



CITY OF SANTA CLARA

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CITY COUNCIL MEETING

AGENDA

A complete agenda packet with back-up reports is available at either City Library beginning Saturday before the Tuesday meeting or at the City Clerk's Office on weekdays. A complete agenda packet is also available at the City Council meeting and on the City's website.

February 10, 2015

SPECIAL ANNOUNCEMENTS

Ensure Bookmark is Entered
(Insert > Bookmark)

REGULAR MEETING

7:00 PM in the City Hall Council Chambers

APPEAL OF HEARING DECISIONS OF THE CITY COUNCIL MUST BE MADE TO THE SUPERIOR COURT WITHIN 90 CALENDAR DAYS OF FINAL ACTION. BECAUSE OF THE AGENDA PROVISION FOR RECONSIDERATION, FINAL ACTION IS DEEMED TO OCCUR AT THE END OF THE NEXT REGULAR MEETING PURSUANT TO CITY COUNCIL POLICY (P&P 042). (CODE OF CIVIL PROCEDURE SECTION 1094.6)

6:00 PM

Closed Session

Council Conference Room

Conference with Labor Negotiators

Pursuant to Government Code Section 54957.6

City designated representative: Julio J. Fuentes, City
Manager (or designee)

Employee organization(s):

Unit #1 - Santa Clara Firefighters Association, IAFF, Local
1171

Unit #2 - Santa Clara Police Officer's Association

Unit #3 - IBEW Local 1245 (International Brotherhood of
Electrical Workers)

Unit #4 - City of Santa Clara Professional Engineers

Units #5, 7 & 8 - City of Santa Clara Employees Association

Unit #6 - AFSCME Local 101 (American Federation of State,
County and Municipal Employees)

Unit #9 - Miscellaneous Unclassified Management
Employees

Unit #9A - Unclassified Police Management Employees

Unit #9B - Unclassified Fire Management Employees

Unit #10 - PSNSEA (Public Safety Non-Sworn Employees)

Agenda - February 10, 2015

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Association)
and
Conference with Real Property Negotiator
Pursuant to Government Code Section 54956.8
Property: APN 104-03-038, 104-03-039, 104-03-040, 104-43-50, 104-55-16 and 104-43-049
City Negotiator: Julio J. Fuentes, City Manager (or designee)
Negotiating Parties: Larry MacNeil and Jim Mercurio, The San Francisco 49ers
Under Negotiation: Parking Rights Agreement
and
Conference with Real Property Negotiators
Pursuant to Government Code Section 54956.8
Property: Franklin Street ROW between the Alameda and Lafayette Street (700 and 800 blocks)
Alviso Street ROW between Benton Street and Franklin Street (1000 block)
City Negotiator: Julio J. Fuentes, City Manager (or designee)
Negotiating Parties: Michael Hindery, Santa Clara University
Under Negotiation: Purchase/Sale/Exchange/Lease of Real Property (provisions, price and terms of payment)
and
Conference with Real Property Negotiator
Pursuant to Government Code Section 54956.8
Property: APN 104-03-036
Negotiating Party(ies): David Ebrahimi, D.E. Restaurants, Inc. and D.E. II Restaurants, Inc.
City Negotiator: Julio J. Fuentes, City Manager (or designee)
Under Negotiation: Purchase/Sale/Exchange/Lease of Real Property (provisions, price and terms of payment)
and
Conference with Legal Counsel - Existing Litigation
Pursuant to Government Code Section 54956.9(d)(1)
D.E. Restaurant, Inc., et al. v. City of Santa Clara, et al.
Santa Clara County Superior Court Case No. 114CV264438
and
Conference with Legal Counsel - Existing Litigation
Pursuant to Government Code Section 54956.9(d)(1)
Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.
Sacramento County Superior Court Case No. 34-2013-80001396
and
Governing Board of the Successor Agency to the City of Santa Clara Redevelopment Agency
Conference with Legal Counsel - Existing Litigation
Pursuant to Government Code Section 54956.9(d)(1)
Vinod K. Sharma, et al. v. Successor Agency to the

1. PLEDGE OF ALLEGIANCE AND STATEMENT OF VALUES:

2. ROLL CALL:

- A. Mayor Matthews: Request to be excused.

3. APPROVAL OF MINUTES:

- A. January 13, 2015.

4. CONTINUANCE/EXCEPTIONS:

5. SPECIAL ORDER OF BUSINESS:

- A. Presentation of 2014 Historic Home Tour Proceeds in the amount of \$10,002 by the Historic Preservation Society of Santa Clara and the Old Quad Residents Association for City specific programs.

6. UNFINISHED BUSINESS:

- A. Possible Reconsideration of Actions Taken at Immediately Preceding Meeting. (See Summary of Actions for potential reconsideration, which is attached to the posted Agenda and is in the Agenda Packet Binder in the Council Chambers.)

7. CONSENT CALENDAR:

[Items listed on the CONSENT CALENDAR are considered routine and will be adopted by one motion. There will be no separate discussion of the items on the CONSENT CALENDAR unless discussion is requested by a member of the Council, staff, or public. If so requested, that item will be removed from the CONSENT CALENDAR and considered under CONSENT ITEMS PULLED FOR DISCUSSION.]

A. Departmental Reports

1. Approval of the plans and specifications for the Corporation Yard Water Storage Tank and Pump Station Project (WA 30236); authorization to make minor modifications, if necessary; and authorization to advertise for bids.
2. Approval of the Compromise and Release to settle the claim for the injury Philip Martin, Fire Captain, sustained cumulatively through February 7, 2013.
3. Approval of the Stipulations with Request for Award for Workers' Compensation to settle the claim for the injury Charles Collins, Police Officer, sustained cumulatively through September 11, 2012.
4. Acceptance of a gift to the City of a utility trailer from K&L Supply Co. for use by the Santa Clara Police Department and authorization to

- transmit a letter of appreciation.
5. Approval of the appointments and changes to the updated City Council Committees List for the 2015 calendar year.
 6. Acceptance of the public improvements performed by Vance Brown, Inc. for Site 7162, EPs 13705, 13610 and 13378 (APN 316-19-031) located at 5409 Stevens Creek Boulevard and authorization to record a Notice of Completion with the County Recorder.
 7. Acceptance of the public improvements performed by Sobrato Construction Corporation for Site 7217, EP 13848 (APN 104-41-031, 104-41-032, 104-41-043, 104-42-020 and 104-42-21) located at 2421, 2431, 2441 and 2451 Mission College Boulevard and 4551 Great America Parkway and authorization to record a Notice of Completion with the County Recorder.
 8. Final adoption of Ordinance No. 1938 which amends Section 8.35.020 (Definitions) of Chapter 8.35 (Smoking and Tobacco Regulations) of Title 8 (Health and Safety) of the City Code to prohibit electronic cigarettes in the same manner as other regulated means of smoking.
 9. Acceptance of the work performed by K.J. Woods Construction, Inc. on the Street Corporation Yard Bunker Wash Area Sewer Connection Project and authorization to record a Notice of Completion with the County Recorder (CE 13-14-07).
 10. Acceptance of the work performed by K.J. Woods Construction, Inc. on the Winchester Boulevard and Newhall Street Storm Drain Replacement Project and authorization to record a Notice of Completion with the County Recorder (CE 13-14-06).
 11. Acceptance of the work performed by Tennyson Electric, Inc. on the De La Cruz Boulevard, El Camino Real and Scott Boulevard Traffic Signal Interconnect and Coordination Project and authorization to record a Notice of Completion with the County Recorder (CE 12-13-01).
 12. Acceptance of the work performed by K.J. Woods Construction, Inc. on the Cabrillo Avenue/Main Street Sewer Replacement [Scott Boulevard to Union Pacific Railroad (U.P.R.R.)] Project and authorization to record a Notice of Completion with the County Recorder (CE 12-13-06).
 13. Acceptance of the work performed by Cratus, Inc. on the Lafayette Street Union Pacific Railroad (UPRR) Underpass Storm Drain Improvement Project and authorization to record a Notice of Completion with the County Recorder (CE 14-15-05).
 14. Acceptance of the work performed by K.J. Woods Construction, Inc. on the Monroe Street, Chromite Drive, Machado Avenue and Nobili Avenue Sanitary Sewer Improvements Phase II Project and authorization to record a Notice of Completion with the County Recorder (CE 10-11-01).
 15. Approval of the Project Manual for Lump Sum Bidding & Construction of the Fairview Substation 60kV Transmission Line Loop-In (Public Works Contract 2403B); direct the solicitation of bids

for the project; and delegate authority to award the contract to the lowest responsible and responsive bidder and to approve change orders up to a total aggregate amount of 10% of the original contract price.

16. Approval of the Job Description for Traffic Control Special Events (As-Needed) and setting the pay rate at \$22.00 per hour.
17. Adoption of a Resolution increasing the City's parking penalty base fines in compliance with the California Vehicle Code and deterring unlawful parking near Levi's Stadium on event days.
18. Note and file the Departmental Activity Report for the month of November 2014.

B. Agreements

1. Approval of an Agreement for the Performance of Services with Hill Brothers Chemical Company, in an amount not to exceed \$220,880 for the first year or a total of \$1,025,104.08 for the term of the agreement, for bulk ammonia hydroxide 19% for the Donald Von Raesfeld (DVR) Power Plant.
2. Approval of an Agreement for Design Professional Services with LPA, Inc. in the amount of \$765,500 for the Youth Soccer Field and Athletic Facility Design and Engineering Services and authorization to execute all necessary documents and to make minor, non-substantive modifications, as necessary.
3. Approval to execute Call No. 15-1 for Professional Services with Cooper Compliance Corp. in an amount not to exceed \$9,860 to provide consulting services for the 2014 Self Certification of the North American Reliability Corporation standards.

C. Reports for Information and Possible Action

D. Minutes to Note and File

1. Historical and Landmarks Commission - December 4, 2014.
2. Senior Advisory Commission - September 22, 2014.
3. Senior Advisory Commission - October 27, 2014.
4. Historical and Landmarks Commission - November 6, 2014.
5. Civil Service Commission - January 12, 2015.
6. Planning Commission - December 10, 2014.

E. Routine Written Petitions for Approval

8. ITEMS SET FOR HEARING:

[Planning Commission items not being appealed, or which are not related to an appeal, will be heard under BOARDS AND COMMISSIONS FOR ACTION.] If you challenge a City Council land use decision in court, you may be limited to raising only those issues you or someone else raised at this hearing before the City Council or in written correspondence delivered to the City at, or prior to, the City Council hearing on the matter. (California Government Code Section 65009)

- A. **1075 Pomeroy Avenue:** Adoption of Resolutions denying a Rezone from Low Density Multiple-Family Residential (R3-18D) to Planned Development (PD) and denying a Tentative Subdivision Map for five residential lots [PLN2013-10129].

9. BIDS AND PROPOSALS:

- A. Award of Contract for the Supervisory Control and Data Acquisition (SCADA) Support Building Project (WA 30259) to Guerra Construction Group in the amount of \$1,117,400; authorization to execute change orders up to 10% of the original contract price or \$112,000; and approval of an additional appropriation and transfer of \$600,000 to cover the cost.

10. BOARDS AND COMMISSIONS FOR ACTION:

11. CONSENT ITEMS PULLED FOR DISCUSSION:

12. PUBLIC PRESENTATIONS:

This item is reserved for persons to address the Council on any matter not on the agenda that is within the subject matter jurisdiction of the City. The law does not permit Council action on, or extended discussion of, any item not on the agenda except under special circumstances. The Council, or staff, may briefly respond to statements made or questions posed, and the Council may request staff to report back at a subsequent meeting. Although not required, please submit to the City Clerk your name and subject matter on forms available by the door in the Council Chambers.

13. REPORTS FOR COUNCIL ACTION:

- A. Acceptance of estimated revenue and approval of appropriations of the Innovation Grant from Pacific Library Partnership in the amount of \$10,000 for fiscal year 2014-15 for the Library's Central Studio - An Artist's Space project.
- B. Adoption of a Resolution adding the property at 746 Madison Street to the City's List of Architecturally and Historically Significant Properties (PLN2014-10712).
- C. Approval of appropriations in the amount of \$5.0 million to establish a new Capital Improvement Project (CIP) for the El Camino Real Pavement Rehabilitation Project to be funded by transfers from unallocated Gas Tax and various street improvement projects.

14. BILLS AND CLAIMS/PROGRESS PAYMENTS:

(Lists are available in the Council Office and the City Clerk's Office.)

- A. Approval of Bills and Claims and Progress Payments.

15. REPORTS OF COUNCILORS AND SPECIAL COUNCIL COMMITTEES:

- A. Reports regarding conference attendance, if any.

16. CITY MANAGER REPORTS:

17. CLOSED SESSION MATTERS:

- A. City Attorney Reports:

- B. Set February 24, 2015 at 6:00 pm for a Closed Session for a Conference with Labor Negotiators pursuant to Government Code Section 54957.6; City designated representatives: Julio J. Fuentes, City Manager (or designee); Employee Organization(s): Unit #1 - Santa Clara Firefighters Association, IAFF, Local 1171; Unit #2 - Santa Clara Police Officer's Association; Unit #3 - IBEW Local 1245 (International Brotherhood of Electrical Workers); Unit #4 - City of Santa Clara Professional Engineers; Units #5, 7 & 8 - City of Santa Clara Employees Association; Unit #6 - AFSCME Local 101 (American Federation of State, County and Municipal Employees); Unit #9 - Miscellaneous Unclassified Management Employees; Unit #9A Unclassified Police Management Employees; Unit #9B Unclassified Fire Management Employees; Unit #10 - PSNSEA (Public Safety Non-Sworn Employees Association) and Conference with Legal Counsel-Existing Litigation pursuant to Government Code Section 54956.9(d)(1); *Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.*, Sacramento County Superior Court Case No. 34-2013-80001396.

18. ADJOURNMENT:

- A. To Tuesday evening, **February 24, 2015**, 2015 at 7:00 pm for the regular scheduled meeting in the City Hall Council Chambers.

02-10-15

CLOSED SESSION NOTICE

6:00 pm

Santa Clara



City of Santa Clara, California



The **CITY COUNCIL OF THE CITY OF SANTA CLARA** will meet in closed session on **Tuesday, February 10, 2015, at 6:00 p.m.**, or as soon thereafter as the matter can be discussed, in the Council Conference Room located in the East Wing of City Hall at 1500 Warburton Avenue, Santa Clara, California, to consider the following matter(s) and to potentially take action with respect to it/them:

CONFERENCE WITH LABOR NEGOTIATORS

Pursuant to Gov. Code § 54957.6

City designated representative: Julio J. Fuentes, City Manager (or designee)

Employee Organization(s):

Unit #1 – Santa Clara Firefighters Association, IAFF, Local 1171

Unit #2 - Santa Clara Police Officer's Association

Unit #3 – IBEW Local 1245 (International Brotherhood of Electrical Workers)

Unit #4 - City of Santa Clara Professional Engineers

Units #5, 7 & 8 - City of Santa Clara Employees Association

Unit #6 - AFSCME Local 101 (American Federation of State, County and Municipal Employees)

Unit #9 – Miscellaneous Unclassified Management Employees

Unit #9A - Unclassified Police Management Employees

Unit #9B - Unclassified Fire Management Employees

Unit #10 – PSNSEA (Public Safety Non-Sworn Employees Association)

CONFERENCE WITH REAL PROPERTY NEGOTIATOR

Pursuant to Gov. Code § 54956.8

Property: APN 104-03-038; 104-03-039; 104-03-040; 104-43-50; 104-55-16; and 104-43-049

City Negotiator: Julio J. Fuentes, City Manager (or designee)

Negotiating Parties: Larry MacNeil and Jim Mercurio, The San Francisco 49ers

Under Negotiation: Parking Rights Agreement

CONFERENCE WITH REAL PROPERTY NEGOTIATORS

Pursuant to Gov. Code § 54956.8

Property: Franklin Street ROW between the Alameda and Lafayette Street (700 and 800 blocks); Alviso Street ROW between Benton Street and Franklin Street (1000 block)

City Negotiator: Julio J. Fuentes, City Manager (or designee)

Negotiating Parties: Michael Hindery, Santa Clara University

Under Negotiation: Purchase/Sale/Exchange/Lease of Real Property (provisions, price and terms of payment)

- CONFERENCE WITH REAL PROPERTY NEGOTIATOR**
Pursuant to Gov. Code § 54956.8
Property: APN 104-03-036
Negotiating Party(ies): David Ebrahimi, D.E. Restaurants, Inc. and D.E. II Restaurants, Inc.
City Negotiator: Julio J. Fuentes, City Manager (or designee)
Under Negotiation: Purchase/Sale/Exchange/Lease of Real Property (provisions, price and terms of payment)

- CONFERENCE WITH LEGAL COUNSEL-EXISTING LITIGATION**
Pursuant to Gov. Code § 54956.9(d)(1)
D.E. Restaurant, Inc., et al. v. City of Santa Clara, et al., Santa Clara County Superior Court Case No. 114CV264438

- CONFERENCE WITH LEGAL COUNSEL-EXISTING LITIGATION**
Pursuant to Gov. Code § 54956.9(d)(1)
Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al., Sacramento County Superior Court Case No. 34-2013-80001396

Date: February 6, 2015



RICHARD E. NOSKY, JR.
City Attorney

02-10-15

6:00 pm



CLOSED SESSION NOTICE

Successor Agency to the City of Santa Clara
Redevelopment Agency



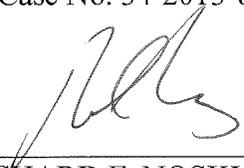
The **GOVERNING BOARD OF THE SUCCESSOR AGENCY TO THE CITY OF SANTA CLARA REDEVELOPMENT AGENCY** will meet in closed session on **Tuesday, February 10, 2015, at 6:00 p.m.**, or as soon thereafter as the matter can be discussed, in the Council Conference Room located in the East Wing of City Hall at 1500 Warburton Avenue, Santa Clara, California, to consider the following matter(s) and to potentially take action with respect to it/them:

CONFERENCE WITH LEGAL COUNSEL-EXISTING LITIGATION

Pursuant to Gov. Code § 54956.9(d)(1)

Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al., Sacramento County Superior Court Case No. 34-2013-80001396

Date: February 6, 2015



RICHARD E. NOSKY, JR.
Successor Agency Counsel

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 2.A

City of Santa Clara, California



Date: February 4, 2015
To: Mayor and City Council for Action
From: Executive Assistant to Mayor & City Council
Subject: Request for Excused Absence

EXECUTIVE SUMMARY:

Please be advised that Mayor Jamie L. Matthews is unable to attend the February 10, 2015 City Council meeting and is requesting that the City Council excuse his absence.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The February 10, 2015 City Council meeting will be conducted without a full Council.

ECONOMIC/FISCAL IMPACT:

None.

RECOMMENDATION:

That the Council excuse Mayor Jamie L. Matthews from attendance at the February 10, 2015 City Council meeting.

Jashma Kadam
Executive Assistant to Mayor and City Council

**MINUTES OF THE CITY COUNCIL OF THE CITY OF SANTA CLARA
FOR REGULAR MEETING HELD ON TUESDAY EVENING, JANUARY 13, 2015**

The City Council of the City of Santa Clara, with a quorum present, met at 6:00 pm in the City Hall Council Chambers. The Council began the meeting with a Development Study Session for a proposed redevelopment of a 1.86 acre property located at 100 North Winchester Boulevard by USA Properties Fund that would demolish the existing 3-story office building and construct 90 senior apartments in 4 stories. The City Manager made introductory remarks and then the Director of Planning and Inspection made an electronic presentation regarding the proposed development. Art May, USA Properties, also made an electronic presentation and then answered Council questions. Renee Morengo addressed the Council with comments of concern. The City Manager provided a summary and discussed next steps.

The Council continued the Development Study Session and considered the request by Santa Clara University to vacate a portion of the 700-800 blocks of Franklin Street and a portion of the 1000 block of Alviso Street to allow the conversion of most of the right-of-way to landscape the pedestrian mall and a presentation of the 2015 Campus Master Plan. The City Manager introduced the item and then the Director of Planning and Inspection made an electronic presentation regarding the proposed project and introduced Chris Shay, Santa Clara University, who also made an electronic presentation. Mr. Shay and Mike Henry, Santa Clara University, then answered Council questions. Steve Van Dorn, CEO and President of the Santa Clara Chamber of Commerce and Convention and Visitors-Bureau (SCC-CVB) addressed the comments in support of the request. The City Manager made general comments regarding the proposed development. Mark Kelsey and Robert O'Keefe addressed the Council with comments of concern.

With no public comment, the Council then met at 6:05 pm for a Closed Session in the Council Conference Room for a Conference with Labor Negotiators pursuant to Government Code Section 54957.6; City designated representative: Julio J. Fuentes, City Manager (or designee); Employee organization(s): Unit #1 - Santa Clara Firefighters Association, IAFF, Local 1171; Unit #2 - Santa Clara Police Officer's Association; Unit #3 - IBEW Local 1245 (International Brotherhood of Electrical Workers); Unit #4 - City of Santa Clara Professional Engineers; Units #5, 7 & 8 - City of Santa Clara Employees Association; Unit #6 - AFSCME Local 101 (American Federation of State, County and Municipal Employees); Unit #9 - Miscellaneous Unclassified Management Employees; Unit #9A - Unclassified Police Management Employees; Unit #9B - Unclassified Fire Management Employees; Unit #10 - PSNSEA (Public

Safety Non-Sworn Employees Association); Conference with Real Property Negotiator pursuant to Government Code Section 54956.8; Property: APN 104-03-038, 104-03-039, 104-03-040, 104-43-50, 104-55-16 and 104-43-049; City Negotiator: Julio J. Fuentes, City Manager (or designee); Negotiating Parties: Larry MacNeil and Jim Mercurio, The San Francisco 49ers; Under Negotiation: Parking Rights Agreement; Conference with Real Property Negotiator pursuant to Government Code Section 54956.8; Property: APN 269-43-018 and 269-36-082; City Negotiator: Julio J. Fuentes, City Manager (or designee); Negotiating Party: Mark Allgire, Santa Clara Unified School District; Under Negotiation: Purchase/Sale/Exchange/Lease of Real Property (provisions, price and terms of payment); Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); D.E. Restaurant, Inc., et al. v. City of Santa Clara, et al.; Santa Clara County Superior Court Case No. 114CV264438; Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); *Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.*; Sacramento County Superior Court Case No. 34-2013-80001396; and Governing Board of the Successor Agency to the City of Santa Clara Redevelopment Agency Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); *Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.*; Sacramento County Superior Court Case No. 34-2013-80001396 (City Attorney - 01/08/15).

The Council reconvened in the Council Chambers at 7:02 pm and the regular meeting was opened with the recitation of the Pledge of Allegiance and Statement of Values in the Council Chambers.

Present: Council Members Debi Davis, Lisa M. Gillmor, Patrick Kolstad, Patricia M. Mahan, Jerry Marsalli and Teresa O'Neill and Mayor Jamie L. Matthews.

Staff present: City Manager, City Attorney and City Clerk/Auditor.

3A. MOTION was made by Davis, seconded and unanimously carried with Caserta and Kolstad abstaining (not present at the meeting), that the Minutes for the meeting of November 25, 2014 be adopted as written.

3B. MOTION was made by Davis, seconded and unanimously carried with Caserta abstaining (not present at the meeting), that the Minutes for the meeting of December 9, 2014 be adopted as written.

- 3C. MOTION was made by Davis, seconded and unanimously carried, that the Minutes for the meeting of December 16, 2014 be adopted as written.
4. As an item under Continuances/Exceptions, MOTION was made by Caserta, seconded and unanimously carried, that the Council, per the applicant's request, continue the Public Hearing for the proposed project located at 1593 Lexington Street including, adoption of a Resolution to uphold the Planning Commission action to deny a design review application to convert a basement into habitable living space and direct that the staff work with the applicant on a revised design review application (PLN2013-09691) to a future date after the Public Hearing is re-noticed (Director of Planning and Inspection - 01/06/15).
- 5A. As an item under Special Order of Business, the Council proceeded with the consideration for adoption of the Budget Principles for Fiscal Year 2015-16. The Director of Finance reviewed his memo (12/17/14). MOTION was made by O'Neill, seconded and unanimously carried, that the Council adopt the Budget Principles for Fiscal Year 2015-16 and refer to the City Manager for implementation.
- 6B. As an item under Unfinished Business, the Council proceeded with the consideration of an Ordinance amending Chapter 17.35 (Park and Recreational Land) of Title 17 (Development) of the City Code to make minor modifications to the parkland dedication requirement. The City Manager introduced the item and the Director of Parks and Recreation reviewed his memo (01/06/15) and made an electronic presentation. He, the City Attorney, Director of Planning and Inspection and the City Manager then answered Council questions. The following people addressed the Council with comments of concern: Jan Heinmeister, Clysta Seeney and Kevin Park. The following people addressed the Council with comments of support: Dennis Martin and Eric Morey. The City Manager answered further Council questions and a Council discussion followed. MOTION was made by Marsalli, seconded and carried with Davis, Gillmor and O'Neill dissenting, that the Council pass to print Ordinance No. 1937 entitled, "AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA, AMENDING CHAPTER 17.35 (PARK AND RECREATIONAL LAND) OF TITLE 17 (DEVELOPMENT), OF THE CODE OF THE CITY OF SANTA CLARA, CALIFORNIA TO MAKE MINOR MODIFICATIONS TO THE PARK LAND DEDICATION REQUIREMENT" which amends Chapter 17.35 (Park and Recreational Land) of Title 17 (Development) of the City Code to make minor modifications to the parkland dedication requirement.

- 6C. Also as an item of Unfinished Business, the Council proceeded to consider a Memorandum of Understanding (MOU) with the International Swimming Hall of Fame (ISHOF) to establish procedures for the negotiation by the City and ISHOF of a multi-year agreement for use of space in the new International Swim Center (ISC) aquatic facility. The Director of Parks and Recreation reviewed his memo (12/17/14). Kevin Moore addressed the Council with comments in support of the MOU. MOTION was made by Gillmor, seconded and unanimously carried, that the Council **approve** of a Memorandum of Understanding (MOU) with the International Swimming Hall of Fame (ISHOF) to establish procedures for the negotiation by the City and ISHOF of a multi-year agreement for use of space in the new International Swim Center (ISC) aquatic facility and **authorize** the City Manager to manage the MOU provisions, negotiate a longer term agreement and any necessary associated documents and business plan and to make minor modifications, as necessary.
- 7A.1 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/30/14), the Council **approve** the use of City Electric forces for the installation of facilities in the Kaiser Drive/Pepper Tree Lane area; Central Expressway and Coronado Drive; and the Northwest corner of Great America Parkway and Old Mountain View/Alviso Road.
- 7A.2 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Water and Sewer Utilities' memo (12/08/14), the Council **approve** the use of City Water Utility forces for the water service connection at 250 Howard Drive.
- 7A.3 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Water and Sewer Utilities' memo (12/16/14), the Council **accept** the work performed by Integrated Water Services, Inc. on the Central Park Pond Improvement Project (WA 7506) and **authorize** the recordation of the Notice of Completion with the County Recorder.
- 7A.4 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/10/14), the Council **set** the salary for Construction Project Engineer candidate Joseph Bruzzone at Step 2 of the salary range for Schedule E-36.
- 7A.5 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Human Resources' memo (12/02/14), the Council **approve** the List of Designated Positions, including Disclosure Categories, which require the incumbents to file a Conflict of Interest Statement, Form 700.

7A.6 MOTION was made by Davis, seconded and unanimously carried, that, per the City Attorney's memo (01/13/15), the Council **adopt Ordinance No. 1933**, entitled, "AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA, AMENDING CHAPTER 18.78 OF TITLE 18 OF THE CODE OF THE CITY OF SANTA CLARA, CALIFORNIA, CONCERNING DENSITY BONUSES AND RELATED INCENTIVES FOR HOUSING DEVELOPMENTS" which amends **Chapter 18.78 (Residential Density Bonus Standards)** of Title 18 (Zoning) of the City Code concerning **density bonuses** and related **incentives** for **housing developments**.

7A.7 MOTION was made by Davis, seconded and unanimously carried, that, per the City Attorney's memo (01/13/15), the Council **adopt Ordinance No. 1934** entitled, "AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA, REVISING CHAPTER 18.48 AND ADDING A NEW CHAPTER 18.120 TO TITLE 18 OF THE CODE OF THE CITY OF SANTA CLARA, CALIFORNIA PERTAINING TO EMERGENCY SHELTERS" which revises **Chapter 18.48 (Regulations for ML-Light Industrial Zoning Districts)** and adds a new **Chapter 18.120 (Emergency Shelters)** to the City Code pertaining to emergency shelters.

7A.8 MOTION was made by Davis, seconded and unanimously carried, that, per the City Attorney's memo (01/13/15), the Council **adopt Ordinance No. 1935** entitled, "AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA, AMENDING CHAPTERS 18.06, 18.10, 18.12, 18.14, 18.16, 18.18, 18.20, 18.22, 18.24 AND 18.26 OF TITLE 18 OF THE CODE OF THE CITY OF SANTA CLARA, CALIFORNIA TO ADDRESS SUPPORTIVE AND TRANSITIONAL HOUSING" which amends **Chapters 18.06, 18.10, 18.12, 18.14, 18.16, 18.18, 18.20, 18.22, 18.24 and 18.26** of Title 18 (Zoning) of the City Code to address **supportive and transitional housing**.

7A.9 MOTION was made by Davis, seconded and unanimously carried, that, per the City Attorney's memo (01/13/15), the Council **adopt Ordinance No. 1936** entitled, "AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA, ADDING A NEW CHAPTER 18.118 (REASONABLE ACCOMMODATION) TO TITLE 18 (ZONING) OF THE CODE OF THE CITY OF SANTA CLARA, CALIFORNIA PERTAINING TO REASONABLE ACCOMMODATION" which adds a new **Chapter 18.118 (Reasonable Accommodation)** to Title 18 (Zoning) of the City Code pertaining to reasonable accommodation.

7A.10 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Finance/Assistant City Manager's memo (01/02/15), the Council **adopt Resolution No. 15-8195** entitled, "A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA, ACCEPTING THE AB1600 REPORT ON DEVELOPMENT IMPACT FEES FOR FISCAL YEAR ENDED JUNE 30, 2014 AND MAKING FINDINGS REGARDING THE CONTINUING NEED FOR UNEXPENDED BALANCES OF IMPACT FEES AS OF JUNE 30, 2014" which

accepts the AB1600 Report on Development Impact Fees for Fiscal Year ended June 30, 2014 and make findings regarding the continuing need for unexpended balances of impact fees as of June 30, 2014.

7A.11 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Public Works/City Engineer's memo (12/17/14), the Council **approve** the plans and specifications for the Scott Boulevard and Park Avenue Sanitary Sewer Improvements Project - Phase III (CE 10-11-02); **authorize** the City Manager to make minor modifications, if necessary; and **authorize** the advertisement for bids.

7A.12 MOTION was made by Davis, seconded and unanimously carried, that, per the Chief of Police's memo (01/13/15), the Council **approve** the request to allow Lieutenant Craig Middlekauff to accrue over the maximum vacation hours without penalty.

7B.1 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/17/14), the Council **approve**, and authorize the City Manager to execute, Call No. 15-1 for Professional Services with Synergy Companies, Inc., in an amount not to exceed \$122,985, for income verification services for the Financial Rate Assistance Program.

7B.2 MOTION was made by Davis, seconded and unanimously carried, that, per the City Attorney's memo (01/13/15), the Council **approve**, and authorize the City Manager to execute, a Release and Settlement in Full of All Claims and Rights with Eaton Corporation to resolve a dispute related to the purchase of a prototype hybrid vehicle.

7B.3 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Water and Sewer Utilities' memo (12/16/14), the Council **approve**, and authorize the City Manager to execute, Amendment No. 1 to the Agreement for Professional Services with GHD, Inc., in the amount of \$395,000 for a total not to exceed amount of \$859,421, to provide specialized engineering services and construction support service for the Supervisory Control and Data Acquisition (SCADA) Master Plan.

7B.4 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Water and Sewer Utilities' memo (12/16/14), the Council **approve**, and authorize the City Manager to execute, an Agreement for the Performance of Services with Modern Building Systems, Inc., in an amount not to exceed \$350,000, for the delivery and installation of two modular office buildings at the City's Corporation Yard, 1705 Martin Avenue (WA30257).

- 7B.5 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/17/14), the Council **approve**, and authorize the City Manager to execute, an Agreement for the Performance of Services with Nalco Company Services, in an amount of \$37,246.48 for the first year for a total not to exceed amount of \$118,000, to provide water treatment services at the Cogeneration (CoGen) Facility.
- 7B.6 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/17/14), the Council **approve**, and authorize the City Manager to execute, an Agreement for the Performance of Services with Nalco Company Services, in an amount of \$129,221.88 for the first year and for a total not to exceed amount of \$407,371.97, to provide water treatment services for the Donald Von Raesfeld (DVR) Power Plant.
- 7B.7 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (11/25/14), the Council **approve**, and authorize the City Manager to execute, Electric Service Agreement with Intel Corporation for the purchase of electricity on a long-term basis in exchange for certain discounted rates, to be effective January 1, 2015.
- 7B.8 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/30/14), the Council **approve**, and authorize the City Manager to execute, a Master Power Purchase and Sale Agreement Confirmation Letter - Resource Adequacy with Shell Energy North America (US) L.P., for calendar years 2016 and 2017, for the sale of excess local resource capacity providing a total revenue to the City of \$129,600.
- 7B.9 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/17/14), the Council **approve**, and authorize the City Manager to execute, Call No. 15-1 for Professional Services with Electrical Consultants, Inc., in an amount not to exceed \$42,150, to provide a formalized opinion of cost to convert an existing 60kV overhead transmission line to underground for the Santa Clara Square development.
- 7B.10 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Electric Utility's memo (12/17/14), the Council **approve**, and authorize the City Manager to execute, a Call Agreement with E Source Companies, LLC and Call No. 15-1 for Professional Services, in an amount not to exceed \$128,250, for ongoing industry research and information services.

- 7D.1 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Planning and Inspection's memo (12/09/14), the Council **note and file** the Minutes of the Planning Commission for the meeting of October 8, 2014.
- 7D.2 MOTION was made by Davis, seconded and unanimously carried, that, per the Director of Planning and Inspection's memo (12/16/14), the Council **note and file** the Minutes of the Planning Commission for the meeting of November 12, 2014.
- 8B. PUBLIC HEARING: The Mayor declared the hearing open to consider the proposed project located at 930 Bellomy Street, including a Resolution to approve rezoning the property from R1-6L (Single-Family Residential) to PD (Planned Development) and approval of a design review for the expansion of an off-campus dormitory (PLN2014-10474). The Director of Planning and Inspection reviewed his memo (01/06/15) and made an electronic presentation. He, the City Manager and the City Attorney then answered Council questions. Stuart Fiedelman, applicant, and Michelle Miner addressed the Council with comments regarding the proposed project and then answered further Council questions. The following people addressed the Council with comments of concern: Spike Standifer, Kay Almon, Judy Tucker, Adam Thompson, Lou Faria, Mark Kelsey, Charles Tucker and Kevin Park. The following people addressed the Council with comments of support: Carol Atwell, Kevin Moore, Emily Moore Minister, Myron Von Raesfeld and Ed McGovern. The following people addressed the Council with general comments: Carolyn Shuck and Michael Kohl. Mr. Fiedelman then addressed the Council with closing comments and then he and the City Attorney and City Manager answered further Council questions. With no further public comment, MOTION was made by Caserta, seconded and unanimously carried, that the Council **close** the public hearing. A Council discussion followed. MOTION was made by Marsalli, seconded and unanimously carried, that the Council **continue** the consideration of the proposed project located at 930 Bellomy Street, including a Resolution to approve rezoning the property from R1-6L (Single-Family Residential) to PD (Planned Development) and approval of a design review for the expansion of an off-campus dormitory to the Council meeting of January 20, 2015.

8C.

PUBLIC HEARING: The Mayor declared the hearing open to consider the proposed project located at 1313 Franklin Street, 1092 Monroe Street and 1350 Benton Street, including a Resolution adopting the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program; adoption of a Resolution approving General Plan Amendment No. 81 to change the land use designation from Community Mixed Use to Regional Mixed Use; adoption of a Resolution approving the rezone from Community Commercial (CC) and General Office (OG) to Planned Development (PD), subject to conditions; and adoption of a Resolution approving the Tentative Subdivision Map to subdivide the 1.04 acre site into 44 for-sale condominium units and 14,500 square feet of retail, subject to conditions (PLN2014-10542, PLN2012-09351, PLN2013-10106 and CEQ2014-01176). Council Member Gillmor noted a conflict of interest (owns property within 500 feet of the proposed development) and stepped off the dais. The Director of Planning and Inspection then reviewed his memo (01/06/15) and made an electronic presentation. Sanjeev Acharya, SiliconSage TM Builders, and Eric Schoennauer, addressed the Council and made an electronic presentation and then he and the City Manager answered Council questions. The following people addressed the Council with comments of support: Steve Van Dorn, CEO and President of the Santa Clara Chamber of Commerce and Convention-Visitors Bureau (SCCC-CVB), Zoe Mullindor, Joel Singer, Adam Thompson and Myron Von Raesfeld. The following people addressed the Council with general comments: Spike Standifer and Kevin Park. A Council discussion followed. With no further public comment, MOTION was made by Davis, seconded and unanimously carried with Gillmor abstaining (owns property within 500 feet of the subject project site), that the Council close the Public Hearing. MOTION was then made by Davis, seconded and unanimously carried with Gillmor abstaining (owns property within 500 feet of the subject project site), that the Council adopt Resolution No. 19-8196 entitled, "A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA, ADOPTING THE MITIGATED NEGATIVE DECLARATION (MND) AND THE MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) FOR THE PROJECT LOCATED AT 1313 FRANKLIN STREET, 1092 MONROE STREET, AND 1350 BENTON STREET" which adopts the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program; Resolution No. 15-8197 entitled, "A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA APPROVING GENERAL PLAN AMENDMENT #81 FROM COMMUNITY MIXED USE TO REGIONAL MIXED USE ON A 1.04 ACRE SITE LOCATED AT 1313 FRANKLIN STREET, 1092 MONROE STREET, AND 1350 BENTON STREET, SANTA CLARA" which approves General Plan Amendment No. 81 to change the land use designation from Community Mixed Use to Regional Mixed Use; Resolution No. 15-8198 entitled, "A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA APPROVING A REZONING FROM CCOMMUNITY

COMMERCIAL AND OA-GENERAL OFFICE TO PD-PLANNED DEVELOPMENT OF THE PROPERTY LOCATED AT 1313 FRANKLIN STREET, 1092 MONROE STREET, AND 1350 BENTON STREET, SANTA CLARA" which approves the rezone from Community Commercial (CC) and General Office (OG) to Planned Development (PD), subject to conditions; Resolution No. 15-8199 entitled, "A RESOLUTION OF THE CITY OF SANTA CLARA, CALIFORNIA APPROVING THE TENTATIVE SUBDIVISION MAP LOCATED AT 1313 FRANKLIN STREET, 1092 MONROE STREET, AND 1350 BENTON STREET, SANTA CLARA" which approves the Tentative Subdivision Map to subdivide the 1.04 acre site into 44 for-sale condominium units and 14,500 square feet of retail, subject to conditions.

Council Member Gillmor returned to the dais.

- 12A. MOTION was made by Caserta, seconded and unanimously carried, that, per the Director of Planning and Inspection's memo (01/06/15), the Council approve the appropriations of \$613,114 to the Lawrence Station Area Specific Plan (539-5532-80100-6537) funded by a transfer from the Building Inspection Reserve (063-44465) and approve, and authorize the City Manager to execute, an Agreement for the Performance of Services with RTKL Associates, Inc. to prepare the Lawrence Station Area Plan and Environmental Impact Report (EIR).
- 13A. MOTION was made by Caserta, seconded and unanimously carried, that the Council approve the bills and claims and progress payments.
- 14A. Under Reports of Councilors and Special Council Committees, Mayor Matthews provided a handout regarding his attendance at recent community events.
- 14B. The Council proceeded to consider the appointments and changes to the City Council Committee List for calendar year 2015 (Mayor Matthews - 01/07/15 and revised 01/12/15). Mayor Matthews noted his replacement as alternate with Council Member O'Neill for the Northern California Power Agency (NCPA) and Modesto-Santa Clara-Redding Public Power Agency (MSR) committees. MOTION was made by Gillmor, seconded and unanimously carried, that the Council approve the appointments and changes to the City Council Committee List for the 2015 calendar year.
- 14C. MOTION was made by O'Neill, seconded and unanimously carried, that, per the Mayor's memo (01/06/15), the Council appoint Council Member Davis as Vice Mayor and Council Member Marsalli as Chaplain for the 2015 calendar year.

15. The City Manager then provided an update on the El Camino Real Street Lighting Improvement project.

16A. The City Attorney reported that the Council met, earlier in the evening and would trail at the conclusion of the meeting, for a Closed Session in the Council Conference Room Council Conference Room for a Conference with Labor Negotiators pursuant to Government Code Section 54957.6; City designated representative: Julio J. Fuentes, City Manager (or designee); Employee organization(s): Unit #1 - Santa Clara Firefighters Association, IAFF, Local 1171; Unit #2 - Santa Clara Police Officer's Association; Unit #3 - IBEW Local 1245 (International Brotherhood of Electrical Workers); Unit #4 - City of Santa Clara Professional Engineers; Units #5, 7 & 8 - City of Santa Clara Employees Association; Unit #6 - AFSCME Local 101 (American Federation of State, County and Municipal Employees); Unit #9 - Miscellaneous Unclassified Management Employees; Unit #9A - Unclassified Police Management Employees; Unit #9B - Unclassified Fire Management Employees; Unit #10 - PSNSEA (Public Safety Non-Sworn Employees Association); Conference with Real Property Negotiator pursuant to Government Code Section 54956.8; Property: APN 104-03-038, 104-03-039, 104-03-040, 104-43-50, 104-55-16 and 104-43-049; City Negotiator: Julio J. Fuentes, City Manager (or designee); Negotiating Parties: Larry MacNeil and Jim Mercurio, The San Francisco 49ers; Under Negotiation: Parking Rights Agreement; Conference with Real Property Negotiator pursuant to Government Code Section 54956.8; Property: APN 269-43-018 and 269-36-082; City Negotiator: Julio J. Fuentes, City Manager (or designee); Negotiating Party: Mark Allgire, Santa Clara Unified School District; Under Negotiation: Purchase/Sale/Exchange/Lease of Real Property (provisions, price and terms of payment); Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); D.E. Restaurant, Inc., et al. v. City of Santa Clara, et al.; Santa Clara County Superior Court Case No. 114CV264438; Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.; Sacramento County Superior Court Case No. 34-2013-80001396; and Governing Board of the Successor Agency to the City of Santa Clara Redevelopment Agency Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.; Sacramento County Superior Court Case No. 34-2013-80001396.

16B. MOTION was made by Davis, seconded and unanimously carried, that the Council set January 20, 2015 at 6:00 pm for a Closed Session in the Council Conference Room for a Conference with Labor

Negotiators pursuant to Government Code Section 54957.6; City designated representatives: Julio J. Fuentes, City Manager (or designee); Employee Organization(s): Unit #1 - Santa Clara Firefighters Association, IAFF, Local 1171; Unit #2 - Santa Clara Police Officer's Association; Unit #3 - IBEW Local 1245 (International Brotherhood of Electrical Workers); Unit #4 - City of Santa Clara Professional Engineers; Units #5, 7 & 8 - City of Santa Clara Employees Association; Unit #6 - AFSCME Local 101 (American Federation of State, County and Municipal Employees); Unit #9 - Miscellaneous Unclassified Management Employees; Unit #9A - Unclassified Police Management Employees; Unit #9B - Unclassified Fire Management Employees; Unit #10 - PSNSEA (Public Safety Non-Sworn Employees Association) and Conference with Legal Counsel - Existing Litigation pursuant to Government Code Section 54956.9(d)(1); *Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al.*, Sacramento County Superior Court Case No. 34-2013-80001396 (City Attorney - 01/08/15).

17A. MOTION was made by Marsalli, seconded and unanimously carried, that, there being no further business, the Council adjourn the meeting at 10:20 pm **In Memory of Martin "Mike" Michael Garcia** (long-time Santa Clara business owner of By-th-Bucket Restaurant); **Megan Alyce Olson** (Santa Clara resident for 35 years); and **Rita Rose** (former City employee for 18 years) to Tuesday evening, February 10, 2015 at 6:00 pm for a Closed Session in Council Conference Room and to 7:00 pm for the regular scheduled meeting in the City Hall Council Chambers. The Council then met in the Council Conference Room to continue the Closed Session as outlined above. The Council then reconvened in the Council Chambers at 10:58 pm and the City Attorney reported that there was no reportable action. The meeting stood adjourned.

ATTEST: _____
City Clerk

APPROVE: _____
Mayor

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 5.A

City of Santa Clara, California



Date: January 16, 2015
To: City Manager for Council Action
From: Staff Aide II
Subject: Special Order of Business: Presentation of Proceeds from the Historic Preservation Society of Santa Clara and Old Quad Residents Association 2014 Historic Home Tour, Acceptance of Donations for City-specific Programs, and Authorization to Transmit Letters of Appreciation

EXECUTIVE SUMMARY:

The Historic Preservation Society of Santa Clara, with assistance of the Old Quad Residents Association, sponsored the 2014 Historic Home Tour in Santa Clara. The annual event raises funds for a variety of historic programs in Santa Clara. Donations from the 2014 Home Tour totaling \$10,002 are being presented to various projects.

Barbara Mordy and Diane Changras, Co-Chairs of the Historic Preservation Society of Santa Clara and the Old Quad Residents Association Historic Home Tour Committee will present the checks at the February 10, 2015 City Council meeting to each of the following: Santa Clara Fire Museum, Santa Clara Station Railroad Museum, the Heritage Pavilion of the Central Park Library, Santa Clara Senior Center, the Women's Club Adobe and the Berryessa Adobe.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Acceptance of the donations will contribute to historic City programs, and projects of need and interest to the community.

ECONOMIC/FISCAL IMPACT:

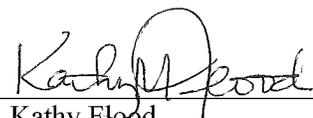
Donations totaling \$10,002 will be available to assist projects throughout the City.

RECOMMENDATION:

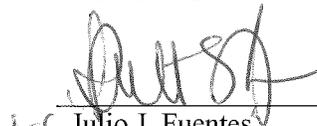
That the Council:

- 1) Hear the presentation of donations totaling \$10,002 from Barbara Mordy and Diane Changras, Co-Chairs, Historic Home Tour Committee to the following: Santa Clara Fire Museum, Santa Clara Station Railroad Museum, the Heritage Pavilion of the Central Park Library, Santa Clara Senior Center, the Women's Club Adobe and the Berryessa Adobe.
- 2) Accept those donations for City-specific programs, and
- 3) Authorize the Mayor and the City Manager to transmit a letter of appreciation to the Historic Preservation Society of Santa Clara and the Old Quad Residents Association for their organization of the 2014 Historic Home Tour and the City-specific program donations.

APPROVED:



Kathy Flood
Staff Aide II



Julio J. Fuentes
City Manager

Documents Related to this Report: None



Date: January 6, 2015

To: City Manager for Council Action

From: Director of Water and Sewer Utilities

Subject: Approval of Plans and Specifications for the Corporation Yard Water Storage Tank and Pump Station Project (WA 30236)

EXECUTIVE SUMMARY:

In 2013, the City's Water and Sewer Utilities demolished the existing 500,000-gallon elevated water storage tank at the City's Corporation Yard due to its seismic deficiencies. Subsequently, the Corporation Yard Water Storage Tank and Pump Station Project (Project) was designed to replace the demolished tank with a new two million gallon at-grade welded steel water storage tank. The Project also includes a new pump station building with vertical turbine and booster pumps, a new electric transformer, an emergency generator, new inlet and outlet piping to and from the distribution system, new mechanical and electrical instrumentation, demolition and relocation of existing storm drain piping, and a dedicated water service connection from the new tank to the existing Emergency Operation Center (EOC).

Project plans and specifications are complete and available in the City Clerk's Office for review during normal business hours. Upon Council's approval of the plans and specifications and authorization to advertise for bids, the bid opening will be scheduled for mid-March 2015.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval of the Project plans and specifications and authorization to advertise for bids will allow the Project to be completed by spring of 2016. The construction of a new water storage tank and pump station will provide an additional storage capacity and improved operation and maintenance for the water distribution system, as well as provide additional reliability and functionality during emergency situations.

ECONOMIC/FISCAL IMPACT:

Appropriations are available in the Seismic Retrofit for Storage Tanks Project (592-1423-80300-7045).

City Manager for Council Action

Subject: Approval of Plans and Specifications for the Corporation Yard Water Storage Tank and Pump Station Project (WA 30236)

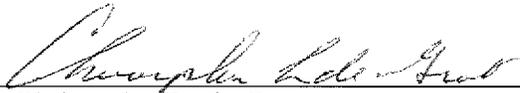
January 6, 2015

Page 2

RECOMMENDATION:

That the Council:

1. Approve the plans and specifications for the Corporation Yard Water Storage Tank and Pump Station Project (WA 30236);
2. Authorize the City Manager to make minor modifications, if necessary; and
3. Authorize the advertisement for bids.



Christopher L. de Groot
Director of Water and Sewer Utilities

APPROVED:



Julio J. Fuentes
City Manager

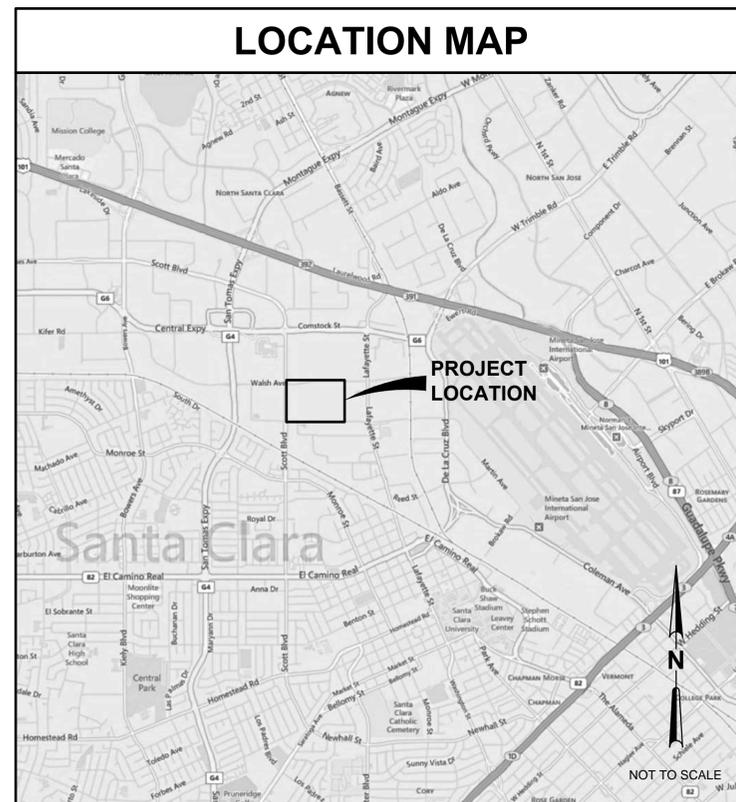
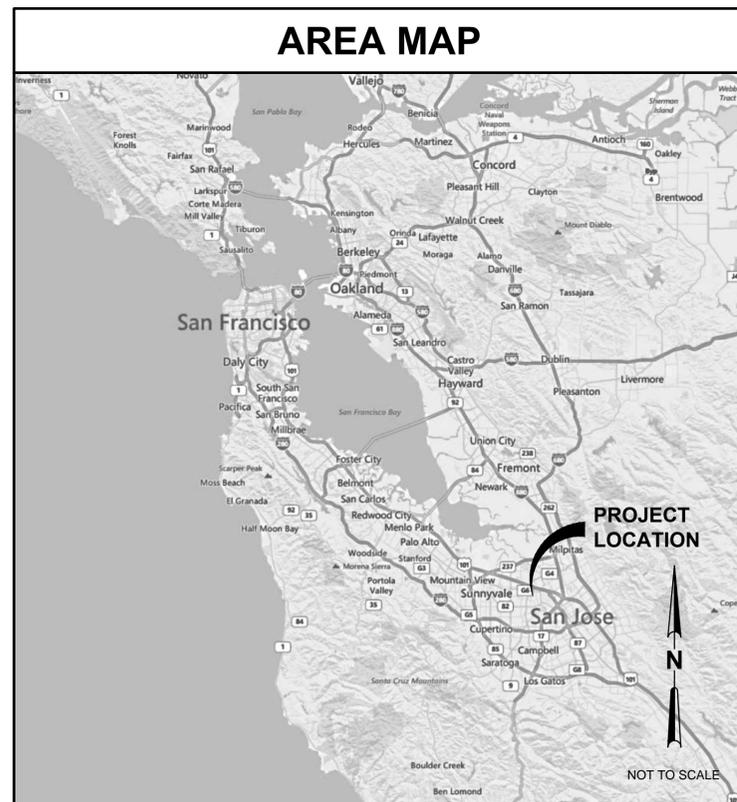
Documents Related to this Report:

- 1) *Specifications and Contract Documents for Corporation Yard Water Storage Tank and Pump Station*



CITY OF SANTA CLARA
WATER AND SEWER UTILITIES

CORPORATION YARD WATER STORAGE TANK AND PUMP STATION



SIGNATURE BLOCK	
APPROVED: SHILPA MEHTA PRINCIPAL ENGINEER - WATER AND SEWER CITY OF SANTA CLARA	
_____	DATE _____
REVIEWED:	
_____	DATE _____
PUBLIC WORKS DEPARTMENT	
_____	DATE _____
PLANNING AND INSPECTION DEPARTMENT	
_____	DATE _____
FIRE DEPARTMENT	
_____	DATE _____
SILICON VALLEY POWER	
_____	DATE _____



GHD Inc.
 1735 North First Street Suite 301 San Jose California 95112 USA
 T 1 408 451 9615 F 1 408 451 9665
 W www.ghd.com

DATE	REVISION	BY

CITY OF SANTA CLARA		
WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION		
1651 MARTIN AVENUE		
COVER SHEET, VICINITY MAP, LOCATION MAP		
APPROVED	DATE	
DIRECTOR OF WATER & SEWER UTILITIES		

PROJ. NO. 592-1423-80300-7054-30236			
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	G-001	SHT.	1 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

GENERAL NOTES	
1.	ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY'S STANDARD DETAILS, TECHNICAL SPECIFICATIONS, AND GENERAL REQUIREMENTS.
2.	IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES WITH THE APPROPRIATE UTILITY AGENCIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY OWNERS 48 HOURS PRIOR TO COMMENCEMENT OF WORK ADJACENT TO THE UTILITY. CONTACT UNDERGROUND SERVICE ALERT (USA) AT 800-227-2600.
3.	BLACK SAND SLURRY SEAL SHALL BE REQUIRED ON ALL NEW STREET PAVEMENT FOR TRENCH WORK, POTHoles, AND STREET WIDENING AND WHERE INDICATED ON THE PLANS. SLURRY SEAL SHALL EXTEND TWELVE INCHES BEYOND THE LIMIT OF PAVEMENT RECONSTRUCTION. REFER TO SPECIFICATION SECTION 02037.
4.	THE CONTRACTOR SHALL NOTIFY, BY CIRCULAR, ALL BUSINESS ESTABLISHMENTS AND RESIDENCES LOCATED IN AREAS AFFECTED BY THE WORK AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. CIRCULAR SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
5.	ALL MANHOLES, VALVE BOXES, MONUMENT BOXES, AND OTHER STRUCTURES IN THE PAVEMENT AREA SHALL BE ADJUSTED TO FINISH GRADE BEFORE PAVING FINAL LIFT.
6.	IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ALL STREET MONUMENTS OR LOT CORNER PIPES DISTURBED DURING THE PROCESS OF CONSTRUCTION. IF A STREET MONUMENT HAS THE POTENTIAL OF BEING DISTURBED, A CORNER RECORD SHALL BE FILED WITH THE SANTA CLARA COUNTY SURVEYOR (PER SECTION 8773.2 OF THE PUBLIC LAND SURVEYORS ACT) AS REQUIRED BY THE SUBDIVISION MAP ACT TO PRESERVE THE LOCATION OF SAID STREET MONUMENT. CONTRACTOR SHALL, AT HIS/HER EXPENSE, HIRE A CIVIL ENGINEER OR LAND SURVEYOR TO PERFORM THE WORK.
7.	ALL SURPLUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
8.	CONTRACTOR SHALL PROVIDE ADEQUATE DUST CONTROL AND KEEP MUD AND DEBRIS OFF THE PUBLIC RIGHT-OF-WAY AT ALL TIMES.
9.	ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
10.	EXISTING UTILITIES SHOWN ARE BASED UPON RECORD INFORMATION AND ARE APPROXIMATE IN LOCATION AND DEPTH. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES THAT MAY BE AFFECTED BY NEW FACILITIES IN THIS CONTRACT, VERIFY ACTUAL LOCATION, DEPTH, AND SERVICE, AND REPORT POTENTIAL CONFLICTS TO THE ENGINEER PRIOR TO EXCAVATING FOR NEW FACILITIES.
11.	CONTRACTOR SHALL PERFORM HIS CONSTRUCTION AND OPERATION IN A MANNER WHICH WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM. TO ENSURE COMPLIANCE, THE CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE BEST MANAGEMENT PRACTICE (BMP) AS OUTLINED IN THE BROCHURES ENTITLED "BEST MANAGEMENT PRACTICE FOR THE CONSTRUCTION INDUSTRY" ISSUED BY THE SANTA CLARA VALLEY NONPOINT SOURCE POLLUTION CONTROL PROGRAM, TO SUIT THE CONSTRUCTION SITE AND JOB CONDITION.
12.	OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE PUBLIC RIGHT-OF-WAY SHALL NOT BE PERMITTED, EXCEPT AT LOCATION(S) APPROVED BY THE CITY TRAFFIC ENGINEER.
13.	ANY UTILITIES BEING ABANDONED SHALL BE EXCAVATED, REMOVED, PROPERLY DISPOSED OF OFFSITE, AND TRENCH BACKFILLED AND COMPACTED TO 95% MIN. COMPACTION UNLESS SPECIFICALLY NOTED IN THE PLANS TO BE ABANDONED IN PLACE. UTILITIES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH CONTROL DENSITY FILL (CDF) AND PLUGGED AT EACH END WITH A MINIMUM FIVE FOOT LENGTH OF CLASS "A" P.C.C.
14.	PROJECT SITE IS A WORKING CORPORATION YARD. CONTRACTOR SHALL COORDINATE WORK TO MINIMIZE INTERFERENCE WITH DAILY CITY OPERATIONS.
15.	ALL MATERIALS INSTALLED FOR THIS PROJECT, INCLUDING BUT NOT LIMITED TO EQUIPMENT, PIPING, VALVES, APPURTENANCES, SHALL BE DOMESTIC.
16.	CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING PERMIT AND MAKING DEFERRED SUBMITTALS OUTLINED ON S-003. CITY WILL WAIVE THE PERMIT FEE.

DRAWING DESIGNATION

DISCIPLINE (IF 2ND LETTER DESIGNATOR NOT USED, REPLACED WITH "-")

C-101

INDIVIDUAL DRAWING NUMBER
SHEET TYPE

LETTER	DISCIPLINE	NUMBER	SHEET TYPE
G	GENERAL	0	GENERAL
C	CIVIL	1	PLANS
A	ARCHITECTURAL	2	ELEVATIONS
S	STRUCTURAL	3	SECTIONS
M	MECHANICAL	4	LARGE SCALE VIEWS
E	ELECTRICAL	5	DETAILS
CP	CATHODIC PROTECTION	6	SCHEDULE AND DIAGRAMS

CIVIL NOTES	
1.	CONTRACTOR SHALL PROVIDE AT LEAST THREE, 24-HOUR EMERGENCY PHONE NUMBERS WITH THE POLICE, FIRE AND CITY ENGINEERING DEPARTMENTS.
2.	CONTRACTOR SHALL POST ON THE SITE, EMERGENCY TELEPHONE NUMBERS FOR PUBLIC WORKS, AMBULANCE, POLICE, AND FIRE DEPARTMENTS.
3.	THE CONTRACTOR SHALL IDENTIFY, LOCATE, AND PROTECT ALL UNDERGROUND FACILITIES.
4.	THE CONTRACTOR SHALL HIRE A STREET CLEANING CONTRACTOR TO CLEAN UP DIRT AND DEBRIS FROM CITY STREETS THAT ARE ATTRIBUTABLE TO THE PROJECT'S CONSTRUCTION ACTIVITIES.
5.	ALL GRADING SHALL BE PERFORMED IN SUCH A MANNER AS TO COMPLY WITH THE STANDARDS ESTABLISHED BY THE PROJECT SPECIFICATIONS AND AGENCIES HAVING JURISDICTION FOR AIRBORNE PARTICULATES (DUST).
6.	ALL GRADING SHALL CONFORM TO APPROVED SPECIFICATIONS PRESENTED HEREON OR ATTACHED HERETO. ALL GRADING WORK SHALL BE OBSERVED AND APPROVED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS BEFORE BEGINNING ANY GRADING. UNOBSERVED AND UNAPPROVED GRADING WORK SHALL BE REMOVED AND REDONE AT THE CONTRACTOR'S EXPENSE.
7.	ALL MATERIALS, REQUIRED FOR THE COMPLETE EXECUTION OF THE PROJECT, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
8.	THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY DURING THE CONSTRUCTION PERIOD.
9.	THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING IMPROVEMENTS OR UNDERGROUND FACILITIES DAMAGED DURING THE CONSTRUCTION PERIOD.
10.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL ENCROACHMENT, EXCAVATION, CONCRETE, ELECTRICAL, PLUMBING, ETC. PERMITS NECESSARY PRIOR TO BEGINNING CONSTRUCTION FOR ANY WORK.
11.	THE CONTRACTOR SHALL HAVE A SUPERINTENDENT OR REPRESENTATIVE ON SITE AT ALL TIMES DURING CONSTRUCTION.
12.	STORAGE OF CONSTRUCTION MATERIAL AND EQUIPMENT ON STREETS OR ANY OTHER AREA NOT SPECIFICALLY DESIGNATED AS STAGING AREA WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL.
13.	CONSTRUCTION EQUIPMENT SHALL BE PROPERLY MUFFLED. UNNECESSARY IDLING OF GRADING CONSTRUCTION EQUIPMENT IS PROHIBITED.
14.	CONSTRUCTION EQUIPMENT, TOOLS, ETC. SHALL NOT BE CLEANED OR RINSED INTO A STREET, GUTTER OR STORM DRAIN.
15.	A CONTAINED AND COVERED AREA ON-SITE SHALL BE USED FOR STORAGE OF CEMENT BAGS, PAINTS, FLAMMABLES, OILS, FERTILIZERS, PESTICIDES, OR ANY OTHER MATERIALS THAT HAVE POTENTIAL FOR BEING DISCHARGED TO THE STORM DRAIN SYSTEM BY WIND OR IN THE EVENT OF A MATERIAL SPILL.
16.	ALL CONSTRUCTION DEBRIS SHALL BE GATHERED ON A REGULAR BASIS AND PLACED IN A DUMPSTER WHICH IS EMPTIED OR REMOVED WEEKLY. WHEN FEASIBLE, TARPS SHALL BE USED ON THE GROUND TO COLLECT FALLEN DEBRIS OR SPLATTERS THAT COULD CONTRIBUTE TO STORMWATER POLLUTION.
17.	ANY TEMPORARY ON-SITE CONSTRUCTION PILES SHALL BE SECURELY COVERED WITH A TARP OR OTHER DEVICE TO CONTAIN DEBRIS.
18.	CONCRETE TRUCKS AND CONCRETE FINISHING OPERATIONS SHALL NOT DISCHARGE WASH WATER INTO THE STREET GUTTERS OR DRAINS.
19.	IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY IF EXISTING UTILITIES WITHIN THE PROJECT LIMITS ARE SERVING EXISTING FACILITIES OR NOT. THOSE THAT SERVE EXISTING FACILITIES SHALL BE RELOCATED IN SUCH A MANNER AS TO MAINTAIN UNINTERRUPTED SERVICE. ANY EXISTING UTILITIES WITHIN THE PROJECT LIMITS THAT DO NOT SERVE ANY OTHER EXISTING FACILITIES TO REMAIN SHALL BE DEMOLISHED OR ABANDONED IN PLACE AS INDICATED ON THE PLANS AND PER CITY DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS.
20.	CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL AND CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPTING LIABILITY ARISING FROM SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
21.	UNLESS SPECIFIC WRITTEN PERMISSION IS GRANTED BY CITY ENGINEER, CONSTRUCTION HOURS SHALL BE FROM MONDAY THROUGH FRIDAY, 7:00 A.M. TO 5:00 P.M. OTHER THAN HOLIDAYS. ALL HEAVY EQUIPMENT AND ANY INTERNAL COMBUSTION ENGINES SHALL BE FITTED WITH ADEQUATE MUFFLERS. NOISE GENERATING EQUIPMENT, INCLUDING PORTABLE POWER GENERATORS AND AIR COMPRESSORS, SHALL BE LOCATED AT THE FURTHEST DISTANCE POSSIBLE FROM OCCUPIED RESIDENCES. THE CONTRACTOR SHALL REIMBURSE THE CITY FOR ANY OVERTIME ASSOCIATED WITH WORK OUTSIDE OF CONSTRUCTION HOURS ABOVE. CITY ENGINEER MAY ALLOW WORK TO BE PERFORMED ON SATURDAYS FROM 9:00 A.M. TO 6:00 P.M. OTHER THAN HOLIDAYS.

PUBLIC WATER SYSTEM NOTES	
1.	WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE PROJECT PLANS, AND TO THE CITY OF SANTA CLARA WATER DEPARTMENT STANDARD DRAWINGS AND SPECIFICATIONS.
2.	CLEARANCES:
2.1.	ONE FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND OTHER FACILITIES UNLESS OTHERWISE NOTED ON THE PLANS.
2.2.	TEN FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND SANITARY MAINS AND SERVICES AND TREES.
2.3.	FIVE FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER AND STORM MAINS AND LATERALS AND OTHER GENERAL UTILITIES OR FACILITIES.
3.	CONSTRUCTION OF WATER MAINS AND SERVICES CANNOT BEGIN UNTIL SITE IS AT SUB GRADE.
4.	CITY WILL PERFORM ALL TAPS TO THE WATER MAIN. CONTRACTOR IS RESPONSIBLE FOR INSTALLING TAPPING SLEEVE AND VALVES, AND PREPARING THE SITE FOR CITY TO PERFORM THE TAP.
5.	THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS, FITTINGS AND DEADENDS USING MECHANICALLY RESTRAINED DEVICES IN ACCORDANCE WITH CITY REQUIREMENTS.
6.	THE CONTRACTOR IS RESPONSIBLE FOR KEEPING A SET OF CURRENT, THOROUGH, AND ACCURATE AS-BUILTS DRAWINGS AT THE PROJECT SITE. THEY SHALL INCLUDE CENTER TO CENTER DIMENSIONS BETWEEN ALL FITTINGS, VALVES, SERVICES, DEADENDS, TIE-BACKS, CHANGES IN PIPE TYPE, ETC. AND SHALL INCLUDE A DIMENSION REFERENCING A TRACEABLE FEATURE ON THE EXISTING WATER SYSTEM. THE UP-DATED AS-BUILT DRAWINGS SHALL BE AVAILABLE FOR THE INSPECTORS REVIEW AT ALL TIMES. THE PROJECT WILL NOT BE CONSIDERED FOR ACCEPTANCE NOR ANY METERS ALLOWED TO BE TURNED ON UNTIL THE AS-BUILT DRAWINGS ARE COMPLETED, TURNED IN TO THE INSPECTOR, VERIFIED, AND ACCEPTED.
7.	ALL WATER USE SHALL BE METERED EXCEPT FOR USE IN DISINFECTION AND FLUSHING OF WATER MAINS.
8.	NO WATER VALVES ON THE EXISTING SYSTEM NOR ANY NEW VALVE CONNECTED TO THE EXISTING SYSTEM SHALL BE OPENED OR CLOSED BY ANYONE EXCEPT AUTHORIZED WATER DEPARTMENT PERSONNEL.
9.	MAINTAIN, SECURE, AND PROTECT ANY EXISTING WATER SYSTEM FACILITY IN PLACE UNTIL THE PROPOSED WATER SYSTEM IS COMPLETED AND ACTIVATED.

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DATE	REVISION	BY

CITY OF SANTA CLARA	
WATER & SEWER UTILITIES	
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE NOTES AND SHEET INDEX	
APPROVED	DATE
DIRECTOR OF WATER & SEWER UTILITIES	

PROJ. NO. 592-1423-80300-7054-30236			
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	G-002	SHT.	2 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

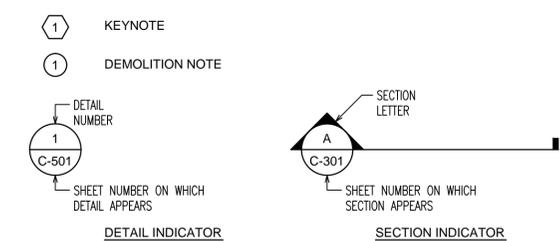
ABBREVIATIONS

Ø	DIAMETER	MPVC	MIDPOINT OF VERTICAL CURVE MONUMENT
AB	AGGREGATE BASE	MON	
ABDN	ABANDONED	N	NORTHING COORDINATE
AC	ACRE, ASPHALT CONCRETE	(N)	NEW
ACP	ASBESTOS CEMENT PIPE	NC	NORMALLY CLOSED
ACM	ASBESTOS CONTAINING MATERIAL	NIC	NOT IN CONTRACT
AD	AREA DRAIN	NO	NUMBER
AGG	AGGREGATE	NTS	NOT TO SCALE
ALGN	ALIGNMENT		
ARV	AIR RELEASE VALVE	OHE	OVERHEAD ELECTRIC
ASB	AGGREGATE SUBBASE	O.R.	OFFICIAL RECORDS
ASPH	ASPHALT		
BC	BEGIN CURVE	(P)	PROPOSED
BEG	BEGIN	P	PAVEMENT ELEVATION
BFP	BACK FLOW PREVENTER	PA	PLANTER AREA
BLDC	BUILDING CORNER	PB	PULL BOX
BLDG	BUILDING	PCC	POINT OF COMPOUND CURVATURE PORTLAND CEMENT CONCRETE
BMP	BEST MANAGEMENT PRACTICES	PE	PLAIN END
BOD	BOTTOM OF DOCK	PED	PEDESTRIAN
BOL	BOLLARD	PERF	PERFORATED
BSW	BACK OF SIDEWALK	PH	POTHOLE
BVC	BEGIN VERTICAL CURVE	PID	POINT ID
BW	FINISHED GRADE AT BOTTOM OF WALL	PIV	POST INDICATOR VALVE
C	CONCRETE OR CIVIL	PL	PROPERTY LINE
CB	CATCH BASIN	PM	PARKING METER
C&G	CURB AND GUTTER	PMH	POWER MANHOLE
CG&S/W	CURB, GUTTER & SIDEWALK	PO	PUSH-ON
CI	CAST IRON OR CURB INLET	POC	POINT ON CURVE
CIP	CAST IRON PIPE	POI	POINT OF INTERSECTION
CL	CENTERLINE	PP	POWER POLE
CLR	CLEAR	PRC	POINT OF REVERSE CURVATURE
CLSM	CONTROLLED LOW-STRENGTH MATERIAL	PRV	PRESSURE REDUCING VALVE
CMN	COMMUNICATION	PRUE	PRIVATE UTILITY EASEMENT
CMP	CORRUGATED METAL PIPE	PT	POINT OF TANGENCY
CO	CLEAN OUT	PUE	PUBLIC UTILITY EASEMENT
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE PIPE
CONST	CONSTRUCTION OR CONSTRUCT	R	RIGHT
CONF	CONFORM TO EXISTING	R=	RADIUS (CURVE)
CSC	CITY OF SANTA CLARA	RC	RELATIVE COMPACTION
CU	CUBIC	RCP	REINFORCED CONCRETE PIPE
CY	CUBIC YARD	RJ	RESTRAINED JOINT
D=	DELTA (CURVE)	RP	RADIUS POINT
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
DEMO	DEMOLISH	RPPA	REDUCED PRESSURE PRINCIPLE ASSEMBLY
DEPT	DEPARTMENT	RSC	RECEIVING AND SUPPORT CENTER
DET	DETAIL	RW	RECYCLED WATER
DI	DROP INLET, DUCTILE IRON	RW, ROW	RIGHT OF WAY
DIA	DIAMETER	S	SOUTH, SLOPE
DIP	DUCTILE IRON PIPE	S.A.D.	SEE ARCHITECTURAL DRAWINGS
DOM	DOMESTIC	SCVWD	SANTA CLARA VALLEY WATER DISTRICT
DW	DOMESTIC WATER	SD	STORM DRAIN
DWG	DRAWING	SDCB	STORM DRAIN CATCH BASIN
E	EASTING COORDINATE, ELECTRIC	SDI	STORM DRAIN INLET
EC	END CURVE	SDMH	STORM DRAIN MANHOLE
EG	EXISTING GRADE	SDCO	STORM DRAIN CLEANOUT
EL, ELEV	ELEVATION	S.E.D.	SEE ELECTRICAL DRAWINGS
ELEC	ELECTRICAL	SF	SILT FENCE
EP	EDGE OF PAVEMENT	SG	SUBGRADE
EVA	EMERGENCY VEHICLE ACCESS	SHLDR	SHOULDER
EX, EXIST,	EXISTING	SHT	SHEET
(E)		SL	STREETLIGHT
(F)	FUTURE	S.L.D.	SEE LANDSCAPE DRAWINGS
FA	FIRE ALARM	SMH	SIGNAL MANHOLE
F/C, FC	FACE OF CURB	S.M.D	SEE MECHANICAL DRAWINGS
FD	FOUND	S.P.D	SEE PLUMBING DRAWINGS
FDC	FIRE DEPARTMENT CONNECTION	SS	SANITARY SEWER
FF, FFE	FINISHED FLOOR ELEVATION	S.S.D.	SEE STRUCTURAL DRAWINGS
FG	FINISH GRADE	SSCO	SANITARY SEWER CLEANOUT
FH	FIRE HYDRANT	SSFM	SANITARY SEWER FORCE MAIN
FIPT	FEMALE IRON PIPE THREAD	SSMH	SANITARY SEWER MANHOLE
FL	FLOW LINE, FLANGE	SSPS	SANITARY SEWER PUMP STATION
FLG	FLANGE	STA	STATION
FM	FLOWMETER	STD	STANDARD
FOUND	FOUNDATION	STL	STEEL
FS	FINISHED SURFACE	S/W	SIDEWALK
FT	FOOT, FEET	SVP	SILICON VALLEY POWER
FW	FIRE WATER	T	TELEPHONE
G	GAS, GROUND ELEVATION	TC	TOP OF CURB
GB	GRADE BREAK	TD	TRENCH DRAIN
GI	GALVANIZED IRON	TEL	TELEPHONE
GRD, G	GROUND	TEMP	TEMPORARY
GV	GATE VALVE	TFC	TOP FACE OF CURB
HMA	HOT MIX ASPHALT	THK	THICK
HORIZ	HORIZONTAL	TOD	TOP OF DOCK
HT	HEIGHT	TOE	TOE OF SLOPE
HP	HIGH POINT	TW, TOW	TOP OF WALL
INV	INVERT	TS	TOP OF SLAB
INST	INSTALL	TYP	TYPICAL
IRR	IRRIGATION	UON	UNLESS OTHERWISE NOTED
JP	JOINT POLE	UG	UNDERGROUND
JT	JOINT TRENCH	VC	VERTICAL CURVE
L	LEFT	W	WEST, WATER
L=	LENGTH (CURVE)	WM	WATER METER
LF	LINEAR FEET	WV	WATER VALVE
LAT	LATERAL	WWF	WELDED WIRE FABRIC
LIP	LIP OF GUTTER	W/	WITH
LP	LIGHT POLE, LOW POINT	YDS	YARDS
LPFH	FIRE HYDRANT		
LS	LANDSCAPE		
LSA	LANDSCAPE ARCHITECT		
MA	MEDICAL AIR		
MAX	MAXIMUM		
MEP	MECHANICAL/ELECTRICAL/PLUMBING		
MH	MANHOLE		
MIN	MINIMUM		
MIPT	MALE IRON PIPE THREAD		
MJ	MECHANICAL JOINT		

CIVIL SYMBOLS LEGEND

SURVEY TOPO AND SITE IMPROVEMENTS			
NEW	EXISTING	NEW	EXISTING

ANNOTATION



GENERAL SHEET NOTES

- ABBREVIATIONS AND SYMBOLS ON THIS SHEET APPLY ONLY TO THE CIVIL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE ABBREVIATIONS AND SYMBOLS NOT PROVIDED HERE.
- THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOME ABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.
- DO NOT SCALE DRAWINGS.



DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES

CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
LEGEND AND ABBREVIATIONS

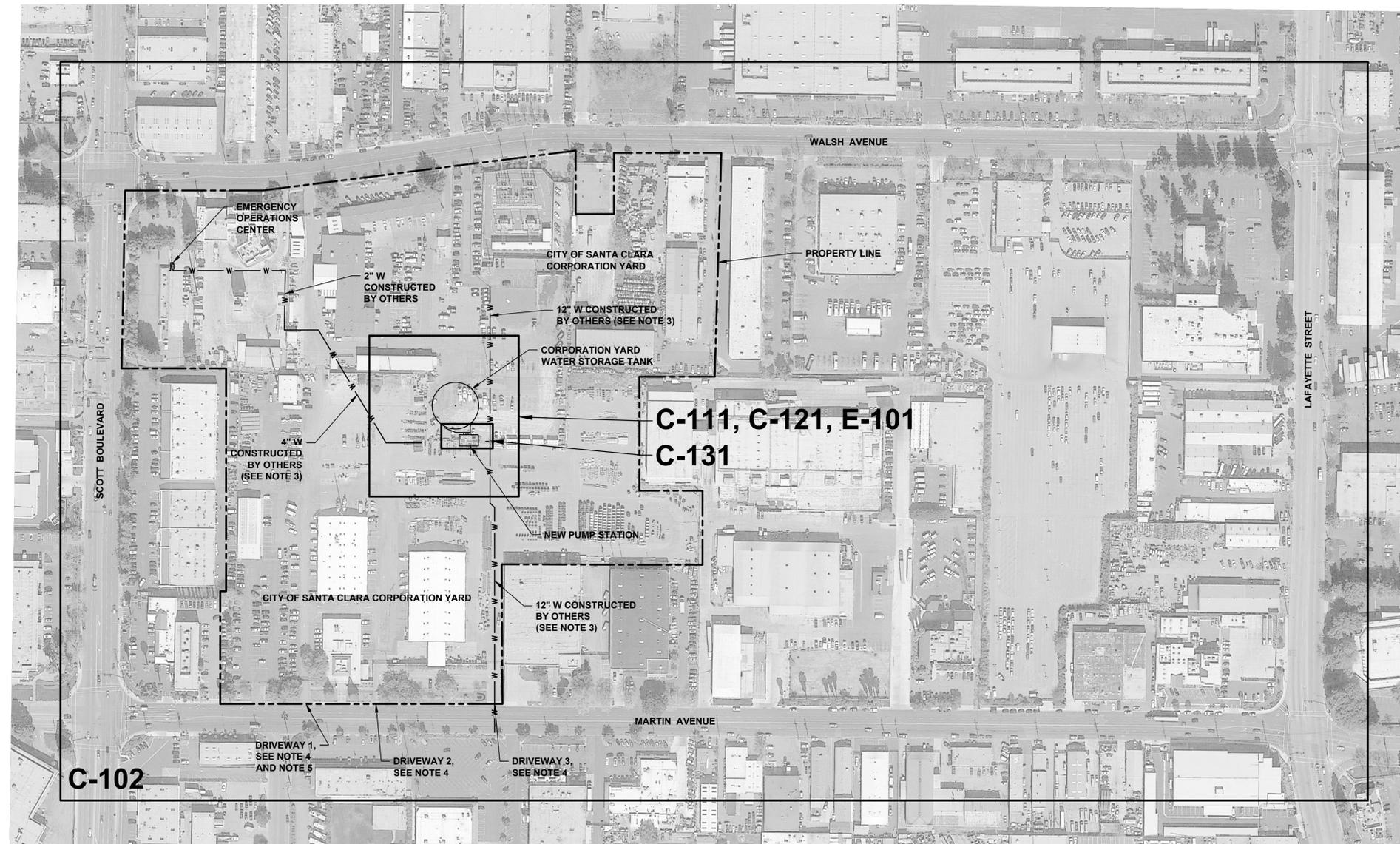
PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	C-001	SHT.	3 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

SHEET GENERAL NOTES

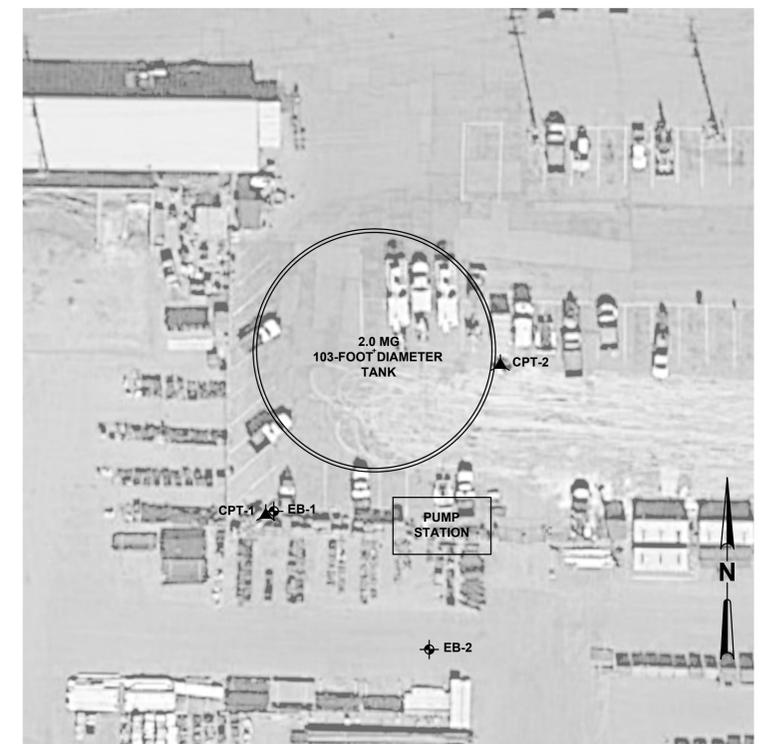
1. REFERENCE COMPLETE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY CORNERSTONE EARTH GROUP, PROJECT NUMBER 138-6-1, DATED AUGUST 1, 2014.
2. BASE AERIAL IMAGE BY GOOGLE EARTH, DATED 2/2/2014.
3. CONTRACTOR SHALL SLURRY SEAL PAVEMENT RECONSTRUCTION FOR 4' W AND 12' W CONSTRUCTED BY OTHERS. APPROXIMATE LENGTH OF 4' W TO SLURRY SEAL IS 380 FEET. APPROXIMATE LENGTH OF 12' W TO SLURRY SEAL IS 1000 FEET.
4. CONTRACTOR SHALL DEMOLISH EXISTING DRIVEWAY, DRIVEWAY APPROACH, SIDEWALK, CURB AND GUTTER, AND LANDSCAPING AS REQUIRED TO INSTALL ADA COMPLIANT DRIVEWAY AND SIDEWALK. DRIVEWAY 1 AND 2 SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL 7/C-503. DRIVEWAY 3 SHALL BE INSTALLED PER 2/C-503. CONTRACTOR SHALL RELOCATE SIGN POSTS AS REQUIRED. NEW LOCATION OF SIGN POSTS TO BE COORDINATED WITH THE CITY. LANDSCAPING SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION.
5. THERE IS AN SVP ELECTRICAL BOX LOCATED IN THE LANDSCAPE AREA ADJACENT TO THE DRIVEWAY. THE CONDUITS EXITING THE BOX HAVE APPROXIMATELY 2 FEET OF COVER. CONTRACTOR SHALL CONTACT DAVE PADILLA, ELECTRIC T&D DIVISION MANAGER, AT 408-615-5630 A MINIMUM OF 2 WEEKS IN ADVANCE OF CONSTRUCTION TO COORDINATE THE BOX RELOCATION AND/OR ADJUSTMENT OF BOX LID TO GRADE.

LEGEND

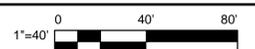
- ◆ APPROXIMATE LOCATION OF EXPLORATORY BORING (EB)
- ▲ APPROXIMATE LOCATION OF CONE PENETRATION TEST (CPT)



KEY MAP



GEOTECHNICAL BORINGS PLAN



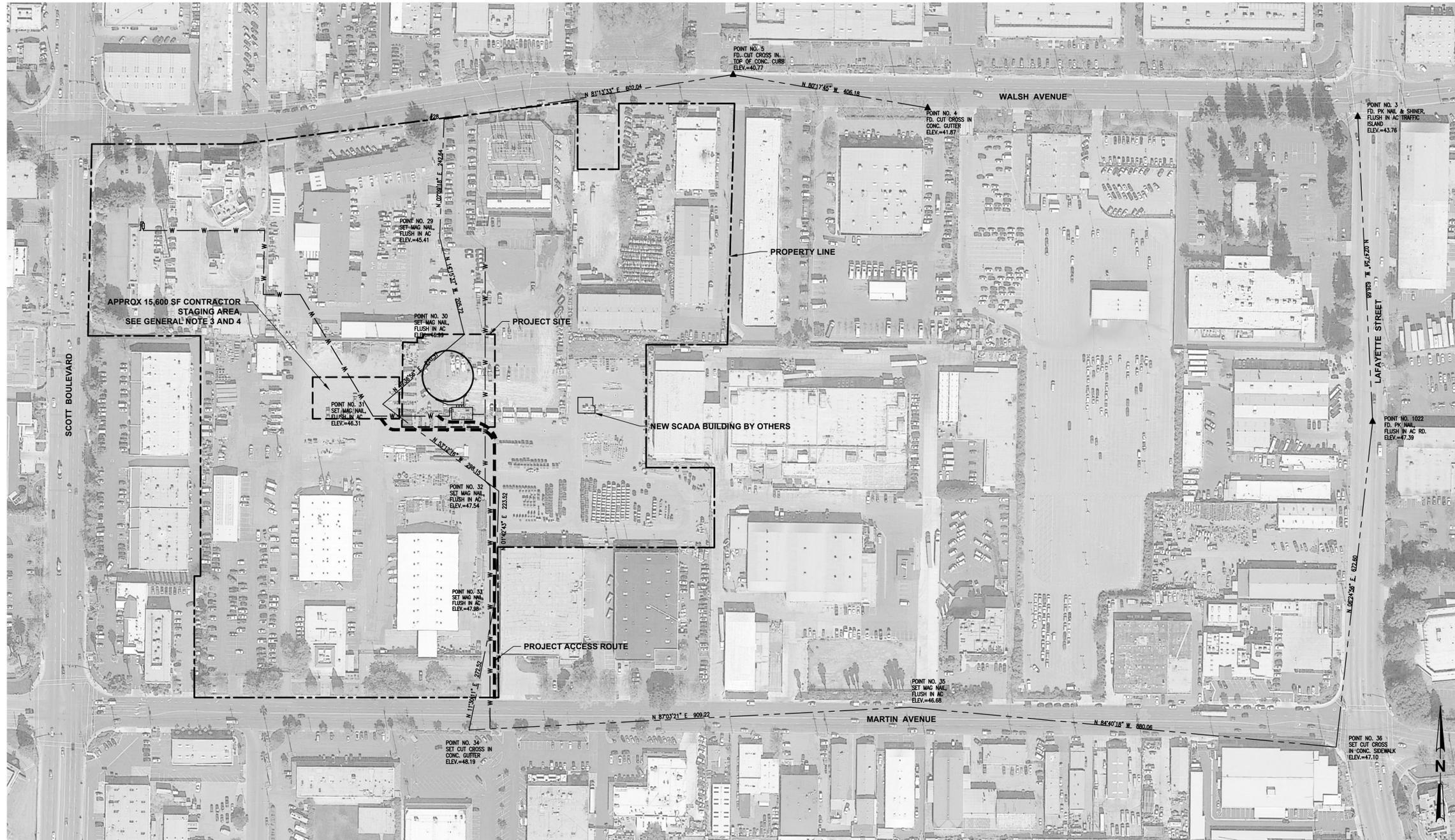
GHD Inc.
1735 North First Street Suite 301 San Jose California 95112 USA
T 1 408 451 9615 F 1 408 451 9665
W www.ghd.com

DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
KEY MAP AND GEOTECHNICAL BORINGS PLAN

APPROVED _____ DATE _____ BY _____
DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	PS
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	C-101	SHT.	4 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4



SURVEY CONTROL, CONTRACTOR ACCESS AND STAGING PLAN



SHEET GENERAL NOTES

1. BASE AERIAL IMAGE BY GOOGLE EARTH, DATED 2/2/2014.
2. NORTHING AND EASTING COORDINATES SHOWN ON THE PLANS ARE BASED ON THE FOLLOWING SURVEY CONTROL REFERENCE POINTS.
3. EXISTING BOLLARDS IN STAGING AREA TO REMAIN DURING CONSTRUCTION.
4. NORTHERN EDGE OF THE STAGING AREA IS THE AC BERM. CONTRACTOR SHALL MAINTAIN ACCESS TO THE MATERIAL BINS.

SURVEY CONTROL NOTES

1. GROUND TOPOGRAPHIC SURVEY PREPARED BY: CROSS LAND SURVEYING, INC. 2210 MT. PLEASANT ROAD SAN JOSE, CA 95148 PHONE (408) 274-7994
2. DATE ORIGINAL TOPOGRAPHIC SURVEY PERFORMED JULY 2014.
3. BASIS OF BEARINGS: HORIZONTAL COORDINATES ARE DERIVED FROM A FAST-STATIC GPS SURVEY HOLDING HPGN-DENSIFICATION POINTS "MISSION" (2214), "SAN PEDRO" (2218), AND "SAN ANTONIO" (2217) TWO-DIMENSIONALLY AND ALL OF THE ELEVATIONS OF THE FLIGHT CROSSES IN A LEAST SQUARES ADJUSTMENT OF THE GPS DATA, AS PERFORMED IN MARCH 2008 FOR THE CITY OF SANTA CLARA WALSH AVENUE SEWER PROJECT. THE VALUES HELD FOR THE HPGN-DENSIFICATION POINTS ARE AS SHOWN ON THE RECORD OF SURVEY PREPARED BY THE SANTA CLARA VALLEY WATER DISTRICT, FILED ON FEBRUARY 3, 2005 IN BOOK 781 OF MAPS AT PAGES 1 THROUGH 5, SANTA CLARA COUNTY RECORDS. HORIZONTAL DATUM IS NAD83, CALIFORNIA COORDINATE SYSTEM, ZONE 3, EPOCH 2004.82.
4. BENCH MARK: ELECTRONIC DIGITAL LEVELS WERE RUN TO CONTROL POINTS 4, 5, 1022 AND 3. A CLOSED TRAVERSE WAS RUN THROUGH POINTS 28, 29, 30, 31, 32, 33, 34, 35 AND 36 TO PUT ELEVATIONS ON THESE POINTS. ELEVATIONS FOR THIS PROJECT ARE BASED ON CITY OF SANTA CLARA BENCHMARK L-2, BEING SCVWD BM 94, WITH A PUBLISHED ELEVATION OF 51.27 FEET, AS LISTED IN THE VERTICAL BENCHMARKS REPORT, OBTAINED FROM THE CITY OF SANTA CLARA WEBSITE. VERTICAL DATUM IS NAVD88.

SURVEY CONTROL POINTS

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	1960353.33	6140195.77	43.76	SET PK NAIL & SHINER IN AC
4	1960371.09	6139310.87	41.87	SET CUT CROSS CONC GUTTER
5	1960439.56	6138910.50	40.77	SET CUT CROSS IN TC
28	1960347.72	6138315.50	42.54	SET CUT CROSS CONC. DWY.
29	1960105.25	6138306.38	45.41	SET MAG NAIL FLUSH IN AC
30	1959905.87	6138357.06	46.99	SET MAG NAIL FLUSH IN AC
31	1959763.09	6138189.20	46.31	SET MAG NAIL FLUSH IN AC
32	1959584.50	6138427.95	47.54	SET MAG NAIL FLUSH IN AC
33	1959361.08	6138421.27	47.98	SET MAG NAIL FLUSH IN AC
34	1959094.03	6138366.93	48.19	SET CUT CROSS CONC GUTTER
35	1959140.73	6139274.95	46.68	SET MAG NAIL FLUSH IN AC
36	1959059.01	6140151.21	47.10	SET CUT CROSS CONC. WALK
1022	1959727.40	6140226.36	47.39	SET PK NAIL IN CENTER LANE

CONSTRUCTION STAGING NOTES

1. THE PROJECT SITE IS LOCATED AT THE CITY OF SANTA CLARA CORPORATION YARD. THE CORPORATION YARD IS A WORKING FACILITY. IN ADDITION, OTHER CONSTRUCTION PROJECTS MAY BE OCCURRING CONCURRENTLY WITHIN THE CORPORATION YARD. THE CONTRACTOR SHALL COORDINATE WITH THE CITY TO MINIMIZE INTERRUPTIONS TO FACILITY OPERATIONS AND COORDINATE WORK WITH OTHER CONTRACTORS ON SITE.
2. CONSTRUCTION STAGING AREA IS LIMITED TO THE PROJECT SITE AND STAGING AREA AS SHOWN ON THIS SHEET. COORDINATE WITH THE CITY OF SANTA CLARA FOR ESTABLISHING NECESSARY SITE ACCESS, INGRESS AND EGRESS ROUTES, AND CONSTRUCTION STAGING AREA.
3. SHOULD THE PROJECT REQUIRE COMPLETE OR PARTIAL PUBLIC STREET CLOSURE OR VEHICLE TRAFFIC DISRUPTION, THE CONTRACTOR SHALL SUBMIT TO THE CITY OF SANTA CLARA A COMPREHENSIVE TRAFFIC CONTROL PLAN FOR APPROVAL PRIOR TO WORK.
4. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY DURING THE CONSTRUCTION PERIOD.
5. CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FENCING FOR BOTH THE PROJECT SITE AND THE STAGING AREA. SEE C-121 FOR PROJECT SITE LIMIT OF WORK.
6. ACCESS ROUTE SHALL BE AS DELINEATED UNLESS OTHERWISE APPROVED.

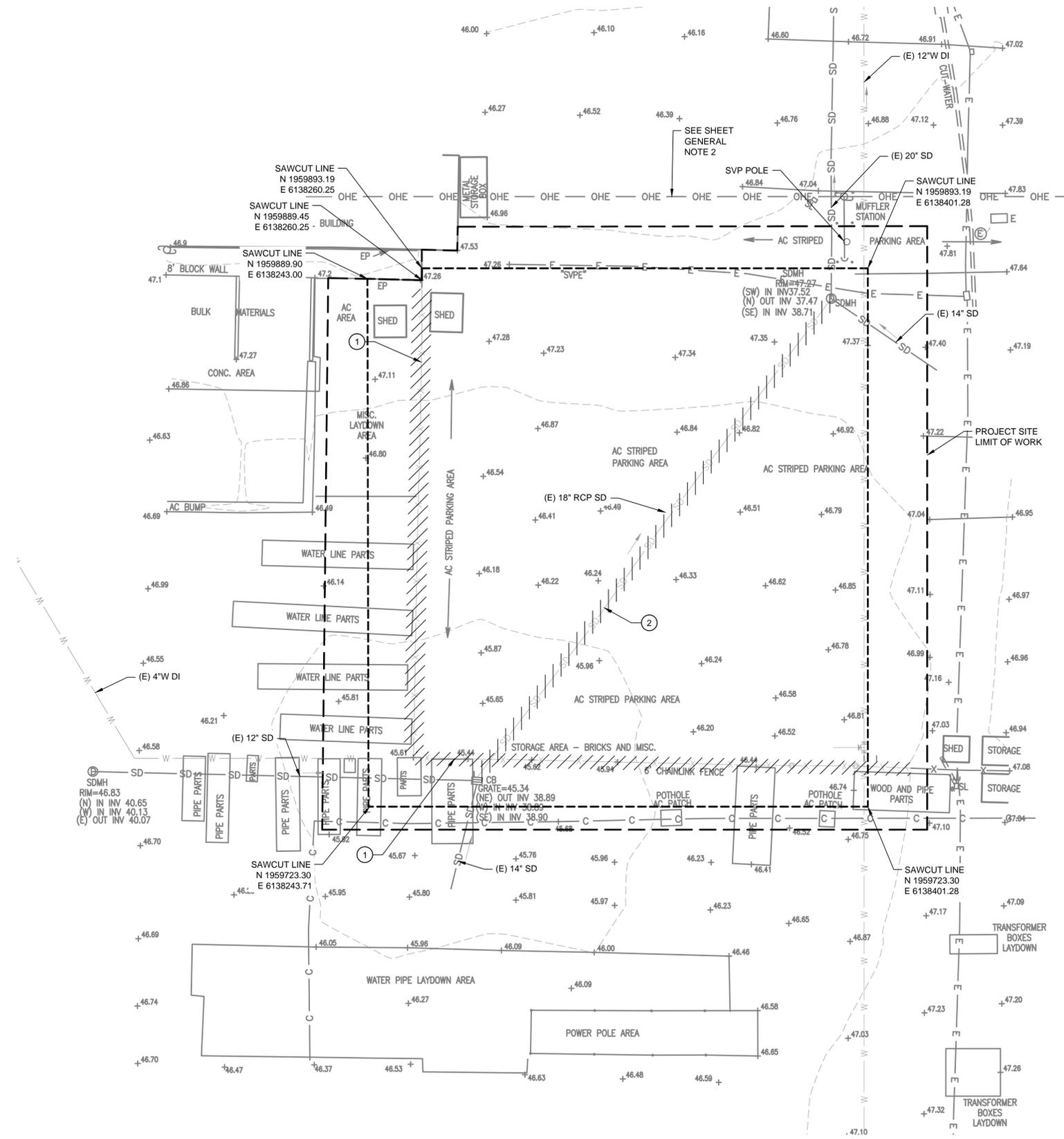


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DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 SURVEY CONTROL, CONTRACTOR ACCESS AND STAGING PLAN

PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY MY	DRAWN BY PS
CHECKED BY NK/PS	YEAR 2014	DATE DEC 2014
DRAWING NO. C-102	SHT. 5 OF 60	BLK. BK. PG. 55 AND 56
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4



SITE DEMOLITION PLAN
 1"=20'
 0 20' 40'

SHEET GENERAL NOTES

- PIPE AND SITE DEMOLITION ON THIS SHEET PREPARES THE SITE FOR NEW WORK SHOWN ON C-121.
- CONTRACTOR SHALL MAINTAIN A MINIMUM 15' CLEARANCE BETWEEN SILICON VALLEY POWER OVERHEAD ELECTRICAL LINES AND HIS EQUIPMENT AND METAL OBJECTS.
- SAW CUT LINES FOR NEW UTILITIES NOT SHOWN. SEE C-121 AND ELECTRICAL DRAWINGS FOR LOCATION OF NEW UTILITIES.
- WATER LINE PARTS, PIPE PARTS, AND ITEMS IN THE MISC. LAY DOWN AREA LOCATED ON THE WEST AND SOUTH SIDES OF THE PROJECT SITE WILL BE REMOVED BY CITY PRIOR TO START OF CONSTRUCTION. THE TWO SHEDS LOCATED IN THE NORTHWEST CORNER OF THE PROJECT SITE WILL REMAIN IN PLACE.
- EXISTING PAVING THICKNESS IS APPROXIMATELY 2 INCHES.

DEMOLITION NOTES

- REMOVE APPROXIMATELY 310± OF EXISTING FENCE. GATE AND APPURTENANCES TO THE NEAREST POST. POSTS AND CONCRETE AROUND POSTS SHALL BE REMOVED. BACKFILL HOLES WITH CLASS II BASEROCK COMPACTED TO 95% RELATIVE COMPACTION OR CLSM. CLSM SHALL BE A HAND-EXCAVATABLE MIXTURE OF CEMENT, POZZOLAN, COARSE AND FINE AGGREGATE, AND WATER MIXED IN ACCORDANCE WITH ASTM C94 AND SHALL BE FLOWABLE DURING PLACEMENT. IT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF NO LESS THAN 50 PSI AND A MAXIMUM 28 DAY COMPRESSIVE STRENGTH OF NO MORE THAN 150 PSI. CONTRACTOR TO SALVAGE GATE AND RETURN TO CITY.
- CONTRACTOR SHALL REMOVE ENTIRE LENGTH OF APPROX. 198 FT. OF (E) 18" RCP STORM DRAIN PIPE. REMOVE TRENCH BACKFILL, PIPE BACKFILL, AND BEDDING. EXCAVATED AREA TO BE REPLACED WITH CLASS II AGGREGATE BASEROCK COMPACTED TO 95%. OPENING IN MANHOLE AND CATCHBASIN AFTER REMOVAL OF (E) SD PIPE SHALL SERVE AS OPENING FOR NEW STORM DRAIN PIPE WORK SHOWN ON C-121. SEE C-121, KEYNOTE 4. CONTRACTOR SHALL SEQUENCE THE DEMOLITION OF (E) 18" SD PIPE AND INSTALLATION OF (N) STORM DRAIN FACILITIES SUCH THAT THE MAXIMUM TIME THE SITE DOES NOT HAVE FUNCTIONING STORM DRAIN FACILITIES IS 24 HOURS. CONTRACTOR SHALL ENSURE THAT NO RAIN IS FORECAST FOR THE DAY PRIOR AND DAY AFTER THE 24 HOUR OUTAGE PERIOD.

LEGEND

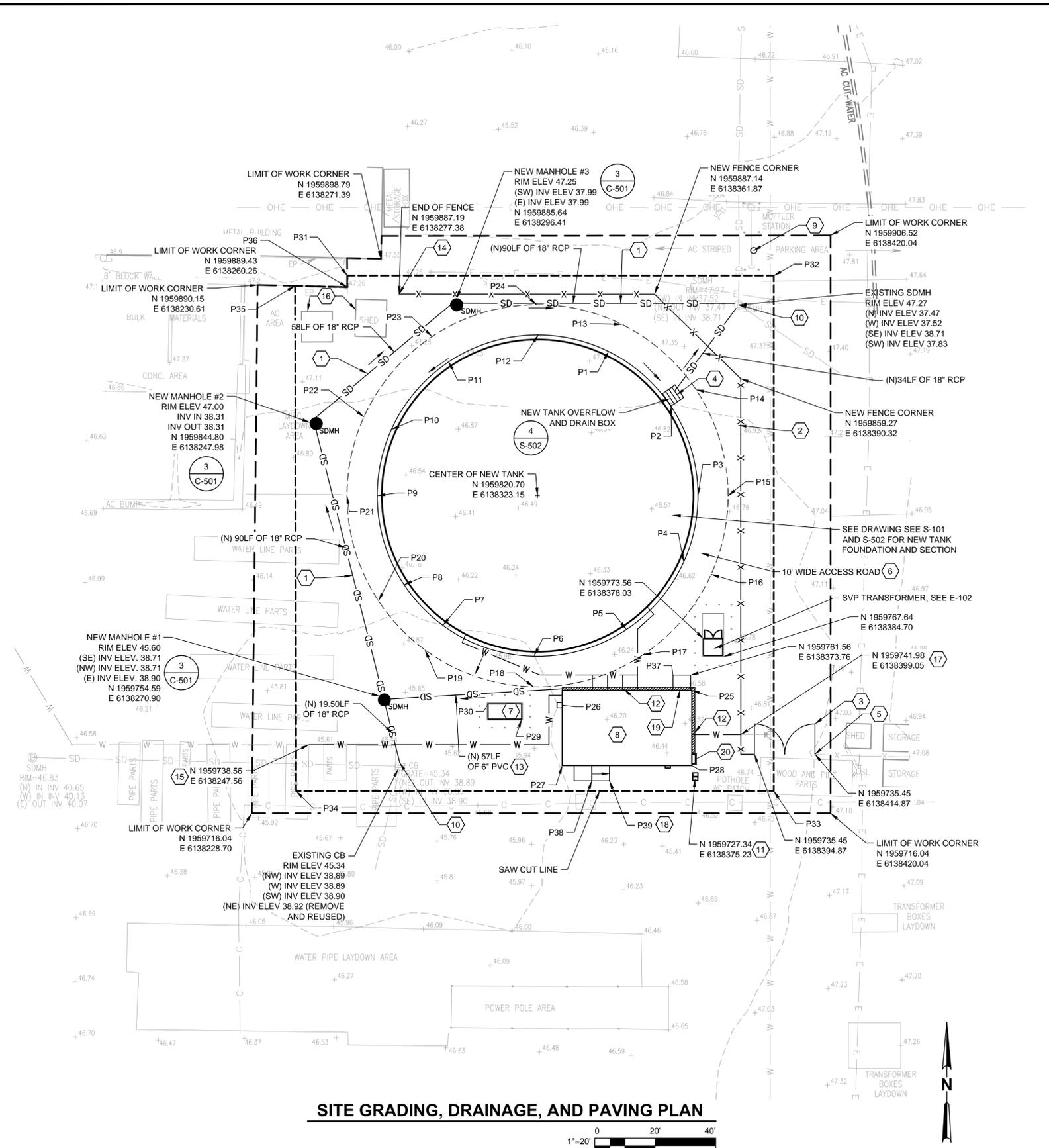
- SAWCUT LINE
- /// DEMOLISH AND REMOVE OR ABANDON-IN-PLACE
- FLOW DIRECTION



DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 SITE DEMOLITION PLAN

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	C-111	SHT.	6 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4



SITE GRADING, DRAINAGE, AND PAVING PLAN



POINTS TABLE					
POINTS	NORTHING	EASTING	FINISH GRADE ELEVATION	ROUGH SUBGRADE ELEVATION (SEE GENERAL NOTE E)	DESCRIPTION
P1	1959888.22	6138346.62	48.04	44.87±	EDGE OF FOUNDATION
P2	1959850.08	6138367.26	47.58	44.87±	EDGE OF FOUNDATION
P3	1959824.10	6138376.04	47.42	44.87±	EDGE OF FOUNDATION
P4	1959798.88	6138371.45	47.28	44.37±	EDGE OF FOUNDATION
P5	1959776.59	6138352.54	46.95	44.37±	EDGE OF FOUNDATION
P6	1959767.93	6138322.03	46.60	44.37±	EDGE OF FOUNDATION
P7	1959777.93	6138291.84	46.60	44.37±	EDGE OF FOUNDATION
P8	1959791.35	6138279.02	46.83	44.37±	EDGE OF FOUNDATION
P9	1959817.36	6138270.26	47.25	44.87±	EDGE OF FOUNDATION
P10	1959842.51	6138274.85	47.45	44.87±	EDGE OF FOUNDATION
P11	1959864.83	6138293.81	47.93	44.87±	EDGE OF FOUNDATION
P12	1959873.60	6138319.85	47.99	44.87±	EDGE OF FOUNDATION
P13	1959877.18	6138351.06	47.35±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P14	1959855.62	6138375.58	47.15±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P15	1959824.74	6138386.02	46.83±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P16	1959794.77	6138380.57	46.70±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P17	1959768.27	6138358.08	46.30±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P18	1959757.82	6138327.01	46.00±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P19	1959769.87	6138285.93	45.87±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P20	1959786.03	6138270.55	46.26±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P21	1959816.72	6138260.28	46.45±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P22	1959846.67	6138265.75	47.00±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P23	1959873.16	6138288.27	47.28±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P24	1959883.58	6138319.23	47.30±	-	ACCESS ROAD EDGE, SEE GENERAL NOTE F.
P25	1959756.56	6138374.18	46.60±	-	PUMP STATION BUILDING
P26	1959751.64	6138331.34	46.00±	-	PUMP STATION BUILDING
P27	1959731.73	6138331.34	46.00±	-	PUMP STATION BUILDING
P28	1959731.73	6138374.18	46.52±	-	PUMP STATION BUILDING
P29	1959747.06	6138317.89	45.95±	-	GENERATOR
P30	1959752.06	6138306.8	45.95±	-	GENERATOR
P31	1959893.19	6138260.25	47.26±	-	SAWCUT LINE, SEE GENERAL NOTE F.
P32	1959893.19	6138401.28	47.50±	-	SAWCUT LINE, SEE GENERAL NOTE F.
P33	1959723.30	6138401.28	46.76±	-	SAWCUT LINE, SEE GENERAL NOTE F.
P34	1959723.30	6138243.34	45.63±	-	SAWCUT LINE, SEE GENERAL NOTE F.
P35	1959899.90	6138243.01	47.22±	-	SAWCUT LINE, SEE GENERAL NOTE F.
P36	1959899.43	6138260.26	47.26±	-	SAWCUT LINE, SEE GENERAL NOTE F.
P37	1959761.56	6138367.26	46.63	-	EDGE OF CONCRETE STOOP, 9" THICK, 1/2" LIP AT BUILDING, SEE DETAIL 2/S-501
P38	1959726.73	6138341.09	46.63	-	EDGE OF CONCRETE STOOP, 9" THICK, 1/2" LIP AT BUILDING, SEE DETAIL 2/S-501
P39	1959721.73	6138335.26	46.38±	-	EDGE OF ADA COMPLIANT RAMP, SLOPE 5% TO MEET EXISTING GRADE. SEE GENERAL NOTE F.

- SHEET GENERAL NOTES**
- MINIMUM COVER FOR YARD PIPING SHALL BE 3 FEET. AT POINTS OF CONNECTION TO EXISTING UTILITIES, DEPTH OF COVER SHALL MATCH.
 - CONTRACTOR SHALL REPAVE ENTIRE AREA WITHIN CONSTRUCTION ZONE AND STAGING AREA UNLESS OTHERWISE NOTED. AREAS THAT ARE SAWCUT AND NOT COVERED WITH A STRUCTURE OR DIATOMACEOUS EARTH SHALL BE PAVED PER DETAIL 2/C-504.
 - DEMOLITION WORK AND EXISTING UTILITIES ARE SHOWN ON C-111
 - SEE E-101 FOR ELECTRICAL SITE PLAN.
 - ROUGH SUBGRADE ELEVATION SHOWN DENOTES TOP OF 18" ENGINEERED FILL AND BOTTOM OF CONCRETE FOUNDATION.
 - FINISH GRADE ELEVATION IS APPROXIMATION OF EXISTING GRADE. CONTRACTOR SHALL FIELD VERIFY AND MATCH EXISTING GRADE AT EDGE OF ACCESS ROAD/ SAWCUT LINE.
 - EXISTING SHEDS LOCATED IN NORTHWEST CORNER OF PROJECT SITE SHALL REMAIN IN PLACE.
 - CROSSING UTILITIES TO MAINTAIN MINIMUM 12" VERTICAL CLEARANCE.
- KEYNOTES**
- INSTALL (N) 18" RCP STORM DRAIN PER DETAIL 4/C-502. CONTRACTOR SHALL SEQUENCE THE DEMOLITION OF (E) 18" SD PIPE AND INSTALLATION OF (N) STORM DRAIN FACILITIES SUCH THAT THE MAXIMUM TIME THE SITE DOES NOT HAVE FUNCTIONING STORM DRAIN FACILITIES IS 24 HOURS. CONTRACTOR SHALL ENSURE THAT NO RAIN IS FORECAST FOR THE DAY PRIOR TO AND DAY AFTER THE 24 HOUR OUTAGE PERIOD.
 - INSTALL (N) 6' HIGH CHAIN LINK FENCE. SEE DETAIL 1/C-501.
 - INSTALL (N) 20' WIDE DOUBLE GATE. SEE DETAIL 2/C-501.
 - AT OVERFLOW AND DRAIN BOX, INSTALL (N) 12" SD RCP LINE AT INV ELEV 42.00. AT (E) SDMH, (N) 12" SD RCP LINE SHALL BE AT INV 37.83. SEE KEYNOTE 10 FOR TIE-IN CONNECTION. CONTRACTOR SHALL USE EXISTING OPENING FROM SD DEMOLITION. INSTALL SLEEVE COUPLINGS ON 12" RCP LINE AT 1' AND 3' DISTANCE MEASURED FROM OUTSIDE EDGE OF OVERFLOW BOX.
 - CONTRACTOR SHALL INSTALL NEW FENCE POST AND CONNECT IT TO EXISTING FENCE.
 - ACCESS ROAD SHALL CONSIST OF 3-INCH THICK LAYER OF DIATOMACEOUS EARTH. ACCESS ROAD SHALL BE SLOPED TO DRAIN AWAY FROM THE TANK FOUNDATION. CONTRACTOR SHALL INSTALL 2x4 PRESSURE TREATED HEADER AT EDGE OF ACCESS ROAD TO FACILITATE PAVING ADJACENT TO ACCESS ROAD. TOP OF HEADER SHALL BE INSTALLED FLUSH WITH EXISTING GRADE. HEADER LENGTH SHALL BE APPROXIMATELY 10.86 FEET FOR 2.5 DEGREE DEFLECTION BETWEEN CHORDS ALONG THE CURVE.
 - FOR NEW STANDBY ENGINE GENERATOR, INSTALL 12" THICK SLAB-ON-GRADE CONCRETE PAD WITH #5@12"EW T&B WITH 3/4" CHAMFER ON EXPOSED CORNERS. SEE DETAIL 2/S-501 FOR FOUNDATION REQUIREMENTS AND E-101 FOR ELECTRICAL REQUIREMENTS.
 - FOR NEW PUMP STATION, SEE A-111 FOR ARCHITECTURAL PLANS AND S-121 FOR FOUNDATION. CONTRACTOR SHALL INSTALL THE CONDUITS PER E-102 AND GROUNDING SYSTEM PER E-104 PRIOR TO FOUNDATION CONSTRUCTION.
 - NEW SVP ELECTRICAL SERVICE POLE TO BE CONSTRUCTED BY OTHERS. CONTRACTOR SHALL PROTECT 12KV ELECTRICAL POLE FROM DAMAGE AT ALL TIMES. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE VICINITY. IF DAMAGED, CONTRACTOR SHALL REPAIR OR REPLACE AS REQUIRED AT NO COST TO THE CITY.
 - CONTRACTOR SHALL PENETRATE WALL OF STRUCTURE AND INSTALL PIPE IN ACCORDANCE WITH DETAIL 3/C-503. PIPE SHALL BE FLUSH WITH INTERIOR WALL OF STRUCTURE. ON STRUCTURE INTERIOR, CONTRACTOR SHALL MAKE SMOOTH GROUT FINISH AROUND PIPE END AND INTERIOR WALL.
 - ELECTRICAL BOXES, SEE E-101.
 - PRE-SLOPED TRENCH DRAIN SYSTEM SHALL BE 6" WIDE POLYPROPYLENE CHANNEL, DUCTILE IRON FRAME, AND ADA COMPLIANT DUCTILE IRON GRATING, DEAD LEVEL BY WATTS, DURASLOPE BY NDS, OR APPROVED EQUAL. INSTALL CATCH BASIN, PIPING CONNECTION, CORNER/ TEE SECTION, AND APPURTENANCES AS REQUIRED. TRENCH DRAIN SYSTEM SHALL BE SLOPED MIN 0.7% TOWARDS (N) 6" PVC STORM DRAIN LINE. SEE DETAIL 5/C-503. SEE KEYNOTE 19.
 - CONNECT (N) 6" PVC SCHEDULE 80 STORM DRAIN LINE TO PRE-SLOPED TRENCH DRAIN AT INVERT ELEVATION 44.25. 6" SD SHALL TIE-IN TO (N) MANHOLE #1 AT INV ELEV. 38.90 PER DETAIL 3/C-501.
 - CONTRACTOR SHALL INSTALL NEW FENCE POST 4 FEET FROM EXISTING SHED.
 - CONTRACTOR SHALL TIE INTO EXISTING 4" DI WATER LINE BY REMOVING CAP AND USING MECHANICAL FULLY RESTRAINED JOINTS. DEPTH TO TOP OF EXISTING PIPE IS APPROXIMATELY 4 FEET. CONTRACTOR TO VERIFY EXIST PIPE MATERIAL AND DEPTH.
 - CONTRACTOR TO ALLOW FOR ACCESS TO THE EXISTING SHEDS AT ALL TIMES. PROTECT THE SHEDS FROM ANY DAMAGE DURING CONSTRUCTION.
 - CONTRACTOR SHALL CONNECT (N) 12"W TO (E) 12"W WATER LINE BY REMOVING CAP. USING FITTINGS AS NECESSARY AND MECHANICALLY FULLY RESTRAINED JOINTS. DEPTH TO TOP OF (E) 12"W IS APPROXIMATELY 3 FEET. DEPTH TO TOP OF (N) 12"W PIPE IS APPROXIMATELY 5 FOOT. VERIFY DEPTH OF EXISTING 12"W. CONTRACTOR TO INSURE THAT THERE IS MIN 18" CLEARANCE BETWEEN BOTTOM OF THICKENED EDGE OF PUMP STATION FOUNDATION AND TOP OF NEW 12"W WHEN CONNECTING TO (E) 12"W.
 - 5 FOOT LONG AC RAMP. SLOPE OF RAMP TO BE GRADED APPROXIMATELY 5% TO FG 46.38±.
 - TRENCH DRAIN AT CONCRETE DOOR PAD TRANSITION. SEE DETAIL 6/C-503.
 - 10" THICK EQUIPMENT PAD, FOR UTILITY METER ENCLOSURE, TOP OF PAD 4" ABOVE GRADE. USE #5@12"EW T&B AND 3/4" CHAMFER ALL EXPOSED EDGES. MINIMUM 4 EPOXY ANCHORS, 3/4" DIAMETER WITH MIN 6" EMBEDMENT, SIMPSON SET-XP OR APPROVED EQUAL. SEE DETAIL 2/S-501.



DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
SITE GRADING, DRAINAGE PLAN, AND PAVING PLAN

APPROVED _____ DATE _____ BY _____
DIRECTOR OF WATER & SEWER UTILITIES

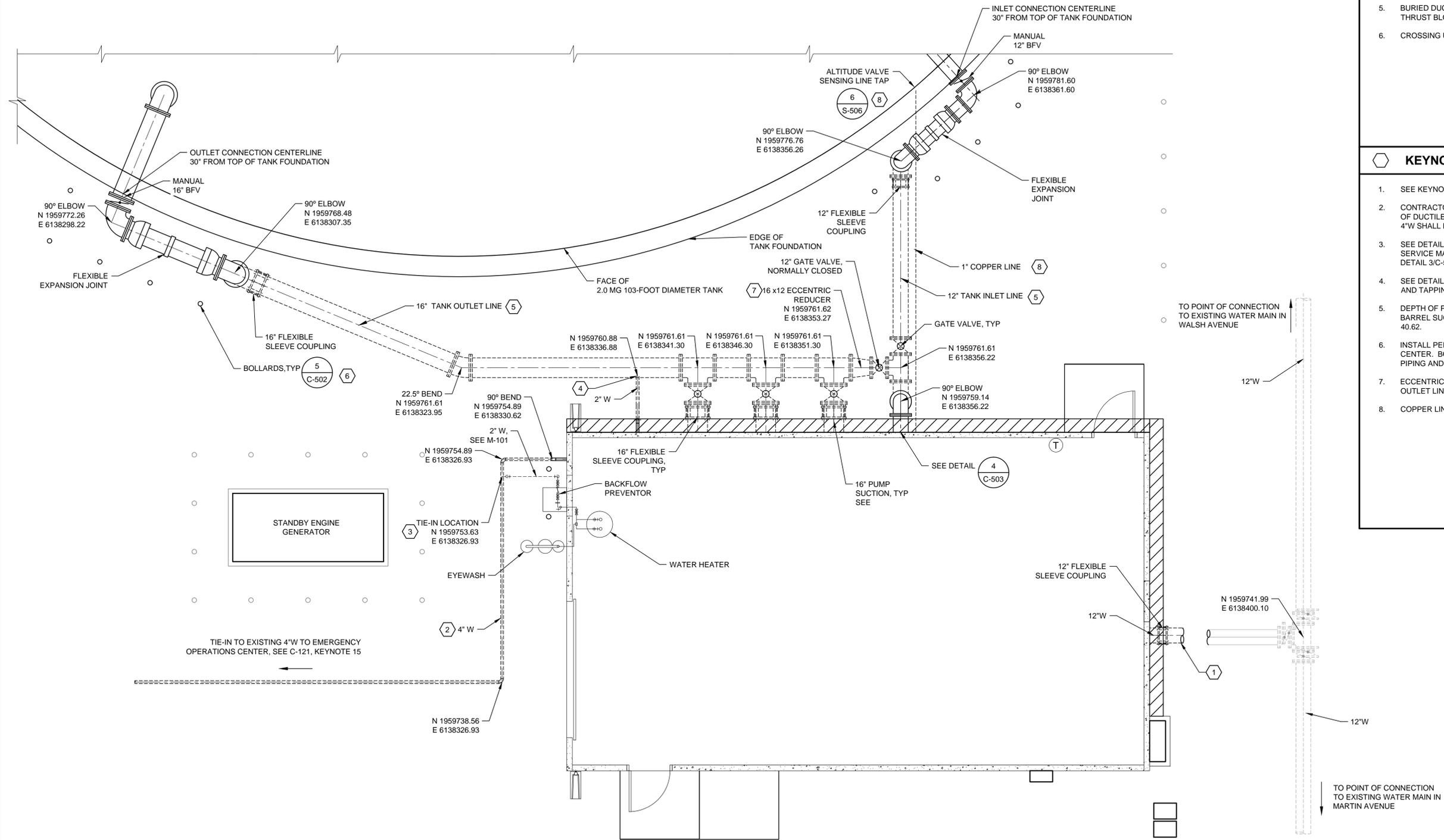
PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	MY	DRAWN BY MY
CHECKED BY	NK/PS	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	C-121	SHT. 7 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

SHEET GENERAL NOTES

1. PIPING GREATER THAN 2-INCH DIAMETER SHALL BE DUCTILE IRON. PIPING LESS THAN OR EQUAL TO 2-INCH SHALL BE COPPER PIPE TYPE "K" SOFT.
2. BURIED PIPING AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE ENCASEMENT PER SECTION 02071.
3. SEE C-132 FOR PIPING PLAN INSIDE PUMP STATION.
4. SEE C-133 FOR PIPING INSIDE THE TANK.
5. BURIED DUCTILE IRON PIPE SHALL HAVE MECHANICAL FULLY RESTRAINED JOINTS AND THRUST BLOCKS.
6. CROSSING UTILITIES TO MAINTAIN MINIMUM 12" VERTICAL CLEARANCE.

KEYNOTES

1. SEE KEYNOTE 17 ON C-121.
2. CONTRACTOR SHALL INSTALL 4" W PER DETAIL 3/C-502. 4" W SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE PER CITY STANDARD SPECIFICATION SECTION 02071. TOP OF 4" W SHALL BE ELEVATION 41.90.
3. SEE DETAIL 1/C-503 AND PUBLIC WATER SYSTEM NOTES ON G-002 FOR 2" WATER SERVICE MATERIAL AND INSTALLATION REQUIREMENTS. METER SHALL BE 1-1/2". SEE DETAIL 3/C-502 FOR TRENCH BACKFILL.
4. SEE DETAIL 1/C-503 AND PUBLIC WATER SYSTEM NOTES ON G-002 FOR 2" W MATERIAL AND TAPPING REQUIREMENTS. SEE DETAIL 3/C-502 FOR TRENCH BACKFILL.
5. DEPTH OF PIPELINE SHALL BE COORDINATED WITH DEPTH OF VERTICAL TURBINE PUMP BARREL SUCTION NOZZLE. TOP OF PIPELINE ELEVATION SHALL BE APPROXIMATELY 40.62.
6. INSTALL PERMANENT BOLLARDS. BOLLARDS SHALL BE SPACED MAXIMUM 4' ON CENTER. BOLLARDS SHALL BE INSTALLED MIN 18" CLEAR FROM OUTSIDE EDGE OF PIPING AND APPURTENANCES.
7. ECCENTRIC REDUCER SHALL BE INSTALLED TO MATCH THE TOP OF TANK INLET AND OUTLET LINES.
8. COPPER LINE SHALL SHARE THE SAME TRENCH AS ADJACENT 12" W PER DETAIL 3/C-502.



PUMP STATION YARD PIPING PLAN



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 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 PUMP STATION YARD PIPING PLAN

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	C-131	SHT.	8 OF 60
HORIZ. NOTED		VERT. X	
DWG. NO.	W-3200-4		

SHEET GENERAL NOTES

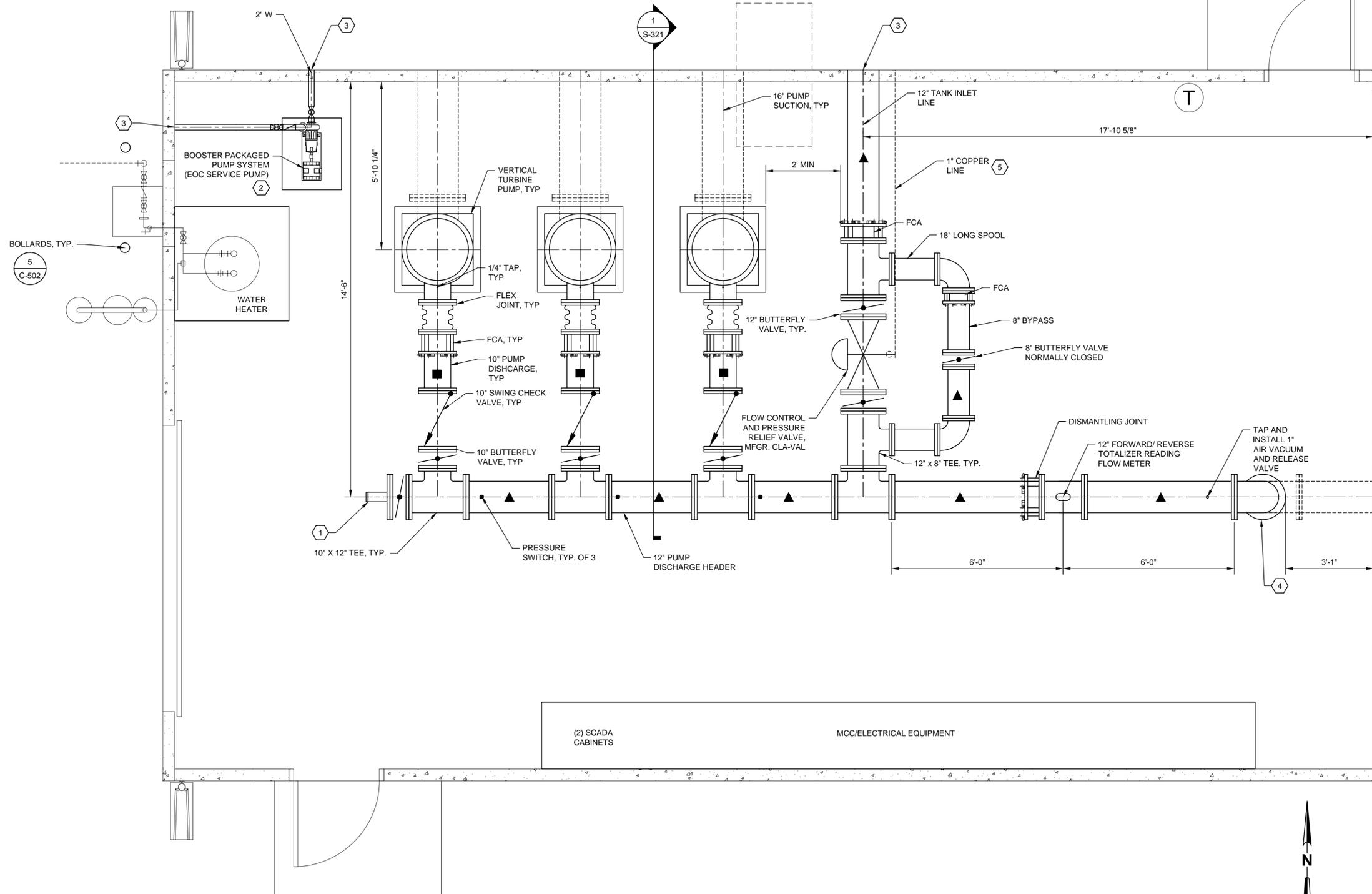
1. PIPING GREATER THAN 2-INCH DIAMETER SHALL BE DUCTILE IRON. PIPING LESS THAN OR EQUAL TO 2-INCH SHALL BE COPPER PIPE TYPE "K" SOFT.
2. BURIED PIPING AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE ENCASEMENT PER SECTION 02071.
3. SEE C-131 FOR CONTINUATION OF PIPING OUTSIDE THE BUILDING.
4. ABOVE GRADE DUCTILE IRON PIPE AND FITTINGS SHALL HAVE FLANGED ENDS.

KEYNOTES

1. CONTRACTOR SHALL INSTALL 12" X 4" TAP LINE FLANGE, DOMESTIC, TYLER UNION. COATING SHALL BE PER SPECIFICATION 09900. PROVIDE 4" SPOOL PIECE, 1 FOOT IN LENGTH AND 4" PLUG.
2. BOOSTER PACKAGED PUMP SYSTEM LAYOUT SHOWN IS SCHEMATIC. CONTRACTOR SHALL INSTALL FITTINGS AS REQUIRED TO CONNECT BOOSTER PACKED PUMP SYSTEM INLET AND OUTLET PIPING TO 2"W AND 4"W.
3. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF WALL PENETRATIONS WITH BUILDING MANUFACTURER. REFER TO ELECTRICAL PLANS FOR ANY REQUIRED CONDUIT PENETRATIONS. SEE DETAIL 4/C-503. SEE MECHANICAL PLANS FOR PIPE PENETRATIONS ASSOCIATED WITH EYE WASH STATION.
4. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF FLOOR PENETRATION WITH BUILDING MANUFACTURER. SEE DETAIL 4/C-503.
5. CONNECT 1" COPPER LINE TO FLOW CONTROL AND PRESSURE RELIEF VALVE. WHERE SENSING LINE IS LOCATED BENEATH BUILDING FOUNDATION, 1" COPPER LINE SHALL BE CONTAINED WITHIN A 2" PVC PIPE. CONTRACTOR SHALL INSTALL A UNION AT THE POINT OF CONNECTION TO THE PILOT SENSING CHAMBER WITH A SHUT-OFF VALVE ON THE TANK SIDE OF THE UNION TO FACILITATE BLEEDING EXCESS AIR.

LEGEND

- ▲ PIPE SUPPORT, SEE DETAIL 1/C-504
- PIPE SUPPORT, SEE DETAIL 3/C-504



PUMP STATION PIPING PLAN



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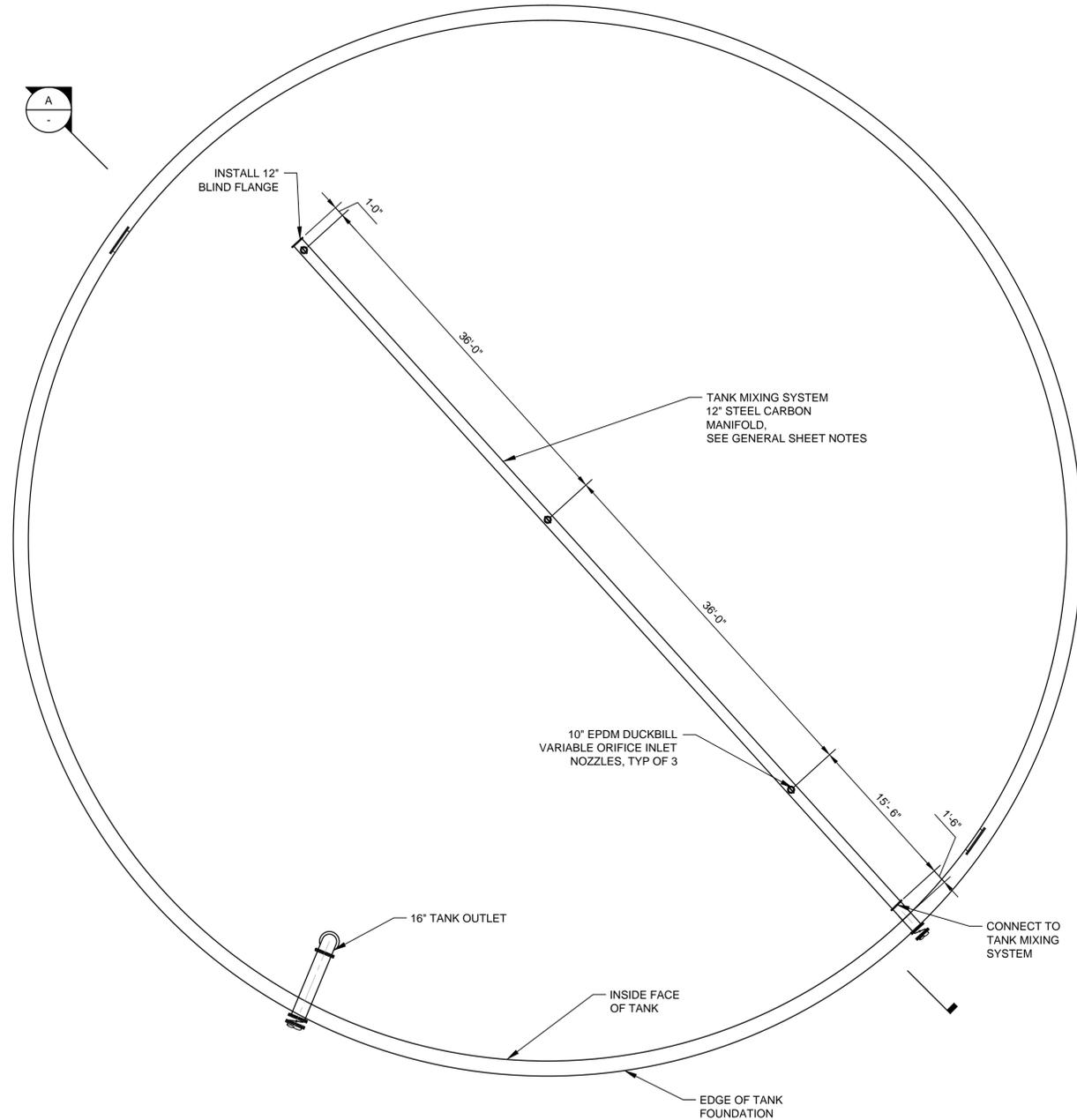
DATE	REVISION	BY

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 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 PUMP STATION PIPING PLAN

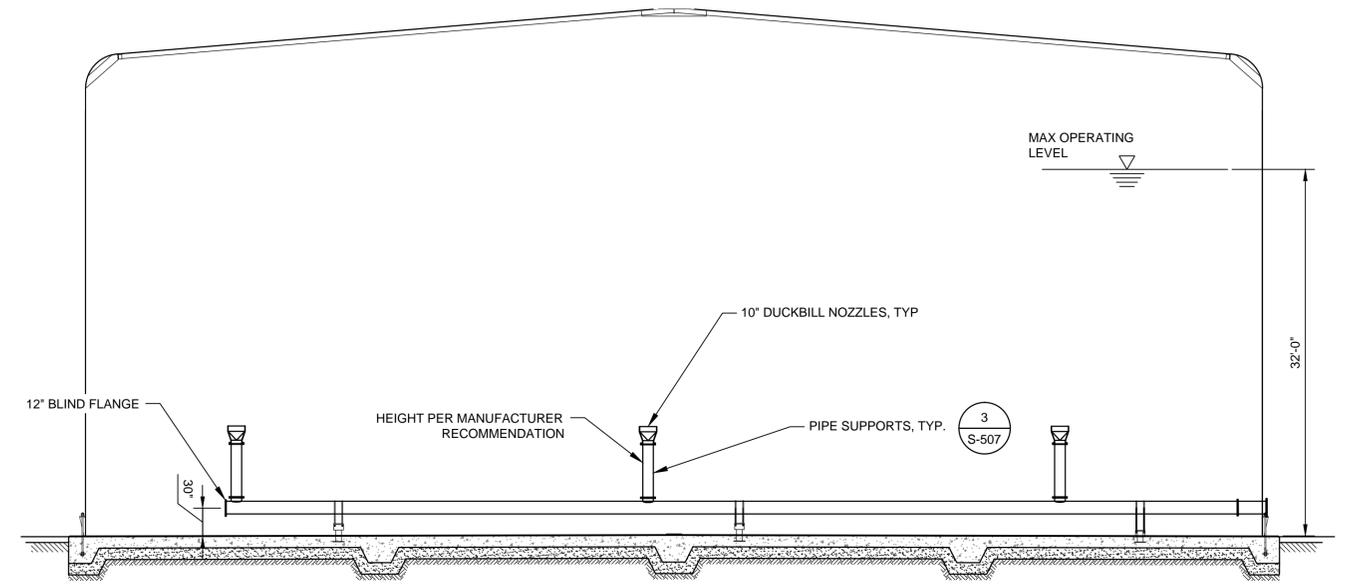
PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY MY	DRAWN BY MY
CHECKED BY NK/PS	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. C-132	SHT. 9 OF 60	
HORIZ. NOTED	VERT. X	DWG. NO. W-3200-4

SHEET GENERAL NOTES

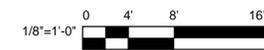
1. THE TANK MIXING SYSTEM SHALL BE A SUPPLEMENTAL SYSTEM INSTALLED INSIDE THE TANK THAT WILL PASSIVELY UTILIZE THE ENERGY PROVIDED BY THE INLET WATER SUPPLY TO GENERATE A SUFFICIENT INLET MOMENTUM TO ACHIEVE A COMPLETE HOMOGENEOUS BLENDING OF THE WATER VOLUME WITHIN THE TANK. THE TANK MIXING SYSTEM SHALL BE A UNI-DIRECTIONAL FLOW MANIFOLD EQUIPPED WITH VARIABLE ORIFICE DUCKBILL INLET NOZZLES THAT ARE NSF61 CERTIFIED.
2. THE TANK MIXING SYSTEM MANUFACTURER SHALL BE RESPONSIBLE FOR DESIGNING THE SYSTEM TO ACHIEVE COMPLETE MIX OF THE TANK VOLUME AT 200 -3000 GPM FILL RATES.
3. THE TANK MIXING SYSTEM SHALL BE SUPPLIED BY THE VARIABLE ORIFICE NOZZLE MANUFACTURER TO MAINTAIN SINGLE SOURCE RESPONSIBILITY FOR THE SYSTEM. THE COMPLETE SYSTEM SHALL BE DEFINED AS ALL PIPING AND APPURTENANCES WITHIN THE TANK DOWNSTREAM OF THE TANK PENETRATION AS IDENTIFIED ON THE PLAN. APPURTENANCES INCLUDE PIPE, FITTINGS, HORIZONTAL AND VERTICAL PIPE SUPPORTS, EXPANSION JOINTS, VARIABLE ORIFICE DUCKBILL INLET NOZZLES, AND ANY OTHER EQUIPMENT AS REQUIRED FOR A COMPLETE OPERATIONAL SYSTEM.
4. INLET NOZZLES SHALL BE DUCKBILL-STYLE CHECK VALVES THAT ALLOW FLUID TO ENTER THE TANK DURING FILL CYCLES AND PREVENT FLOW IN THE REVERSE DIRECTION THROUGH THE NOZZLE DURING DRAW PERIODS. INLET NOZZLES MAY NOT BE FIXED-DIAMETER PORTS OR PIPES. THE VALVES SHALL BE NSF61 CERTIFIED. NSF61 APPROVED/CERTIFIED MATERIALS WILL NOT BE ACCEPTED IN LIEU OF VALVE CERTIFICATION. THE INLET NOZZLES SHALL DISCHARGE AN ELLIPTICALLY SHAPED JET.
5. THE DUCKBILL STYLE NOZZLES SHALL BE ONE-PIECE EPDM ELASTOMER MATRIX WITH INTERNAL FABRIC REINFORCING DESIGNED TO PRODUCE THE REQUIRED DISCHARGE VELOCITY WITH MINIMUM HEADLOSS TO ACHIEVE COMPLETE TANK MIXING. THE FLANGE PORTION SHALL BE EPDM AND AN INTEGRAL PORTION OF THE NOZZLE WITH FABRIC REINFORCING SPANNING ACROSS THE JOINT BETWEEN THE FLANGE AND NOZZLE BODY. THE MANUFACTURER'S NAME, PLANT LOCATION, SERIAL NUMBER AND PRODUCT PART NUMBER WHICH DESIGNATE NOZZLE SIZE, MATERIAL AND CONSTRUCTION SPECIFICATIONS SHALL BE BONDED ONTO THE SURFACE OF THE NOZZLE.
6. SIZE OF INLET NOZZLES SHALL BE 10". MANIFOLD PIPING SHALL BE 12" CARBON STEEL SCHEDULE 40, LINED AND COATED WITH FUSION BONDED EPOXY WITH 316 STAINLESS STEEL BOLTS, NUTS, WASHERS, AND NSF 61 EPDM GASKETS.
7. ALL COMPONENTS OF THE PIPE SUPPORT BRACKET ASSEMBLY SHALL BE CARBON STEEL IN ACCORDANCE WITH THE ASSOCIATED STANDARDS. BRACKET ASSEMBLY SHALL BE COATED PER SPECIFICATION SECTION 09910.
8. ALL INLET NOZZLE, PIPING, PIPE SUPPORT BRACKETS, JOINT CONNECTIONS, EXPANSION JOINTS, AND ANCHORS SHALL BE WARRANTED BY THE TANK MIXING SYSTEM MANUFACTURER AGAINST FAILURE UNDER DESIGN CONDITIONS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL INSTALLATION APPROVAL BY THE ENGINEER.
9. MANUFACTURER TO BE TIDEFLEX TECHNOLOGIES OR EQUAL.



TANK FLOOR PLAN



SECTION

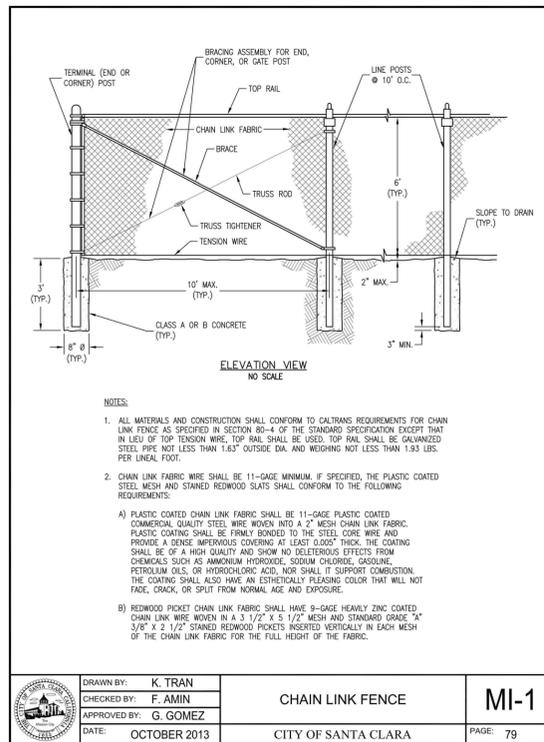


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DATE	REVISION	BY

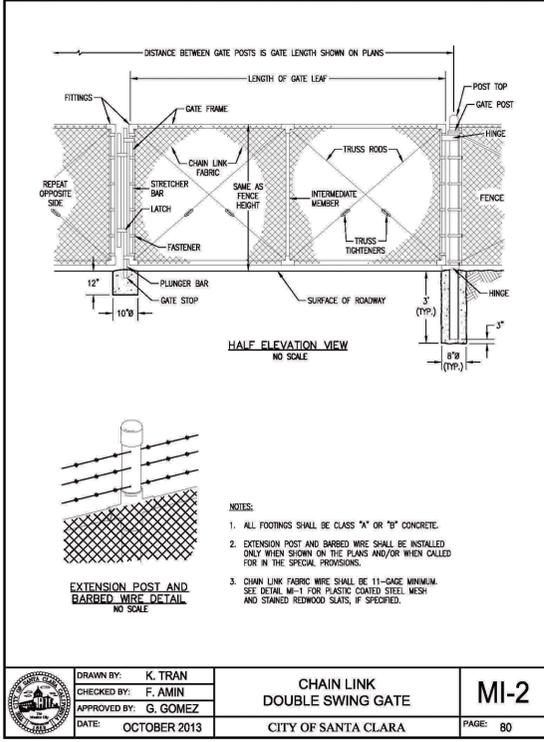
CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 TANK FLOOR PIPING PLAN AND SECTION

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	C-133	SHT.	10 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4



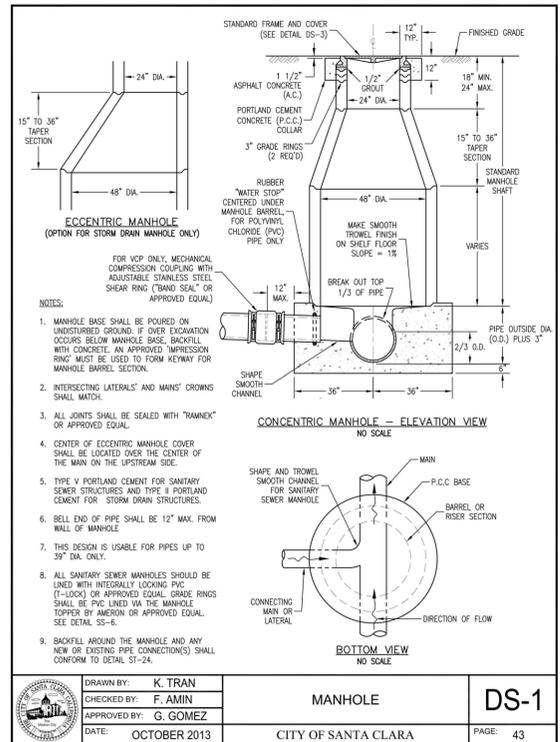
DRAWN BY: K. TRAN	CHAIN LINK FENCE	MI-1
CHECKED BY: F. AMIN		
APPROVED BY: G. GOMEZ		
DATE: OCTOBER 2013		
CITY OF SANTA CLARA		PAGE: 79

1 CHAIN LINK FENCE
C-121



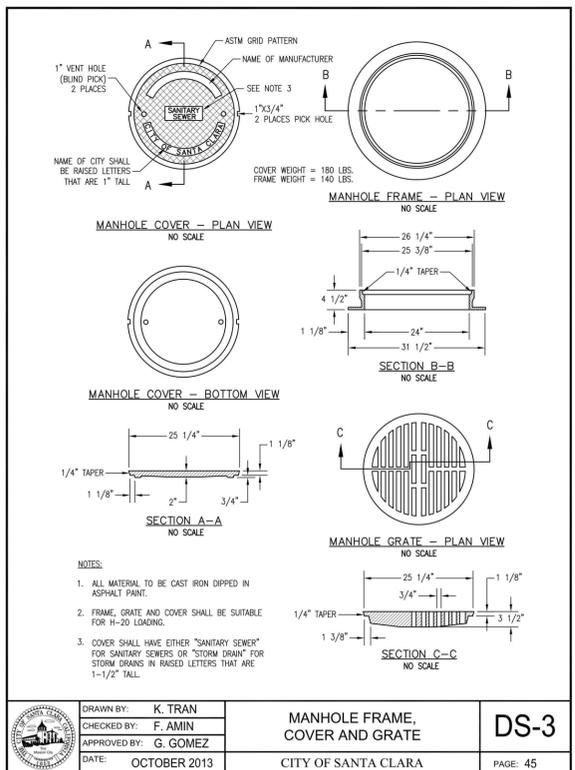
DRAWN BY: K. TRAN	CHAIN LINK DOUBLE SWING GATE	MI-2
CHECKED BY: F. AMIN		
APPROVED BY: G. GOMEZ		
DATE: OCTOBER 2013		
CITY OF SANTA CLARA		PAGE: 80

2 CHAIN LINK DOUBLE SWING GATE
C-121



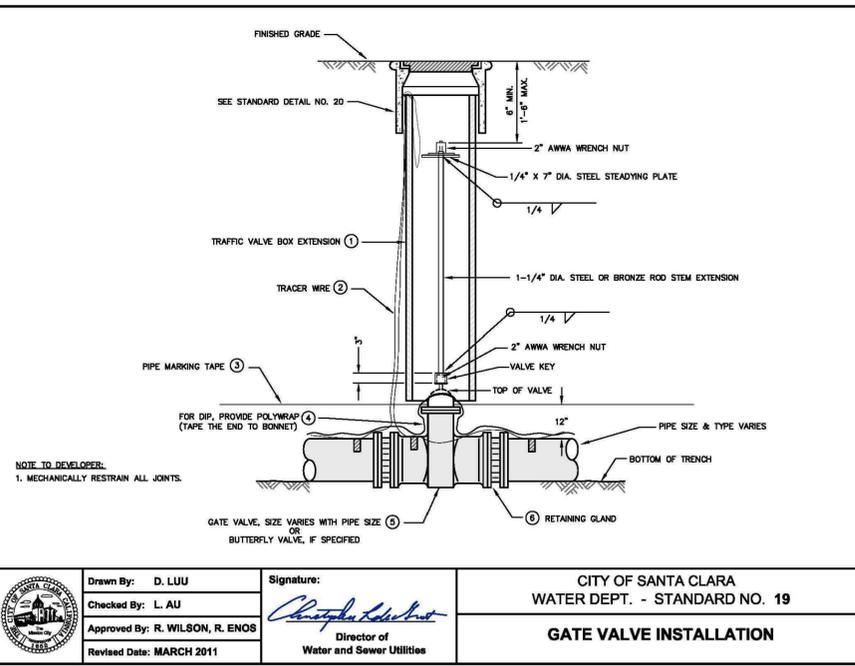
DRAWN BY: K. TRAN	MANHOLE	DS-1
CHECKED BY: F. AMIN		
APPROVED BY: G. GOMEZ		
DATE: OCTOBER 2013		
CITY OF SANTA CLARA		PAGE: 43

3 MANHOLE
C-121



DRAWN BY: K. TRAN	MANHOLE FRAME, COVER AND GRATE	DS-3
CHECKED BY: F. AMIN		
APPROVED BY: G. GOMEZ		
DATE: OCTOBER 2013		
CITY OF SANTA CLARA		PAGE: 45

4 MANHOLE COVER
C-121

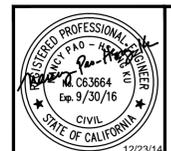


DRAWN BY: D. LUU	Signature: <i>Christopher Wilson</i>	CITY OF SANTA CLARA WATER DEPT. - STANDARD NO. 19
CHECKED BY: L. AU		
APPROVED BY: R. WILSON, R. ENOS		
Revised Date: MARCH 2011		
Director of Water and Sewer Utilities		GATE VALVE INSTALLATION

5 GATE VALVE INSTALLATION
VAR

City of Santa Clara - Water & Sewer Utilities Department
Standard No. 19 - Gate Valve Installation - Material List
Use no lead products for domestic water services.
Domestic Products Only. Use 316 stainless steel bolts, nuts, and washers for all bolted connections.

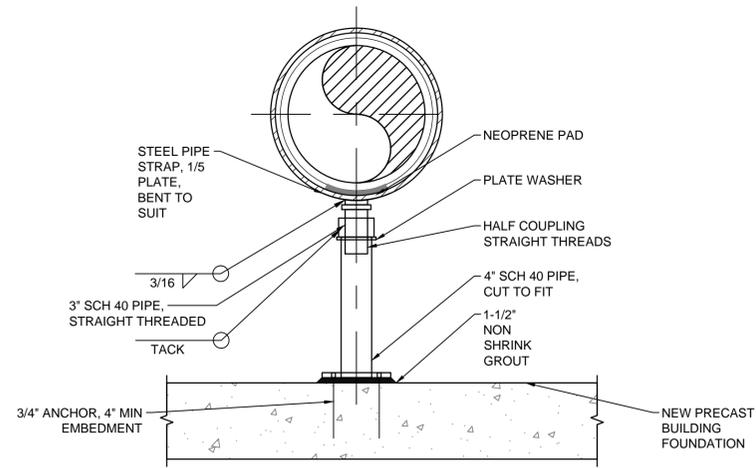
Material	Description	Manufacturer	Model
1. Traffic Valve Box & Extension	Traffic valve box with lid. For potable water, lid shall be marked "WATER". For recycled water, provide purple lid marked "CSC-RW".	Christy	G5
2. Trace Wire	RHW #12 AWG solid with 12" minimum slack inside all valve boxes.		
3. Pipe Marking Tape	For potable water, use blue. For recycled water, use purple. 3" wide, 4 mil, non-detectable.		
4. Polywrap (for DIP)	For potable water, use blue. For recycled water, use purple. 8 mil low density or 4 mil high density polyethylene film installed per AWWA C105. Tape the end to bonnet.		
5. Gate Valve	End connections as required or specified - size as specified. AWWA C-509 resilient seat, epoxy coated inside and out to meet AWWA C-550. Open left with 2" square operating nut. All rubber components shall be EPDM.	M&H Mueller Clow	Style 4067 A-2360 F-6106
Butterfly Valve	End connections as required or specified - size as specified. AWWA C-504 resilient seat, epoxy coated inside and out to meet AWWA C-550. Open left with 2" square operating nut. All rubber components shall be EPDM.	Pratt Mueller	Groundhog series Lineseal III
6. Retaining Gland	Joint restraint for use with mechanical joint fittings. Size as specified.	US Pipe EBAa Uniflange	MJ Field Lok Megalug Series 1100 Series 1400 (DIP) Series 1500 (PVC)



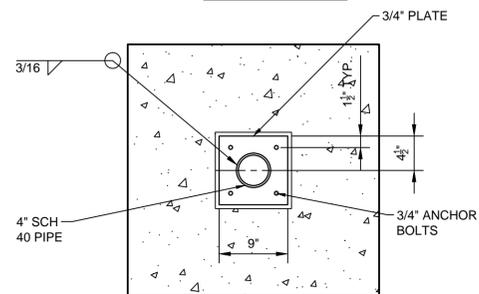
DATE	REVISION	BY

CITY OF SANTA CLARA	
WATER & SEWER UTILITIES	
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION	
1651 MARTIN AVENUE	
CIVIL DETAILS	
APPROVED	DATE
DIRECTOR OF WATER & SEWER UTILITIES	

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	NK/PS	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	C-501	SHT.	11 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4



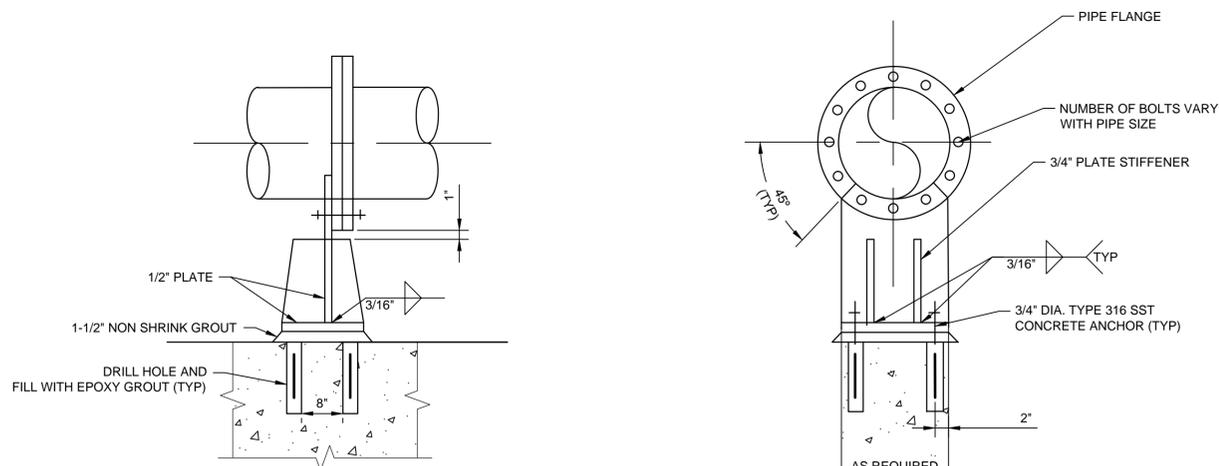
ELEVATION



PLAN

1 PUMP STATION PIPE SUPPORT 1

C-132 NOT TO SCALE



SIDE VIEW

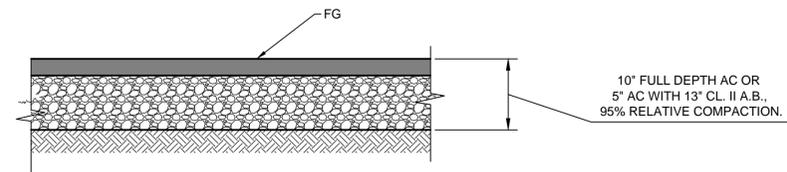
END VIEW

NOTES:

- PIPE SUPPORT SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION
- STIFFENER PLATES NOT REQUIRED IF PIPE FLANGE AND BASE PLATE ARE WITHIN 1" OF EACH OTHER.

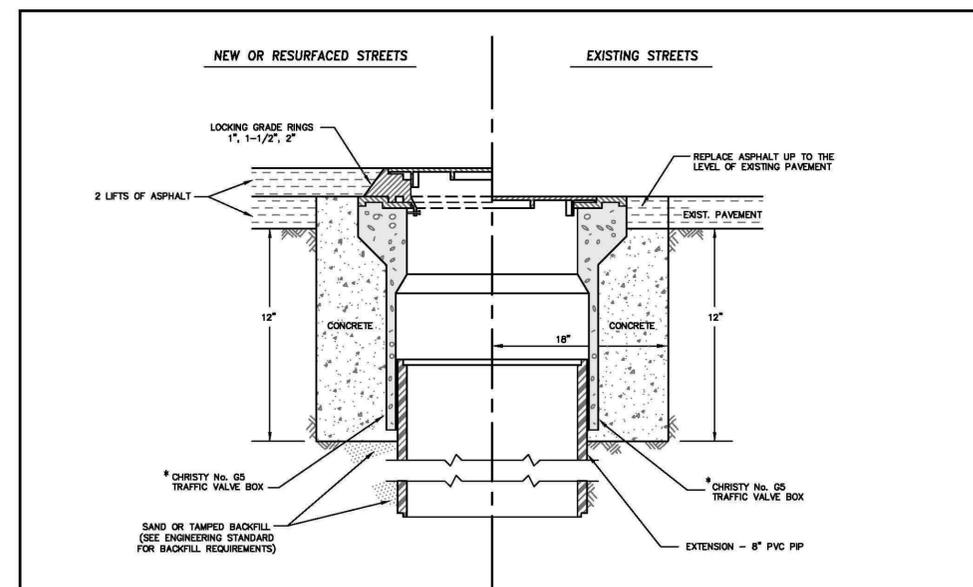
3 PUMP STATION PIPE SUPPORT 2

C-132 NOT TO SCALE



2 ASPHALT CONCRETE PAVEMENT

VAR NOT TO SCALE



* FOR POTABLE WATER, PROVIDE LID MARKED "WATER"
 * FOR RECYCLED WATER, PAINT INSIDE OF THE VALVE BOX PURPLE AND PROVIDE PURPLE LID MARKED "CSC-RW"

	Drawn By: D. LUU	Signature: Director of Water and Sewer Utilities	CITY OF SANTA CLARA
	Checked By: L. AU		WATER DEPT. - STANDARD NO. 20
	Approved By: R. WILSON, R. ENOS		TRAFFIC VALVE BOX
	Revised Date: MARCH 2011		

4 TRAFFIC VALVE BOX

VAR NOT TO SCALE



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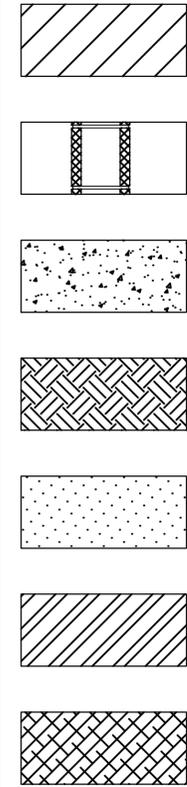
CITY OF SANTA CLARA		
WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION		
1651 MARTIN AVENUE		
CIVIL DETAILS		
APPROVED	DATE	
DIRECTOR OF WATER & SEWER UTILITIES		

PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	MY	DRAWN BY MY
CHECKED BY	NK/PS	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	C-504	SHT. 14 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

ARCHITECTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	FOM	FACE OF MASONRY	SF	SQUARE FEET
AB	ANCHOR BOLT	FOW	FACE OF WALL	SHT	SHEET
ABC	AGGREGATE BASE COURSE	FRMG	FRAMING	SIM	SIMILAR
ABV	ABOVE	FS	FAR SIDE	SP	SPACE/SPACES
AC	AGGREGATE COURSE	FTG	FOOTING	SPCG	SPACING
ACI	AMERICAN CONCRETE INSTITUTE	GA	GAUGE	SPEC	SPECIFICATIONS
ADDL	ADDITIONAL	GALV	GALVANIZED	SST	STAINLESS STEEL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	GF	GOVERNMENT FURNISHED	STD	STANDARD
AISI	AMERICAN IRON AND STEEL INSTITUTE	GR	GRADE	STIFF	STIFFENER
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	GRT	GROUT	STL	STEEL
ALT	ALTERNATE	GSN	GENERAL STRUCTURAL NOTES	STRUCT	STRUCTURAL
ALUM	ALUMINUM	GYP	GYPSONUM	SYM	SYMMETRICAL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	HAS	HEADED ANCHOR STUDS	T	TOP
APA	AMERICAN PLYWOOD ASSOCIATION	HD	HAND	T/	TOP OF
ARCH	ARCHITECT/ARCHITECTURAL	HEF	HORIZONTAL EACH FACE	T&B	TOP AND BOTTOM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	HIF	HORIZONTAL INSIDE FACE	TB	TOP OF BAR
ATS	AUTOMATIC TRANSFER SWITCH	HK	HOOK	THK	THICK
AWS	AMERICAN WELDING SOCIETY	HM	HOLLOW METAL	TOC	TOP OF CONCRETE
B	BOTTOM	HOF	HORIZONTAL OUTSIDE FACE	TOS	TOP OF STEEL
B/	BOTTOM OF	HORIZ	HORIZONTAL	TYP	TYPICAL
BB	BOTTOM BARS	HP	HIGH POINT	UBC	UNIFORM BUILDING CODE
BO	BOND	HSS	TUBE STEEL	UHMW	ULTRA HIGH MOLECULAR WEIGHT
BLDG	BUILDING	HT	HEIGHT	UNO	UNLESS NOTED OTHERWISE
BLKG	BLOCKING	ID	INSIDE DIAMETER	UON	UNLESS OTHERWISE NOTED
BM	BEAM	IE	THAT IS	UPR	UPPER
BN	BOUNDARY NAIL	INFO	INFORMATION	UT	ULTRASONIC TESTING
BRG	BEARING	INT	INTERIOR	VEF	VERTICAL EACH FACE
BS	BOTH SIDES	INTERMED	INTERMEDIATE	VERT	VERTICAL
BTWN	BETWEEN	INTERSECT	INTERSECTION	VIF	VERTICAL INSIDE FACE
C	CHANNEL	INV	INVERT	VOF	VERTICAL OUTSIDE FACE
C/C	CENTER TO CENTER	IBC	INTERNATIONAL BUILDING CODE	W/	WITH
CANT	CANTILEVER	JST	JOIST	W OR WF	WIDE FLANGE (BEAM)
CAP	CAPACITY	JT	JOINT	WGT	WEIGHT
CBC	CALIFORNIA BUILDING CODE	L	ANGLE	WH	WATER HEATER
CF	CUBIC FEET	LBS	POUNDS	W/O	WITHOUT
CHKD	CHECKED	LG	LONG	WP	WORK POINT
CI	CONTRACTOR INSTALLED	LL	LIVE LOAD	WS	WATERSTOP
CJ	CONTRACTION/CONTROL JOINT	LLH	LONG LEG HORIZONTAL	WT	TEE
CL	CENTERLINE	LLV	LONG LEG VERTICAL	XFMR	TRANSFORMER
CLR	CLEAR	LOC	LOCATION	&	AND
CLG	CEILING	LONGIT/LONGL	LONGITUDINAL	@	AT
CMU	CONCRETE MASONRY UNIT	LP	LOW POINT	°	DEGREE
COL	COLUMN	LT	LEFT	∅	DIAMETER
COMPT	COMPARTMENT	LWR	LOWER	'	FEET
CONC	CONCRETE	MACH	MACHINE	"	INCHES
CONN	CONNECTION	MAINT	MAINTENANCE	#	NUMBER
CONSTR	CONSTRUCTION	MAS	MASONRY	±	PLUS OR MINUS
CONT	CONTINUOUS	MAX	MAXIMUM		
COORD	COORDINATE	MB	MACHINE BOLT		
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	MC	CHANNEL		
CT	CURRENT TRANSFORMER	MCC	MOTOR CONTROL CENTER		
CTR/CTR'D	CENTER/CENTERED	MCJT	MASONRY CONTROL JOINT		
d	PENNY (NAIL SIZE)	MECH	MECHANICAL		
DBL	DOUBLE	MFR	MANUFACTURER		
DEG	DEGREES	MIN	MINIMUM		
DET	DETAIL	MISC	MISCELLANEOUS		
DF	DOUGLAS FIR	MHHW	MEAN HIGHER HIGH WATER		
DIA	DIAMETER	MLLW	MEAN LOWER LOW WATER		
DIAG	DIAGONAL	MNTG	MOUNTING		
DIM	DIMENSION	MO	MASONRY OPENING		
DISCONT	DISCONTINUE	MOD	MODIFIED		
DIST	DISTRIBUTION	MTL	METAL		
DL	DEAD LOAD	MTS	MANUAL TRANSFER SWITCH		
DN	DOWN	(N)	NEW		
Do	DITTO	NIC	NOT IN CONTRACT		
DP	DEEP	NO.	NUMBER		
DWG	DRAWING	NOM	NOMINAL		
DWL	DOWEL	NS	NEAR SIDE		
(E)	EXISTING	NTS	NOT TO SCALE		
EA	EACH	OC	ON CENTER		
EF	EACH FACE	OD	OUTSIDE DIAMETER		
EG	FOR EXAMPLE	OF	OUTSIDE FACE		
EL/ELEV	ELEVATION	OPG	OPENING		
EMBED	EMBEDMENT	OPP	OPPOSITE		
EN	EDGE NAIL	PEB	PRE ENGINEERED BUILDING		
ENGR	ENGINEER	PEMB	PRE ENGINEERED METAL BLDG		
EQ	EQUAL	PL	PLATE		
EQUIP	EQUIPMENT	PLCS	PLACES		
ETC	ET CETERA	PLYWD	PLYWOOD		
EW	EACH WAY	PNL	PANEL		
EWEF	EACH WAY EACH FACE	PREFAB	PREFABRICATED		
(E)/EXIST	EXISTING	PT	POINT, PRESSURE TREATED		
EXP	EXPANSION	PVMT	PAVEMENT		
EXT	EXTERIOR	QTY	QUANTITY		
FE	FIRE EXTINGUISHER	R/RAD	RADIUS		
FF	FINISHED FLOOR	REF	REFERENCE		
FG	FINISHED GRADE	REINF	REINFORCING		
FH	FULL HEIGHT	REQD	REQUIRED		
FIN	FINISH	RF	ROOF		
FL	FLOOR	RM	ROOM		
FLG	FLANGE	SCHED/SCH	SCHEDULE		
FN	FACE NAIL	SEC	SECTION		
FND	FOUNDATION				
FO	FACE OF				

ARCHITECTURAL LEGEND



CMU IN PLAN

CMU IN SECTION

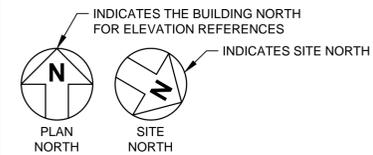
CONCRETE IN SECTION

EARTH IN SECTION

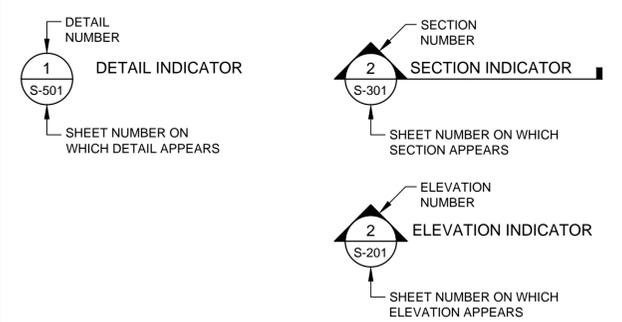
GROUT IN SECTION

STEEL IN SECTION

VOID FORM IN SECTION



ANNOTATION



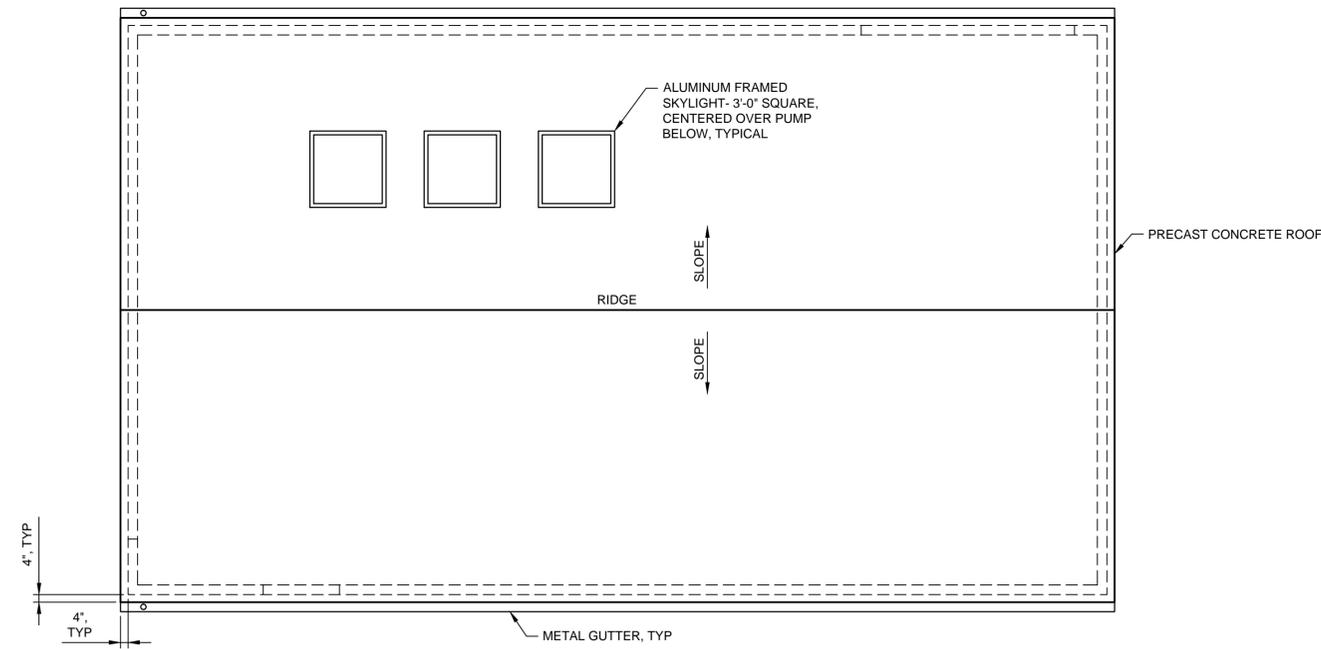
GENERAL SHEET NOTES

- ABBREVIATIONS ON THIS SHEET APPLY ONLY TO THE ARCHITECTURAL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE SYMBOLS NOT PROVIDED HERE
- THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOME ABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT
- DO NOT SCALE DRAWINGS

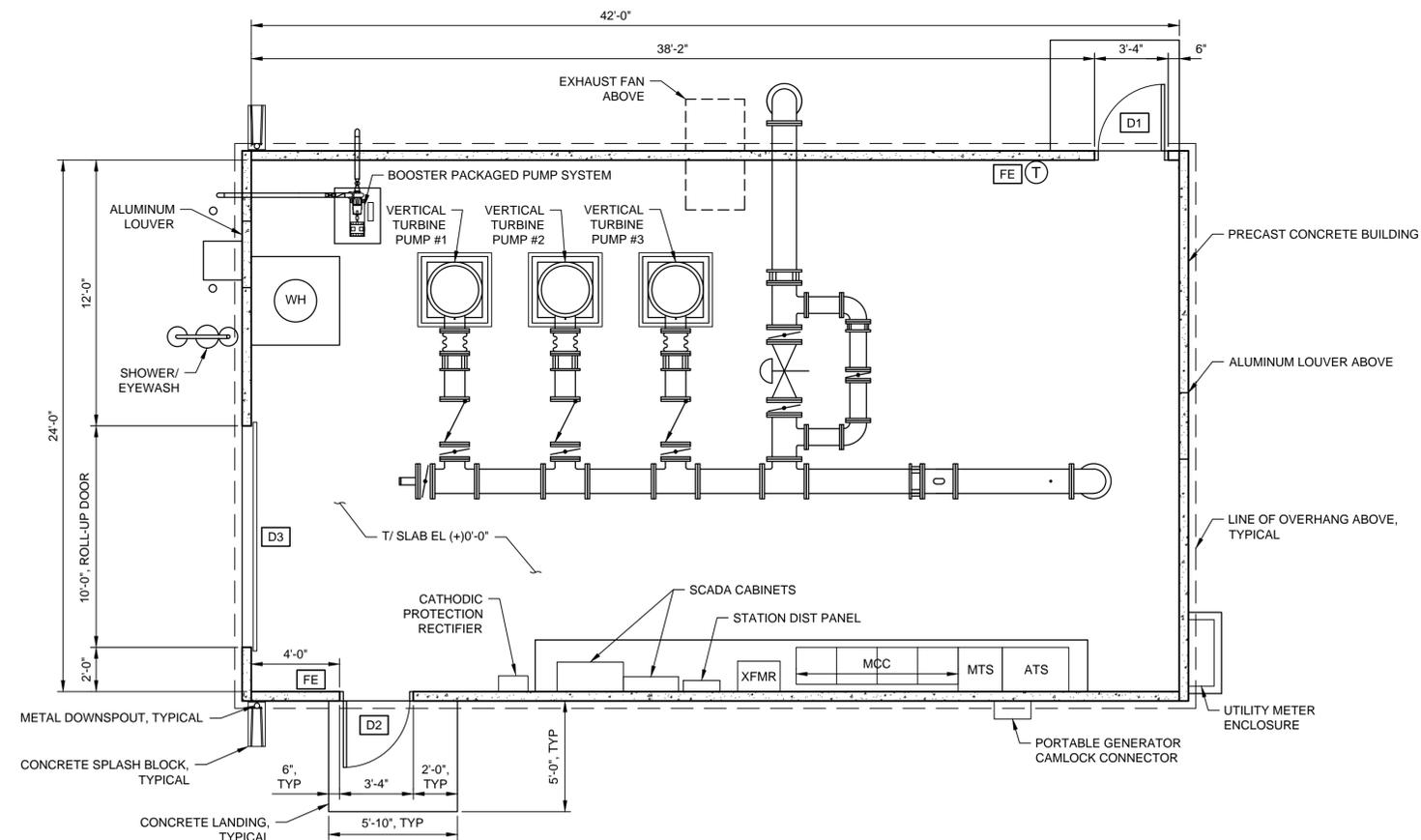
	<p>GHD Inc. 1735 North First Street Suite 301 San Jose California 95112 USA T 1 408 451 9615 F 1 408 451 9665 W www.ghd.com</p>	<p>CITY OF SANTA CLARA WATER & SEWER UTILITIES</p>			<p>PROJ. NO. 592-1423-80300-7054-30236</p>
		<p>CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE LEGEND, ABBREVIATIONS, AND GENERAL NOTES</p>			<p>DESIGNED BY SEB DRAWN BY SEB</p>
<p>DATE REVISION BY</p>			<p>APPROVED DATE</p>	<p>CHECKED BY SCB YEAR 2014</p>	
<p>DIRECTOR OF WATER & SEWER UTILITIES</p>			<p>DRAWING NO. A-001</p>	<p>DATE DEC 2014</p>	
<p>DATE REVISION BY</p>			<p>APPROVED DATE</p>	<p>BLK. BK. PG. 55 AND 56</p>	
<p>DATE REVISION BY</p>			<p>APPROVED DATE</p>	<p>DRAWING NO. A-001 SHT. 15 OF 60</p>	
<p>DATE REVISION BY</p>			<p>APPROVED DATE</p>	<p>HORIZ. NOTED VERT. - DWG. NO. W-3200-4</p>	

SHEET GENERAL NOTES

1. REFER TO CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR INFORMATION NOT SHOWN AND ADDITIONAL BUILDING PENETRATIONS NOT SHOWN
2. REFERENCE T/SLAB EL(+)'0'-0" = DATUM EL 46.68
3. [FE] INDICATES FIRE EXTINGUISHER 4A:80B:C, LOCATE AS SHOWN
4. [D#] INDICATES DOOR NUMBER, SEE SCHEDULE DRAWING A-601



ROOF PLAN



FLOOR PLAN



BUILDING DATA

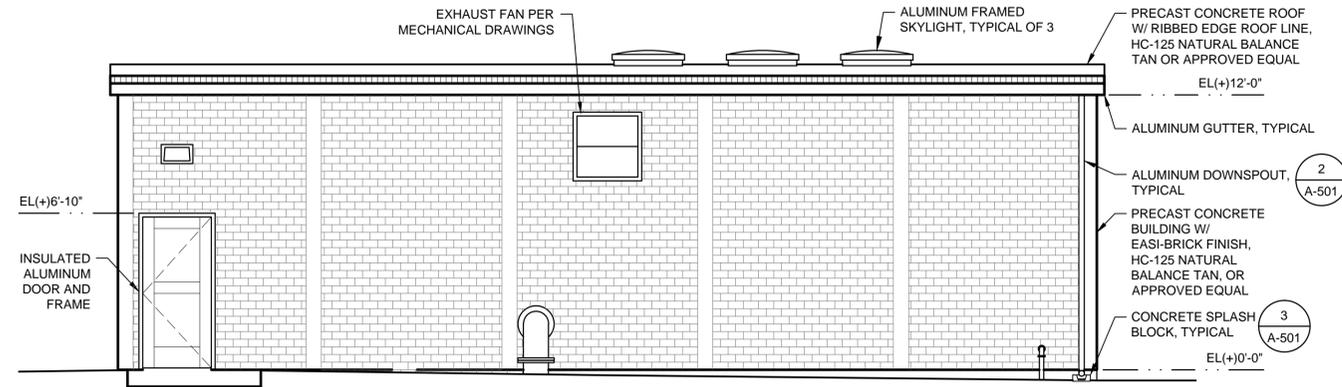
ADDRESS:	1651 MARTIN AVENUE SANTA CLARA, CA 95050
CODE SUMMARY:	2013 CALIFORNIA BUILDING, GREEN BUILDING STANDARDS, FIRE, ELECTRICAL, PLUMBING AND MECHANICAL CODES 2012 INTERNATIONAL BUILDING CODE 2013 UNIFORM PLUMBING CODE 2013 UNIFORM MECHANICAL CODE 2013 NATIONAL ELECTRIC CODE 2013 INTERNATIONAL EXISTING BUILDING CODE
OCCUPANCY:	F-1 FACTORY INDUSTRIAL, MODERATE-HAZARD
CONSTRUCTION:	TYPE V-B
SEISMIC DESIGN CATEGORY:	D
AUTOMATIC FIRE SPRINKLERS:	NO
FIRE ALARM:	NO
BUILDING HEIGHT:	12'-6" PROPOSED
NUMBER OF STORIES:	1
ALLOWABLE FLOOR:	9,000 S.F.
AREA INCREASES:	NONE
BUILDING AREA:	1064 S.F.



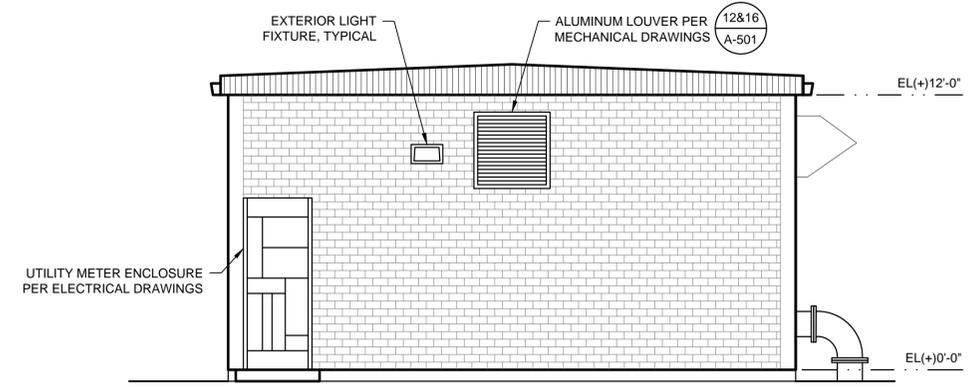
DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
PUMP BUILDING - FLOOR AND ROOF PLANS

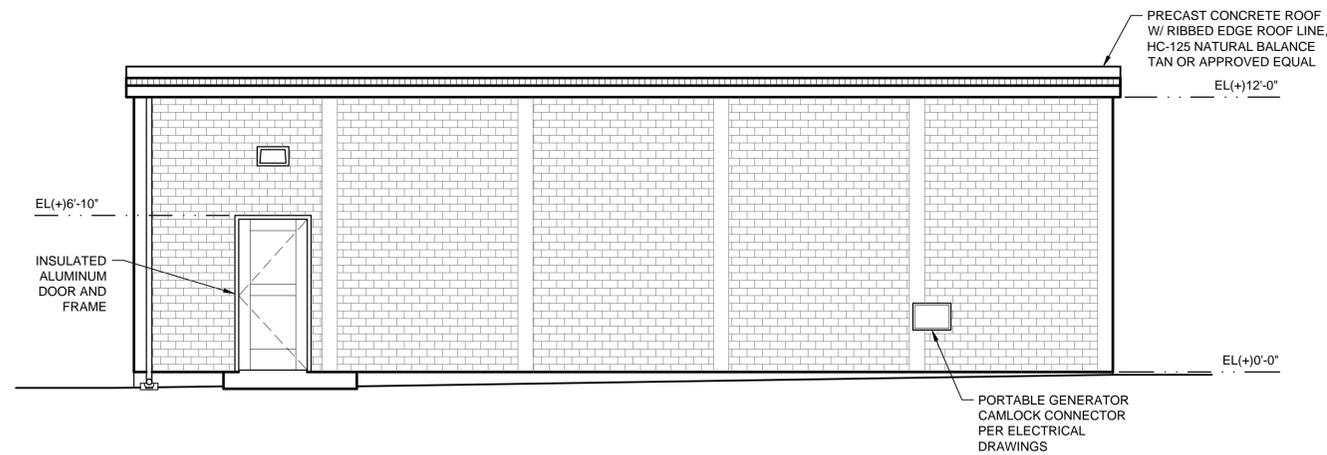
PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	SEB	DRAWN BY	SEB
CHECKED BY	SCB	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	A-111	SHT.	16 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4



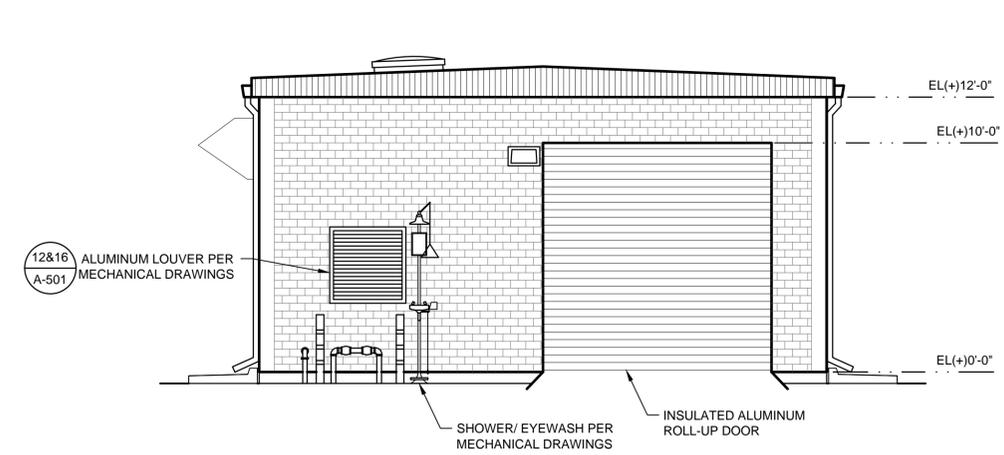
NORTH EXTERIOR ELEVATION



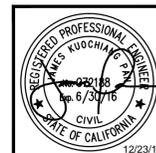
EAST EXTERIOR ELEVATION



SOUTH EXTERIOR ELEVATION



WEST EXTERIOR ELEVATION

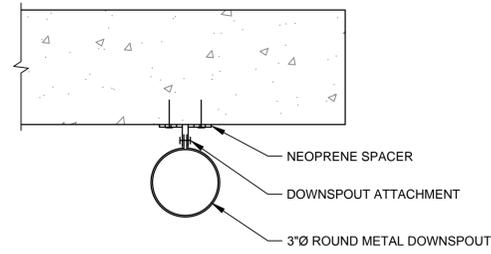


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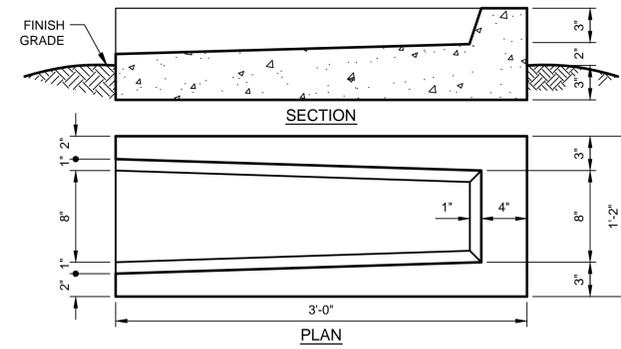
DATE	REVISION	BY

CITY OF SANTA CLARA		
WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION		
1651 MARTIN AVENUE		
PUMP BUILDING - EXTERIOR ELEVATIONS		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

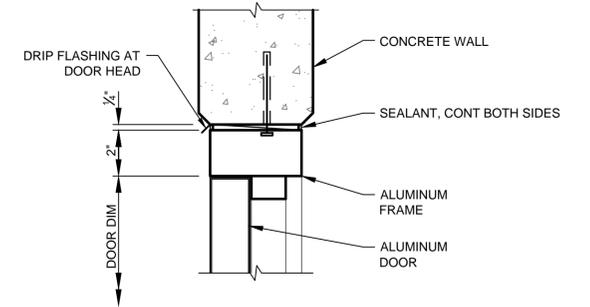
PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	SEB	DRAWN BY SEB
CHECKED BY	SCB	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	A-201	SHT. 17 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4



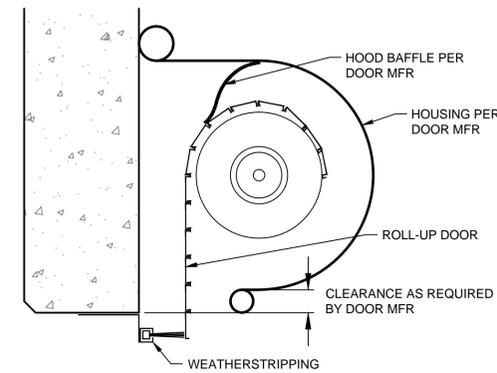
2 **DOWNSPOUT**
A-201 NOT TO SCALE



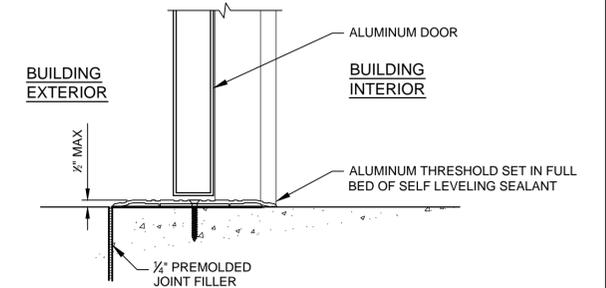
3 **CONCRETE SPLASH BLOCK**
A-201 NOT TO SCALE



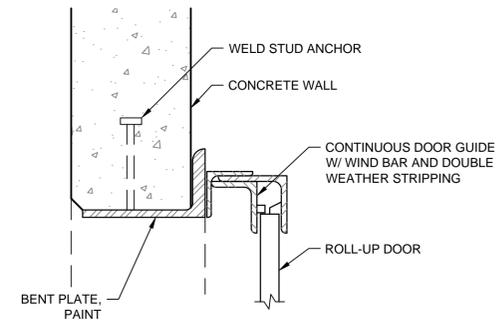
4 **DOOR HEAD, JAMB SIMILAR**
A-601 NOT TO SCALE



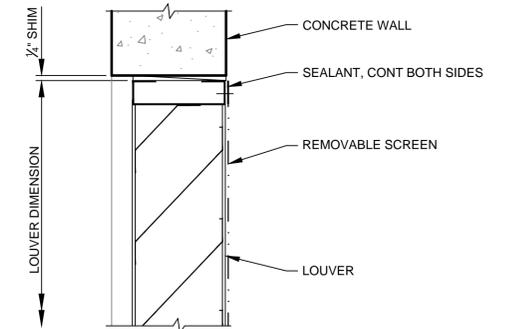
7 **ROLL-UP DOOR HEAD**
A-601 NOT TO SCALE



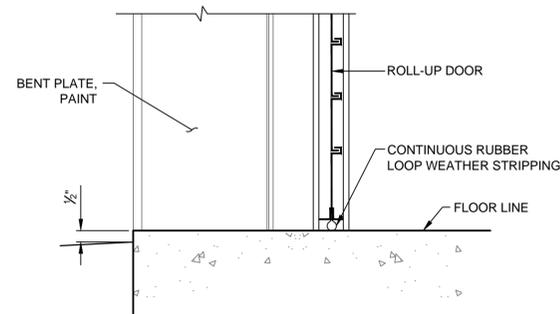
8 **DOOR THRESHOLD**
A-601 NOT TO SCALE



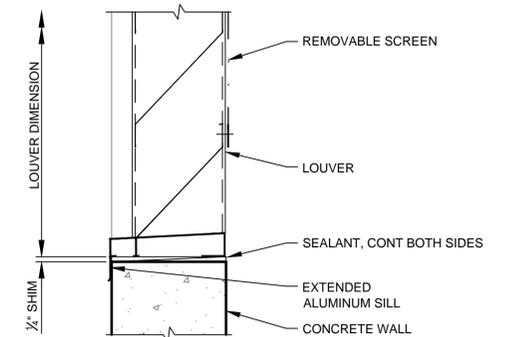
11 **ROLL-UP DOOR JAMB**
A-601 NOT TO SCALE



12 **LOUVER HEAD, JAMB SIMILAR**
A-201 NOT TO SCALE



15 **ROLL-UP DOOR SILL**
A-601 NOT TO SCALE



16 **LOUVER SILL**
A-201 NOT TO SCALE



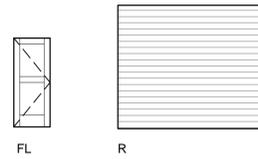
DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
ARCHITECTURAL DETAILS

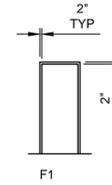
PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	SEB	DRAWN BY SEB
CHECKED BY	SCB	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	A-501	SHT. 18 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

DOOR SCHEDULE																
DOOR #	OPENING						FRAME						MISCELLANEOUS			HARDWARE GROUP
	DOOR SIZE			DOOR			MAT'L	TYPE	FINISH	DETAIL			STC	GLASS	FIRE RATING	
	WIDTH	HEIGHT	THICKNESS	MAT'L	TYPE	FINISH				HEAD	JAMB	THRESHOLD				
1	3'-0"	6'-8"	1 1/2"	ALUMINUM	FL	CLEAR ANODIZED	ALUMINUM	F1	CLEAR ANODIZED	4/A-501	4/A-501 SIM	8/A-501	-	-	-	HW-1, PER SPEC SECTION 08710
2	3'-0"	6'-8"	1 1/2"	ALUMINUM	FL	CLEAR ANODIZED	ALUMINUM	F1	CLEAR ANODIZED	4/A-501	4/A-501 SIM	8/A-501	-	-	-	HW-1, PER SPEC SECTION 08710
3	10'-0"	10'-0"	-	ALUMINUM	R	CLEAR ANODIZED	-	-	-	7/A-501	11/A-501	15/A-501	0.125	-	-	PER SPEC SECTION 08333

DOOR TYPES



FRAME TYPES



GHD Inc.
1735 North First Street Suite 301 San Jose California 95112 USA
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DATE	REVISION	BY

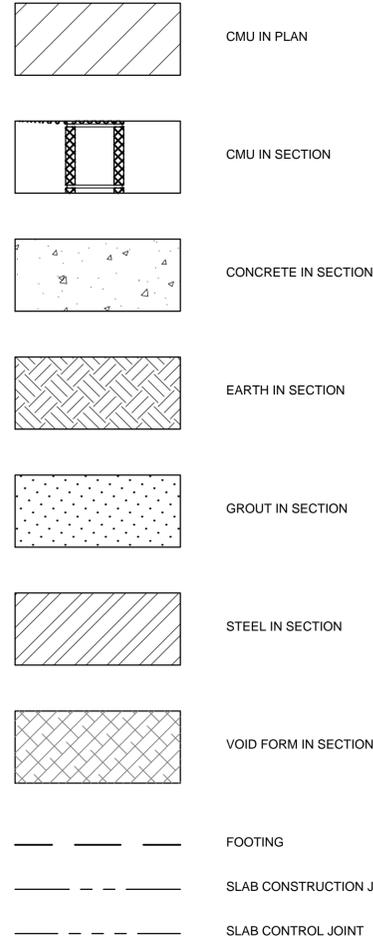
CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE ARCHITECTURAL SCHEDULES		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO. 592-1423-80300-7054-30236			
DESIGNED BY	SEB	DRAWN BY	SEB
CHECKED BY	SCB	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	A-601	SHT.	19 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

STRUCTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	FRMG	FRAMING	STD	STANDARD
AB	ANCHOR BOLT	FS	FAR SIDE	STIFF	STIFFENER
ABC	AGGREGATE BASE COURSE	FTG	FOOTING	STL	STEEL
ABV	ABOVE	GA	GAUGE	STRUCT	STRUCTURAL
AC	AGGREGATE COURSE	GALV	GALVANIZED	SYM	SYMMETRICAL
ACI	AMERICAN CONCRETE INSTITUTE	GF	GOVERNMENT FURNISHED	T	TOP
ADD'L	ADDITIONAL	GR	GRADE	T/	TOP OF
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	GRT	GROUT	T&B	TOP AND BOTTOM
AISI	AMERICAN IRON AND STEEL INSTITUTE	GSN	GENERAL STRUCTURAL NOTES	TB	TOP OF BAR
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	GYP	GYPSUM	THK	THICK
ALT	ALTERNATE	HAS	HEADED ANCHOR STUDS	TOC	TOP OF CONCRETE
ALUM	ALUMINUM	HD	HAND	TOS	TOP OF STEEL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	HEF	HORIZONTAL EACH FACE	TYP	TYPICAL
APA	AMERICAN PLYWOOD ASSOCIATION	HIF	HORIZONTAL INSIDE FACE	UHMW	ULTRA HIGH MOLECULAR WEIGHT
ARCH	ARCHITECT/ARCHITECTURAL	HK	HOOK	UNO	UNLESS NOTED OTHERWISE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	HM	HOLLOW METAL	UON	UNLESS OTHERWISE NOTED
AWS	AMERICAN WELDING SOCIETY	HOF	HORIZONTAL OUTSIDE FACE	UPR	UPPER
AWWA	AMERICAN WATER WORKS ASSOCIATION	HORIZ	HORIZONTAL	UT	ULTRASONIC TESTING
B	BOTTOM	HP	HIGH POINT	VEF	VERTICAL EACH FACE
B/	BOTTOM OF	HSS	TUBE STEEL	VERT	VERTICAL
BB	BOTTOM BARS	HT	HEIGHT	VIF	VERTICAL INSIDE FACE
BO	BOND	IBC	INTERNATIONAL BUILDING CODE	VOF	VERTICAL OUTSIDE FACE
BLDG	BUILDING	ID	INSIDE DIAMETER	W/	WITH
BLKG	BLOCKING	IE	THAT IS	W OR WF	WIDE FLANGE (BEAM)
BM	BEAM	INFO	INFORMATION	WGT	WEIGHT
BN	BOUNDARY NAIL	INT	INTERIOR	W/O	WITHOUT
BRG	BEARING	INTERMED	INTERMEDIATE	WP	WORK POINT
BS	BOTH SIDES	INTERSECT	INTERSECT	WS	WATERSTOP
BTWN	BETWEEN	INV	INVERT	WT	TEE
C	CHANNEL	JST	JOIST	&	AND
C/C	CENTER TO CENTER	JT	JOINT	@	AT
CANT	CANTILEVER	L	ANGLE	°	DEGREE
CAP	CAPACITY	LBS	POUNDS	Ø	DIAMETER
CBC	CALIFORNIA BUILDING CODE	LG	LONG	'	FEET
CF	CUBIC FEET	LL	LIVE LOAD	"	INCHES
CHKD	CHECKED	LLH	LONG LEG HORIZONTAL	#	NUMBER
CI	CONTRACTOR INSTALLED	LLV	LONG LEG VERTICAL	±	PLUS OR MINUS
CJ	CONTRACTOR/CONTROL JOINT	LOC	LOCATION		
CL	CENTERLINE	LONGIT/LONGL	LONGITUDINAL		
CLR	CLEAR	LP	LOW POINT		
CLG	CEILING	LT	LEFT		
CMU	CONCRETE MASONRY UNIT	LWR	LOWER		
COL	COLUMN	MACH	MACHINE		
CONC	CONCRETE	MAINT	MAINTENANCE		
CONN	CONNECTION	MAS	MASONRY		
CONSTR	CONSTRUCTION	MAX	MAXIMUM		
CONT	CONTINUOUS	MB	MACHINE BOLT		
COORD	COORDINATE	MC	CHANNEL		
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	MCJT	MASONRY CONTROL JOINT		
CTR/CTR'D	CENTER/CENTERED	MECH	MECHANICAL		
d	PENNY (NAIL SIZE)	MFR	MANUFACTURER		
DBL	DOUBLE	MHHW	MEAN HIGHER HIGH WATER		
DEG	DEGREES	MIN	MINIMUM		
DET	DETAIL	MISC	MISCELLANEOUS		
DF	DOUGLAS FIR	MLLV	MEAN LOWER LOW WATER		
DIA	DIAMETER	MNTG	MOUNTING		
DIAG	DIAGONAL	MO	MASONRY OPENING		
DIM	DIMENSION	MOD	MODIFIED		
DISCONT	DISCONTINUE	MTL	METAL		
DL	DEAD LOAD	(N)	NEW		
DN	DOWN	NIC	NOT IN CONTRACT		
D _o	DITTO	NO.	NUMBER		
DP	DEEP	NOM	NOMINAL		
DWG	DRAWING	NS	NEAR SIDE		
DWL	DOWEL	NTS	NOT TO SCALE		
(E)	EXISTING	OC	ON CENTER		
EA	EACH	OD	OUTSIDE DIAMETER		
EF	EACH FACE	OF	OUTSIDE FACE		
EG	FOR EXAMPLE	OPG	OPENING		
EL/ELEV	ELEVATION	OPP	OPPOSITE		
EMBED	EMBEDMENT	PEB	PRE ENGINEERED BUILDING		
EN	EDGE NAIL	PEMB	PRE ENGINEERED METAL BLDG		
ENGR	ENGINEER	PL	PLATE		
EQ	EQUAL	PLCS	PLACES		
EQUIP	EQUIPMENT	PLYWD	PLYWOOD		
ETC	ET CETERA	PNL	PANEL		
EW	EACH WAY	PREFAB	PREFABRICATED		
EWEF	EACH WAY EACH FACE	PT	POINT, PRESSURE TREATED		
(E)EXIST	EXISTING	PVMT	PAVEMENT		
EXP	EXPANSION	QTY	QUANTITY		
EXT	EXTERIOR	R/RAD	RADIUS		
FD	FLOOR DRAIN	REF	REFERENCE		
FF	FINISHED FLOOR	REINF	REINFORCING		
FG	FINISHED GRADE	REQD	REQUIRED		
FH	FULL HEIGHT	RF	ROOF		
FIN	FINISH	RM	ROOM		
FL	FLOOR	SCHED/SCH	SCHEDULE		
FLG	FLANGE	SEC	SECTION		
FN	FACE NAIL	SF	SQUARE FEET		
FND	FOUNDATION	SHT	SHEET		
FO	FACE OF	SIM	SIMILAR		
FOM	FACE OF MASONRY	SP	SPACE/SPACES		
FOW	FACE OF WALL	SPCG	SPACING		
		SPEC	SPECIFICATIONS		
		SST	STAINLESS STEEL		

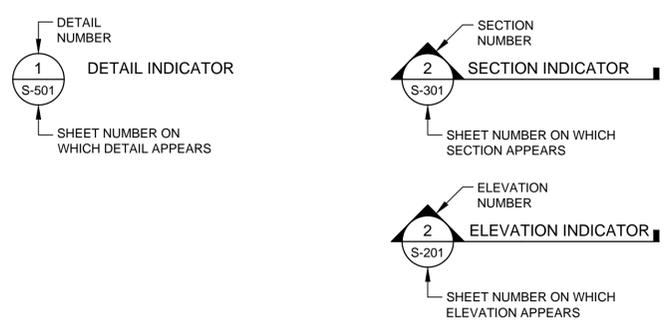
STRUCTURAL LEGEND



GENERAL STRUCTURAL NOTES

- GENERAL**
- CONTRACTOR TO COORDINATE ALL STRUCTURAL DOCUMENTS WITH ALL OTHER DISCIPLINES AND REPORT ANY DISCREPANCIES TO THE OWNER PRIOR TO THE START OF ANY FABRICATION OR CONSTRUCTION.
 - CONTRACTOR TO COORDINATE ALL NEW WORK WITH EXISTING SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE OWNER PRIOR TO CONSTRUCTION.
 - ABBREVIATIONS ON THIS SHEET APPLY ONLY TO THE STRUCTURAL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE SYMBOLS NOT PROVIDED HERE
 - THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOME ABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT
 - DO NOT SCALE DRAWINGS

ANNOTATION



DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
LEGEND, ABBREVIATIONS, AND GENERAL NOTES

PROJ. NO.	592-1423-80300-7054-30236				
DESIGNED BY	JP	DRAWN BY	SEB		
CHECKED BY	CL/EM	YEAR	2014		
DATE	DEC 2014	BLK. BK. PG.	55 AND 56		
DRAWING NO.	S-001	SHT.	20 OF 60		
HORIZ.	NONE	VERT.	-	DWG. NO.	W-3200-4

STATEMENT OF SPECIAL INSPECTIONS

STATEMENT OF SPECIAL INSPECTIONS

THIS STATEMENT OF SPECIAL INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION AND STRUCTURAL TESTING REQUIREMENTS OF THE BUILDING CODE SECTIONS 1704 AND 1705.

THIS STATEMENT OF SPECIAL INSPECTIONS ENCOMPASS THE FOLLOWING DISCIPLINES:

- STRUCTURAL SPECIAL INSPECTIONS PER 1704
- STRUCTURAL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE
- STRUCTURAL SPECIAL INSPECTIONS FOR WIND RESISTANCE

THE SCHEDULE OF SPECIAL INSPECTIONS SUMMARIZES THE SPECIAL INSPECTIONS AND TESTS REQUIRED. SPECIAL INSPECTORS WILL REFER TO THE APPROVED PLANS AND SPECIFICATIONS FOR DETAILED SPECIAL INSPECTION REQUIREMENTS. ANY ADDITIONAL TESTS AND INSPECTIONS REQUIRED BY THE APPROVED PLANS AND SPECIFICATIONS WILL ALSO BE PERFORMED.

THE SPECIAL INSPECTIONS IDENTIFIED ARE IN ADDITION TO THOSE REQUIRED BY OTHER SECTIONS OF THE BUILDING CODE. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY THE BUILDING OFFICIAL

THE SPECIAL INSPECTION COORDINATOR SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL/CONTRACTING OFFICER AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES.

INTERIM REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 1704.1.2.

A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS, TESTING AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY PER SECTION 1704.1.2. THE FINAL REPORT WILL DOCUMENT THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF DISCREPANCIES NOTED IN INSPECTIONS.

JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR IS REQUIRED TO COORDINATE ALL INSPECTIONS. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THE SPECIAL INSPECTOR A MINIMUM OF 24 HOURS PRIOR TO ANY SPECIAL INSPECTIONS THAT ARE REQUIRED. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THE SPECIAL INSPECTOR A MINIMUM OF 24 HOURS PRIOR TO ANY CONCRETE TO BE POURED.

THE INSPECTORS AND TESTING AGENCIES SHALL BE ENGAGED BY THE OWNER OR THE OWNER'S AGENT, AND NOT BY THE CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS TO BE INSPECTED OR TESTED PER SECTION 1704.1. ANY CONFLICT OF INTEREST MUST BE DISCLOSED TO THE BUILDING OFFICIAL/CONTRACTING OFFICER, PRIOR TO COMMENCING WORK. IF APPROPRIATE AGENTS ARE NOTED AS "TO BE DETERMINED (TBD)", THE OWNER IS RESPONSIBLE TO COORDINATE THE ASSEMBLY OF A SPECIAL INSPECTION TEAM. ALL SPECIAL INSPECTORS AND QUALIFICATIONS SHALL BE SUBMITTED TO GHD INC. AND THE BUILDING OFFICIAL FOR REVIEW.

SPECIALY INSPECTED WORK THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL IS SUBJECT TO REMOVAL OR EXPOSURE.

CONTINUOUS INSPECTION IS ALWAYS REQUIRED DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED. WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED, IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE THAT ALL THE WORK IS INSPECTED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE.

CONTRACTOR STATEMENT OF RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OR FABRICATION OF A SYSTEM OR COMPONENT DESIGNATED ABOVE AS PART OF THE MAIN WIND FORCE OR MAIN SEISMIC FORCE RESISTING SYSTEMS ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY PER SECTION 1706.

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED IF REQUESTED.

KEY FOR MINIMUM QUALIFICATIONS OF INSPECTION AGENTS:

WHEN THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE DEEMS IT APPROPRIATE THAT THE INDIVIDUAL PERFORMING A STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION OR LICENSE AS INDICATED BELOW, SUCH DESIGNATION SHALL APPEAR BELOW THE AGENCY NUMBER ON THE SCHEDULE.

PE/SE STRUCTURAL ENGINEER - A LICENSED SE OR PE SPECIALIZING IN THE DESIGN OF BUILDING STRUCTURES
 PE/GE GEOTECHNICAL ENGINEER - A LICENSED GE OR PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS
 EIT ENGINEER-IN-TRAINING - A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTALS OF ENGINEERING EXAMINATION

AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION

ACI-CFTT CONCRETE FIELD TESTING TECHNICIAN - GRADE 1
 ACI-CCI CONCRETE CONSTRUCTION INSPECTOR
 ACI-LTT LABORATORY TESTING TECHNICIAN - GRADE 1&2
 ACI-STT STRENGTH TESTING TECHNICIAN

AMERICAN WELDING SOCIETY (AWS) CERTIFICATION

AWS-CWI CERTIFIED WELDING INSPECTOR
 AWS/AISC-SICERTIFIED STRUCTURAL STEEL INSPECTOR

INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION

ICC-SMSI STRUCTURAL MASONRY SPECIAL INSPECTOR
 ICC-SWSI STRUCTURAL STEEL AND WELDING SPECIAL INSPECTOR
 ICC-SFSI SPRAY-APPLIED FIREPROOFING SPECIAL INSPECTOR
 ICC-PCSI PRESTRESSED CONCRETE SPECIAL INSPECTOR
 ICC-RCSI REINFORCED CONCRETE SPECIAL INSPECTOR

AMERICAN SOCIETY OF NONDESTRUCTIVE TESTING (ASNT)

SCHEDULE OF INSPECTION AND TESTING AGENCIES

THIS STATEMENT OF SPECIAL INSPECTIONS / QUALITY ASSURANCE PLAN INCLUDES THE FOLLOWING BUILDING SYSTEMS:

- SOILS AND FOUNDATIONS
- CAST-IN-PLACE CONCRETE
- PRECAST CONCRETE
- MASONRY LEVEL 1
- MASONRY LEVEL 2
- WOOD CONSTRUCTION
- MECHANICAL & ELECTRICAL SYSTEMS
- ARCHITECTURAL SYSTEMS
- STRUCTURAL STEEL
- COLD-FORMED STEEL FRAMING

SPECIAL INSPECTION AGENCIES	FIRM AND CONTACT INFO.
1. SPECIAL INSPECTION COORDINATOR	TBD
2. CONCRETE INSPECTOR	TBD
3. STEEL INSPECTOR	TBD
4. SOILS INSPECTOR	TBD
5. CONCRETE TESTING AGENCY	TBD

STRUCTURAL STEEL

ITEM 1: MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS. **AGENCY # (QUALIF.):** AWS/AISC-SSI, ICC-SWSI

SCOPE:

A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.

PERIODIC CONTINUOUS

B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.

PERIODIC CONTINUOUS

ITEM 2: INSPECTION OF HIGH-STRENGTH BOLTING. **AGENCY # (QUALIF.):** AWS/AISC-SSI, ICC-SWSI

SCOPE:

A. BEARING-TYPE CONNECTIONS.

PERIODIC CONTINUOUS

B. SLIP-CRITICAL CONNECTIONS

PERIODIC CONTINUOUS

ITEM 3: MATERIAL VERIFICATION OF STRUCTURAL STEEL **AGENCY # (QUALIF.):** PE/SE

SCOPE:

A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED DOCUMENTS.

PERIODIC CONTINUOUS

B. MANUFACTURER'S MILL TEST REPORTS

PERIODIC CONTINUOUS

ITEM 4: MATERIAL VERIFICATION OF WELD FILLER MATERIALS. **AGENCY # (QUALIF.):** AWS-CWI, ASNT

SCOPE:

A. IDENTIFICATION MARKINGS TO CONFORM TO AWS DESIGNATION LISTED IN THE WPS.

PERIODIC CONTINUOUS

B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.

PERIODIC CONTINUOUS

ITEM 5: INSPECTION OF WELDING. **AGENCY # (QUALIF.):** AWS-CWI, ASNT

SCOPE:

A. STRUCTURAL STEEL

1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.

PERIODIC CONTINUOUS

2) MULTIPASS FILLET WELDS.

PERIODIC CONTINUOUS

3) SINGLE-PASS FILLET WELDS - 5/16".

PERIODIC CONTINUOUS

4) SINGLE-PASS FILLET WELDS - 5/16".

PERIODIC CONTINUOUS

5) FLOOR AND ROOF DECK WELDS.

PERIODIC CONTINUOUS

B. REINFORCING STEEL

1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706.

PERIODIC CONTINUOUS

2) REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT.

PERIODIC CONTINUOUS

3) SHEAR REINFORCEMENT

PERIODIC CONTINUOUS

4) OTHER REINFORCING STEEL

PERIODIC CONTINUOUS

ITEM 6: INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS. **AGENCY # (QUALIF.):** PE/SE

SCOPE:

INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:

A) DETAILS SUCH AS BRACING AND STIFFENING.

PERIODIC CONTINUOUS

B) MEMBER LOCATIONS.

PERIODIC CONTINUOUS

C) APPLICATION OF JOINT DETAILS AT EACH CONNECTION.

PERIODIC CONTINUOUS

ITEM 7: WELDED STUDS WHEN USED FOR STRUCTURAL DIAPHRAGMS. **AGENCY # (QUALIF.):** AWS-CWI, ASNT

PERIODIC CONTINUOUS

ITEM 8: WELDING OF COLD-FORMED SHEET STEEL FRAMING MEMBERS. **AGENCY # (QUALIF.):** AWS-CWI, ASNT

PERIODIC CONTINUOUS

ITEM 9: WELDING OF STAIRS AND RAILING SYSTEMS. **AGENCY # (QUALIF.):** AWS-CWI, ASNT

PERIODIC CONTINUOUS

TABLE 1705.3 - CONCRETE

ITEM 1: INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 2: INSPECTION OF REINFORCING STEEL WELDING. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 3: INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 4: INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 5: VERIFYING USE OF REQUIRED DESIGN MIX. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 6: AT TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 7: INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 8: INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 9: INSPECTION OF PRESTRESSED CONCRETE: A. APPLICATION OF PRESTRESSING FORCES. PERIODIC CONTINUOUS
 B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE-RESISTING SYSTEM. PERIODIC CONTINUOUS

ITEM 10: ERECTION OF PRECAST CONCRETE MEMBERS. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 11: VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

ITEM 12: INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. **AGENCY # (QUALIF.):** ACI-CCI, ICC-RCSI

PERIODIC CONTINUOUS

TABLE 1705.6 - INSPECTION OF SOILS

ITEM 1: VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIRED BEARING CAPACITY. **AGENCY # (QUALIF.):** PE/GE

PERIODIC CONTINUOUS

ITEM 2: VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. **AGENCY # (QUALIF.):** PE/GE

PERIODIC CONTINUOUS

ITEM 3: PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS. PERFORM SIEVE TESTS (ASTM D422 & D1140); ATTERBERG LIMIT TEST (ASTM D4318) AND MODIFIED PROCTOR TESTS (ASTM D1557) OF EACH SOURCE OF FILL MATERIAL. **AGENCY # (QUALIF.):** PE/GE

PERIODIC CONTINUOUS

ITEM 4: VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL. TEST DENSITY OF EACH LIFT OF FILL BY NUCLEAR METHODS (ASTM D6938) OR SAND CONE (ASTM D1556). VERIFY EXTENT AND SLOPE OF FILL PLACEMENT. VERIFY COMPACTION OF FILL AND BACKFILL MATERIAL TO 95 PERCENT OF ASTM D 1557. TEST EACH LIFT AT RANDOMLY SELECTED LOCATIONS EVERY 1000 SQUARE FEET OF FILL OR 50 LINEAR FOOT OF WALL OR CONTINUOUS FOOTING, WHICHEVER IS GREATER. PERFORM A MINIMUM OF ONE TEST PER ISOLATED FOOTING. PERFORM 3 TEST MINIMUM PER LIFT. **AGENCY # (QUALIF.):** PE/GE

PERIODIC CONTINUOUS

ITEM 5: PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY. **AGENCY # (QUALIF.):** PE/GE

PERIODIC CONTINUOUS

NOTES: SEE GENERAL STRUCTURAL NOTES FOR REFERENCE GEOTECHNICAL REPORT AND DESIGN BEARING CAPACITIES.

SECTION 1705.11 - SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

ITEM 5: ARCHITECTURAL COMPONENTS **AGENCY # (QUALIF.):**

SCOPE:

A. INSPECT ERECTION AND FASTENING OF EXTERIOR CLADDING WEIGHING MORE THAN 5 PSF. PERIODIC CONTINUOUS

B. INSPECT ERECTION AND FASTENING OF INTERIOR AND EXTERIOR NON-BEARING WALLS WEIGHING MORE THAN 15 PSF. PERIODIC CONTINUOUS

C. INSPECT ERECTION AND FASTENING OF INTERIOR AND EXTERIOR VENEER WEIGHING MORE THAN 5 PSF. PERIODIC CONTINUOUS

ITEM 6: MECHANICAL AND ELECTRICAL COMPONENTS **AGENCY # (QUALIF.):**

SCOPE:

A. INSPECT ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STAND-BY POWER SYSTEMS. PERIODIC CONTINUOUS

B. INSPECT ANCHORAGE OF NON-EMERGENCY ELECTRICAL EQUIPMENT. PERIODIC CONTINUOUS

C. INSPECT INSTALLATION OF PIPING SYSTEMS AND ASSOCIATED MECHANICAL UNITS CARRYING FLAMMABLE, COMBUSTIBLE, OR HIGHLY TOXIC CONTENTS. PERIODIC CONTINUOUS

D. INSPECT INSTALLATION OF HVAC DUCTWORK THAT CONTAINS HAZARDOUS MATERIALS. PERIODIC CONTINUOUS

E. INSPECT INSTALLATION OF VIBRATION ISOLATION SYSTEMS WHERE REQUIRED. PERIODIC CONTINUOUS

ITEM 7: ANCHORAGE OF STORAGE RACKS AND ACCESS FLOORS 8 FEET OR GREATER IN HEIGHT. **AGENCY # (QUALIF.):** PE/GE

PERIODIC CONTINUOUS

ITEM 8: SEISMIC ISOLATION SYSTEM: INSPECTION OF ISOLATION SYSTEM PER ASCE 7 - SECTION 17.2.4.8. **AGENCY # (QUALIF.):**

PERIODIC CONTINUOUS



DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 STATEMENT OF SPECIAL INSPECTIONS

PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	JP	DRAWN BY MY
CHECKED BY	CL/EM	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	S-002	SHT. 21 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

APPROVED _____ DATE _____ BY _____ DIRECTOR OF WATER & SEWER UTILITIES

STRUCTURAL GENERAL NOTES

STATUS OF DESIGN

GENERAL

- DESIGN CRITERIA: 2013 CALIFORNIA BUILDING CODE (2013 CBC)
AWWA D100-11
ACI 318-11
- LOADS:
ROOF LIVE LOADS: 20 PSF (REDUCTIONS TAKEN AS ALLOWED BY BUILDING CODE)
FLOOR LIVE LOADS:
LIGHT MANUFACTURING: 125 PSF OR 2,000 LB CONCENTRATED LOAD
WIND LOADS:
MAIN FORCE RESISTING SYSTEM:
BASIC WIND SPEED: V = 115 MPH
RISK CATEGORY: IV (ESSENTIAL FACILITY)
EXPOSURE CATEGORY: C
INTERNAL PRESSURE COEFFICIENT: ±0.18
COMPONENTS AND CLADDING WIND PRESSURES: (PRESSURES ARE BASED ON AN EFFECTIVE WIND AREA OF 10 SQ FT OR LESS - REDUCTIONS MAY BE TAKEN AS ALLOWED BY BUILDING CODE)
SEISMIC LOADS:
SEISMIC IMPORTANCE FACTOR: I_e = 1.50
MAPPED SPECTRAL RESPONSE ACCELERATIONS:
S_s = 1.50 g S₁ = 0.60 g
SOIL SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS:
S_{DS} = 1.00 g S₀₁ = 0.52 g
SEISMIC DESIGN CATEGORY: D
ANALYSIS PROCEDURE USED:
EQUIVALENT LATERAL FORCE PROCEDURE

6. CONCRETE CLEAR COVER TO REINFORCING BARS IS AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION	CLEAR COVER
CONCRETE PLACED AGAINST EARTH	3 INCHES
FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: #6 BARS AND LARGER #5 BARS AND SMALLER	2 INCHES 1 1/2 INCHES
SLABS ON GRADE (TOP CLEARANCE) BEAMS, GIRDERS AND COLUMNS NOT EXPOSED TO WEATHER OR EARTH	1 1/2 INCHES 1 1/2 INCHES
WALL OR SLAB SURFACES NOT EXPOSED TO WEATHER OR EARTH #5 AND SMALLER #5 AND #7 #8, #9, #10 AND #11 #14 AND #18	3/4 INCH 1 INCH 1 1/2 INCHES 2 1/2 INCHES

- NON-SHRINK GROUT, 7000 PSI; EUCLID CHEMICAL COMPANY'S "EUCCO-NS", L&M CRYSTEX, MASTER BUILDERS' "MASTERFLOW 713", OR FIVE STAR GROUT. WHERE HIGH FLUIDITY OR INCREASED PLACING TIME IS REQUIRED, USE EUCLID CHEMICAL COMPANY'S "EUCCO HI-FLOW GROUT", MASTER BUILDERS' "MASTERFLOW 928", OR APPROVED EQUAL.

FORMWORK

- PROVIDE POUR POCKETS IN FORMS AND UNDER EXISTING STRUCTURAL MEMBERS AS REQUIRED TO PREVENT AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE EXISTING MEMBERS. CONCRETE CAST WITH AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE MEMBERS IS NOT ACCEPTABLE.
- REMOVE FORMS AND SHORES IN ACCORDANCE WITH THE FOLLOWING:

LOCATION	REMOVE FORMS AND SHORES NO SOONER THAN
CONCRETE PLACED AGAINST EARTH	72 HOURS
COLUMNS AND WALLS	48 HOURS
FOOTINGS, PILE CAPS AND GRADE BEAMS	48 HOURS

- PROVIDE CURING WHERE FORMS ARE REMOVED IN LESS THAN 7 DAYS INCLUDING, BUT NOT LIMITED TO, WALLS, COLUMNS, AND UNDERSIDE OF ELEVATED SLABS.

SPECIAL INSPECTION

- SPECIAL INSPECTION IN ACCORDANCE WITH 2013 CALIFORNIA BUILDING CODE CHAPTER 17 IS REQUIRED ON THE FOLLOWING PORTIONS OF THE WORK:
CONCRETE
REINFORCING STEEL
STRUCTURAL STEEL
SOIL
(REFER TO THE STATEMENT OF SPECIAL INSPECTIONS FOR MORE SPECIFIC REQUIREMENTS)

REINFORCING STEEL

- ALL CONCRETE REINFORCING SHALL BE ASTM A615, GRADE 60.
- REINFORCING SHALL EXTEND CONTINUOUS FOR THE DIMENSION SHOWN.
- NO WELDING OF ANY REINFORCING IS PERMITTED.
- LOCATE ALL REINFORCING AS SHOWN ON DRAWINGS AND FASTEN SECURELY.
- ALL REINFORCING TO TERMINATE WITH STANDARD HOOKS AS SHOWN ON PLANS. ALL STIRRUPS AND TIES TO BE CLOSED WITH 135 DEGREE BENDS.
- ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACING DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING BY METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT A MAXIMUM 3-FOOT SPACING.
- MECHANICAL COUPLERS: LENTON THREADED OR INTERLOCK COUPLERS BY ERI CO, I CBO #3967, CADWELD BY ERICO, I CBO #3967, OR XTENDER BY HEADED REINFORCEMENT CORPORATION, ICBO #5309. COUPLERS FOR BEAM AND SLAB BARS AT FORMED CONSTRUCTION JOINTS MAY BE LENTON FORM SAVERS BY ERICO, ICBO #3967, OR APPROVED EQUAL.

FOUNDATIONS

- REFERENCE "CITY OF SANTA CLARA CORP YARD WATER TANK, GEOTECHNICAL ENGINEERING INVESTIGATION" BY CORNERSTONE EARTH GROUP, DATED AUGUST 1, 2014, PROJECT NO 138-6-1.
- CONTRACTOR SHALL PREPARE SITE AND PROVIDE FILL IN ACCORDANCE WITH ALL RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT AND SPECIFICATION SECTION 02019SP, EARTHWORK.
- CONTRACTOR'S GEOTECHNICAL ENGINEER TO BE PRESENT TO OBSERVE SITE PREPARATION AND EXCAVATION AS WELL AS FILL EXCAVATION AND RE-COMPACTION AS RECOMMENDED IN THE GEOTECHNICAL REPORT.
- PROVIDE SITE DE-WATERING AS NECESSARY TO ACHIEVE THE WORK. WATER SHALL BE TESTED PRIOR TO DISPOSAL PER SPECIFICATIONS SECTION 02140.
- LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER CONSTRUCTION.
- REMOVE ABANDONED FOOTINGS, UTILITIES, ETC. WHICH INTERFERE WITH NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED.
- NOTIFY THE OWNER'S REPRESENTATIVE IF ANY BURIED STRUCTURES NOT INDICATED, SUCH AS UTILITY LINES, FOUNDATIONS, ETC., ARE FOUND.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION.
- REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.
- EXCAVATIONS FOR FOUNDATIONS MUST BE ACCEPTED BY THE OWNER'S REPRESENTATIVE PRIOR TO PLACING REINFORCING AND CONCRETE. NOTIFY THE OWNER'S REPRESENTATIVE WHEN EXCAVATIONS ARE READY FOR INSPECTION.

STEEL

- DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (LATEST EDITION AND SUPPLEMENTS).
- ANCHOR BOLTS: ASTM F1554 GRADE 55.
- ALL STEEL BARS & PLATES SHALL BE ASTM A36 UNLESS OTHERWISE NOTED.
- ALL STEEL SHAPES SHALL BE ASTM A992 GRADE 50 UNLESS OTHERWISE NOTED.
- ALL TUBES SHALL BE ASTM A500 GRADE B.
- ALL PIPES TO BE ASTM A53 GRADE B.
- ALL THREADED RODS: ASTM F1554 GRADE 55.
- BOLTED CONNECTIONS, UNLESS NOTED OTHERWISE: 1-INCH DIAMETER A325-N BOLTS.
- INSTALL HIGH STRENGTH BOLTS IN ACCORDANCE WITH SECTION 8 OF THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION.
- PROVIDE BEVELED WASHERS ON ALL CONNECTION TO SLOPING FLANGES OF W SECTIONS AND CHANNELS WHERE SLOPE EXCEEDS 1:20.
- ANCHOR RODS SHALL BE THREADED ANCHOR RODS WITH NUT. THE EMBEDDED NUT SHALL BE TACK WELDED TO THE ANCHOR ROD TO PREVENT ROTATION DURING TIGHTENING.
- BOLT HOLES IN STEEL SHALL BE "STANDARD" (1/16-INCH LARGER IN DIAMETER THAN THE NOMINAL BOLT SIZE), UNLESS OTHERWISE NOTED.
- WELDING ELECTRODES (FILLER METAL): E70XX (70 KSI), WITH EXACT FILLER METAL SELECTED BY THE FABRICATOR.
- WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE THE FULL LENGTH OF THE JOINT.
- COMPLETE PENETRATION WELDS SHALL BE MADE WITH PROPER BACKING WHEREVER POSSIBLE. FULL PENETRATION WELDS MADE WITHOUT PROPER BACKING SHALL HAVE THE ROOT GOUGED BEFORE WELDING IS STARTED FROM THE OTHER SIDE EXCEPT AS PROVIDED IN AWS D1.1.
- ALL BUTT AND GROOVE WELDS SHALL BE FULL PENETRATION, UNLESS NOTED OTHERWISE.
- ALL SPlicing OF MEMBERS SHALL BE AS SHOWN ON THE DRAWINGS. ANY SPlicing OF THE STEEL MEMBERS PROPOSED BY THE STEEL FABRICATOR SHALL BE SHOWN ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
- ALL STEEL FABRICATION SHALL BE PERFORMED BY A FABRICATOR APPROVED BY THE BUILDING DEPARTMENT.
- ALL ANCHOR BOLTS SHALL BE EMBEDDED AS SHOWN ON THE DRAWINGS.
- MINIMUM PLATE THICKNESS: 3/8 INCH UNLESS OTHERWISE NOTED. MINIMUM WELD: 1/4" UNLESS OTHERWISE NOTED.
- ALL STEEL FABRICATION AND DETAILS TO COMPLY WITH MOST STRINGENT OF: AISC CODE, AWS CODE, AND THE 2013 CBC.
- ALL WELDING TO BE BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO ALL 2013 CBC AND AWS REQUIREMENTS. ALL WELDERS SHALL BE PRE-QUALIFIED BY THE PROJECT WELDING INSPECTOR FOR THE WELD TYPES AND POSITIONS USED IN THE PROCEDURES THEY WILL BE PERFORMING.
- UNLESS NOTED OTHERWISE, ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED.

ADHESIVE ANCHORS AND DOWELS

- FOR ANCHORS AND DOWELS INSTALLED INTO CONCRETE AND GROUT-FILLED MASONRY UNITS USE MATERIALS AS INDICATED IN THE DETAILS. WHERE EMBEDMENT DEPTHS ARE NOT SHOWN IN THE DETAILS USE THE FOLLOWING: THE TESTING LABORATORY WILL PERFORM TENSION TESTS ON 25% OF ANCHORS AND DOWELS TO THE FOLLOWING TEST LOADS:

ROD DIA OR BAR SIZE	EMBEDMENT	TEST LOAD	BASE MATERIAL
3/8"	4"	1800#	CONCRETE
1/2"	5"	3200#	CONCRETE
5/8"	6"	5000#	CONCRETE
3/4"	7"	7100#	CONCRETE
7/8"	9"	9700#	CONCRETE
1"	11"	12800#	CONCRETE
#3	5"	3000#	CONCRETE
#4	6 1/2"	5400#	CONCRETE
#5	8"	8400#	CONCRETE
#6	10"	11900#	CONCRETE
#7	12"	16200#	CONCRETE
#8	14"	21300#	CONCRETE
3/8"	3 1/2"	3100#	MASONRY
1/2"	4 1/4"	3800#	MASONRY
5/8"	5"	4500#	MASONRY
3/4"	6 5/8"	7500#	MASONRY

- ANCHORS: ASTM F1554 THREADED RODS WITH ASTM A 563 GRADE A NUTS AND ANSI B18.22. 1 TYPE A WASHERS, UNLESS OTHERWISE NOTED. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS TO USE ASTM A563 GRADE DH HEAVY HEX NUTS AND ASTM F436 WASHERS.
- DOWELS: ASTM A615 GRADE 60 REINFORCING STEEL.
- REMOVE GREASE, OIL, RUST, AND OTHER LAITANCE FROM RODS AND DOWELS PRIOR TO INSTALLATION.
- INSTALL ADHESIVE ANCHORS PER THE MANUFACTURER'S INSTRUCTIONS.
- IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
- LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH ADHESIVE ANCHORS.

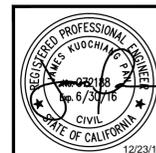
ITEM NUMBER	LOCATION OF WORK	DESCRIPTION OF WORK	PERMIT	DEFERRED SUBMITTAL
1	STEEL TANK	ANCHORAGE		X
2	STEEL TANK	OVERTURNING		X
3	STEEL TANK	SLOSHING		X
4	STEEL TANK	SLIDING		X
5	STEEL TANK	SHELL COMPRESSION		X
6	STEEL TANK	FOUNDATION DESIGN	X	
7	STEEL TANK	WALL PENETRATION REINFORCED PLATES		X
8	STEEL TANK	TIE OFF POINTS		X
9	STEEL TANK	LADDER		X
10	STEEL TANK	INTERMEDIATE AND ROOF PLATFORMS		X
11	STEEL TANK	GUARDRAIL		X
12	STEEL TANK	INTERIOR DIVING PLATFORM		X
13	PUMP BUILDING	ANCHORAGE		X
14	PUMP BUILDING	OVERTURNING		X
15	PUMP BUILDING	SLIDING		X
16	PUMP BUILDING	PANEL CONNECTION DETAILS		X
17	PUMP BUILDING	FOUNDATION DESIGN	X	

DEFERRED SUBMITTAL

- DEFERRED SUBMITTALS ARE BY CONTRACTOR. DETAILS SHOWN IN THESE SECTIONS ARE FOR BIDDING PURPOSES ONLY AND NOT FOR CONSTRUCTION.
- CONTRACTOR SHALL SUBMIT STEEL TANK AND PUMP BUILDING PLANS AND CALCULATIONS TO THE CITY BUILDING DEPARTMENT FOR APPROVAL AND PERMIT PRIOR TO ANY FOUNDATION CONSTRUCTION.
- CONTRACTOR'S STEEL TANK AND PUMP BUILDING SUBMITTAL PACKAGE WILL BE SUBJECT TO CITY REVIEW AND COMMENT. CONTRACTOR WILL BE RESPONSIBLE FOR ADDRESSING CITY REVIEW COMMENTS AND RESUBMITTING THE TANK AND/OR BUILDING SUBMITTAL AS NECESSARY.
- ANCHORAGE DETAILS AND CALCULATIONS SHALL BE SUBMITTED TO ENGINEER TO CHECK FOUNDATION DESIGN PRIOR TO FOUNDATION CONSTRUCTION.

CONCRETE

- ALL CONCRETE SHALL BE NORMAL WEIGHT, WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
- ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS. CONTRACTOR TO REVIEW FORMING, REINFORCING DETAILS AND ANY EMBEDDED ITEMS AND DETERMINE PRIOR TO FABRICATION OF ANY REINFORCING, PLACEMENT REQUIREMENTS AND CLEARANCES.
- CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED. WHERE REINFORCING IS NOT SPECIFICALLY SHOWN OR WHERE DETAILS ARE NOT GIVEN, PROVIDE REINFORCING SIMILAR TO THAT SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
- ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
- AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. EXISTING SURFACE SHALL BE SATURATED SURFACE DRY WITH NO STANDING WATER PRIOR TO NEW CONCRETE POUR.



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DATE	REVISION	BY

CITY OF SANTA CLARA

WATER & SEWER UTILITIES

CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
STRUCTURAL GENERAL NOTES

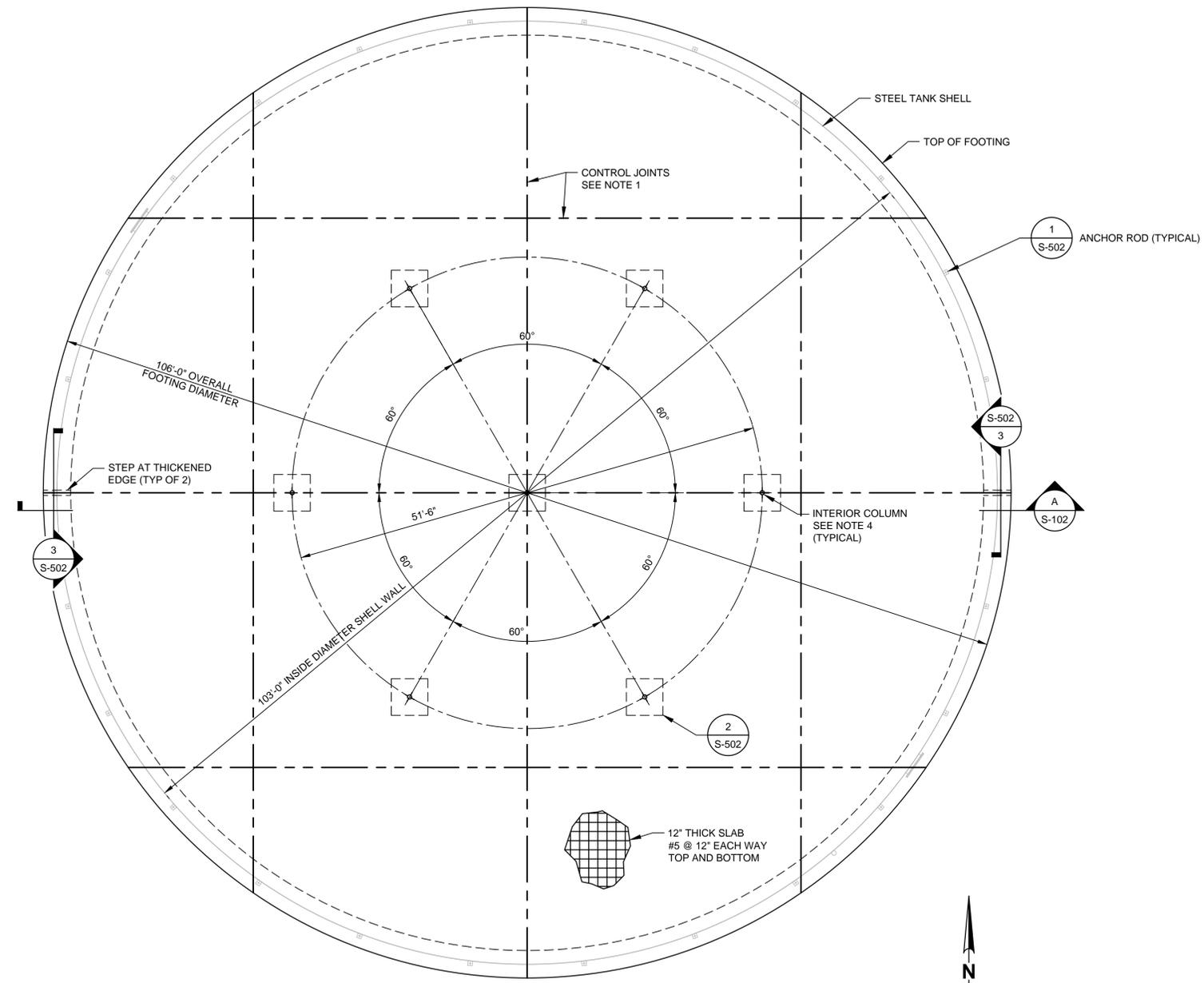
APPROVED _____ DATE _____
DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO. 592-1423-80300-7054-30236

DESIGNED BY	JP	DRAWN BY	JP
CHECKED BY	CL/EM	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	S-003	SHT.	22 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

SHEET GENERAL NOTES

1. PROVIDE CONTROL JOINTS AT A MAXIMUM 30-FOOT ON CENTER. POUR PANELS IN CHECKERED PATTERN. DO NOT PLACE SPLICES IN THE REINFORCING STEEL AT THE LOCATION OF THE CONTROL JOINTS. SEE DETAIL S/S-501.
2. MINIMUM LAP LENGTH OF HORIZONTAL BARS TO BE AS SHOWN ON SHEET S-501. ALL LAPS SHALL BE STAGGERED A MINIMUM OF 5'-0"
3. THE TOP OF TANK FOOTING ELEVATION SHALL HAVE A TOLERANCE OF 0.25-INCH.
4. COORDINATE AND ADJUST THE LOCATIONS OF THE FOOTINGS SUPPORTING THE COLUMNS WITH THE TANK FABRICATOR'S DRAWINGS.
5. TANK WILL BE MECHANICALLY ANCHORED TO THE FOUNDATION.



TANK FOUNDATION PLAN
 1/8"=1'-0"
 0 4' 8' 16'



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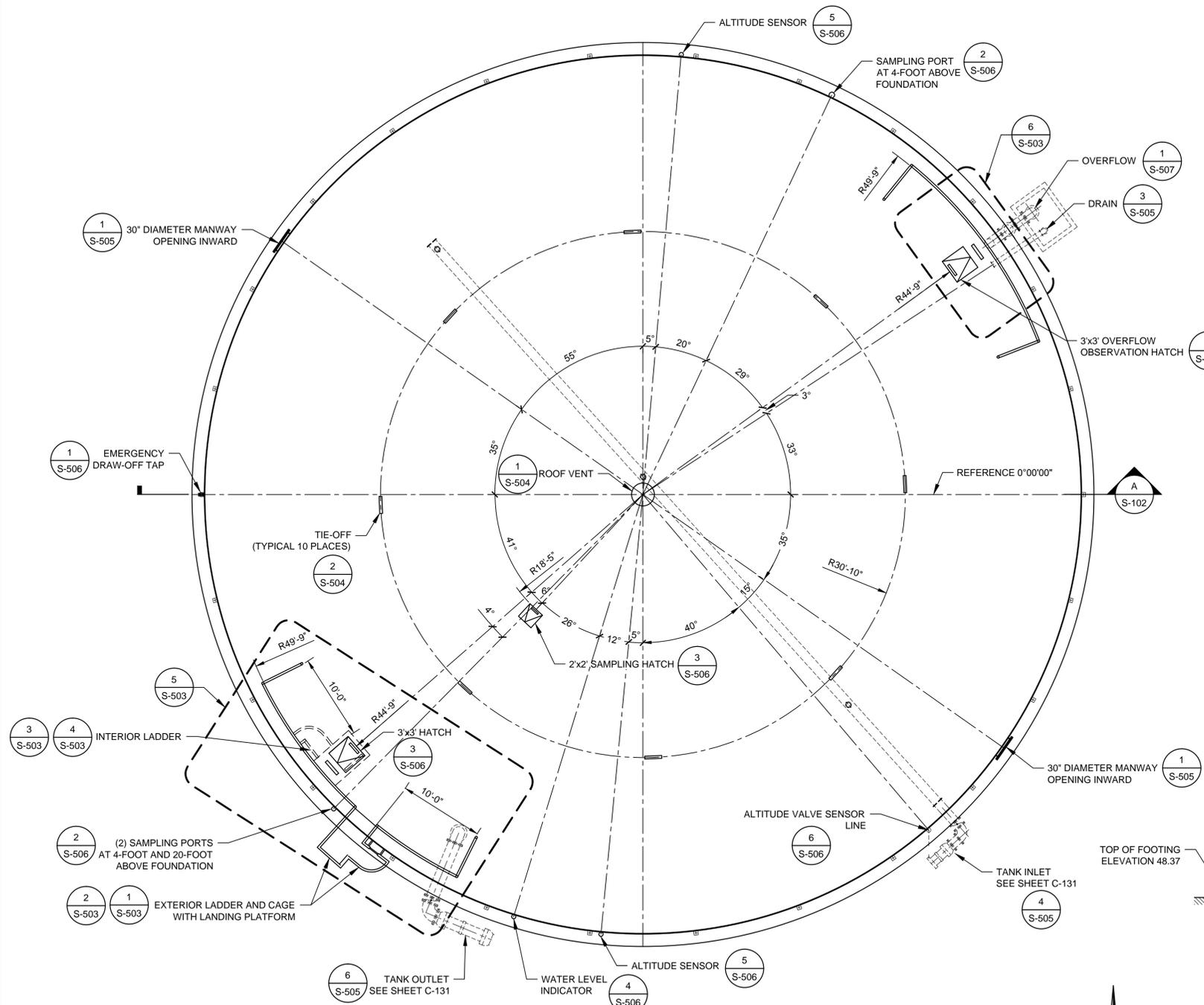
DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE TANK FOUNDATION PLAN AND SECTION		
APPROVED	DATE	BY
DIRECTOR OF WATER & SEWER UTILITIES		

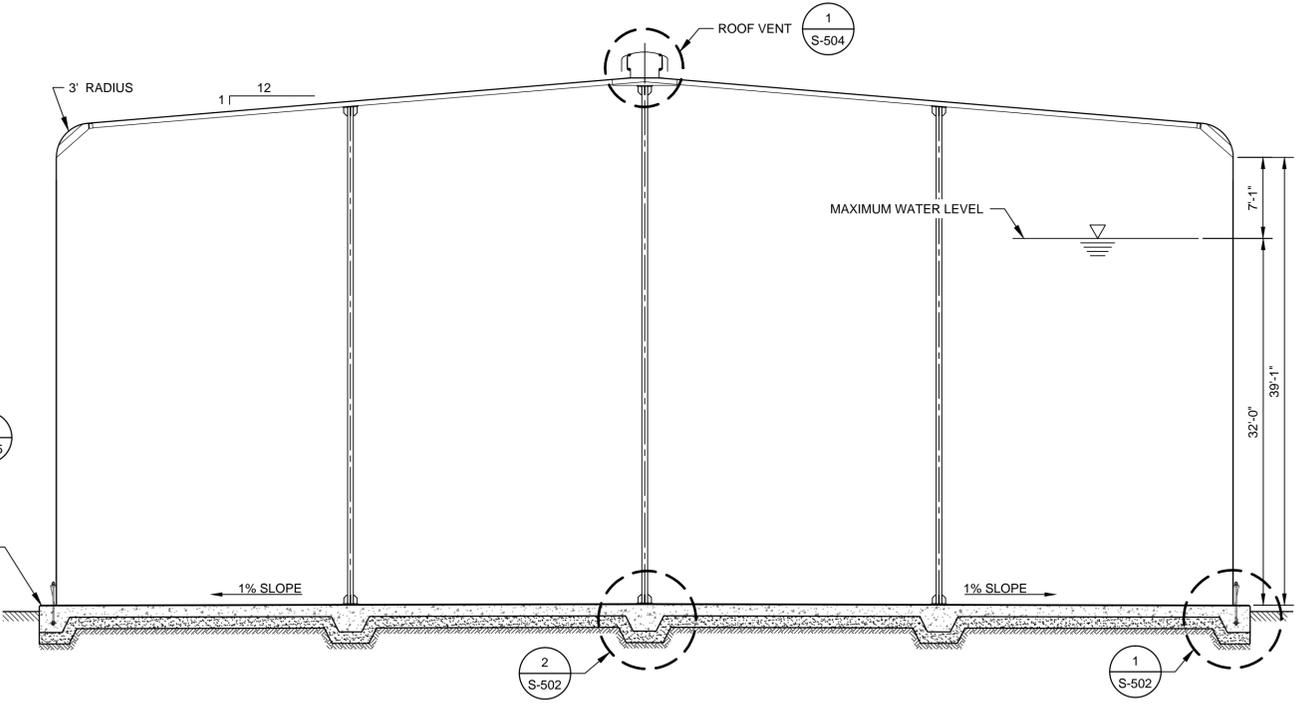
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CHECKED BY CS/EM	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-101	SHT. 23 OF 60	
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

SHEET GENERAL NOTES

- COORDINATE HANDHOLE OPENINGS IN ROOF WITH CATHODIC PROTECTION PLANS.



1
S-102
TANK ROOF PLAN
1/8"=1'-0"
0 4' 8' 16'



A
S-101
TANK SECTION
1/8"=1'-0"
0 4' 8' 16'



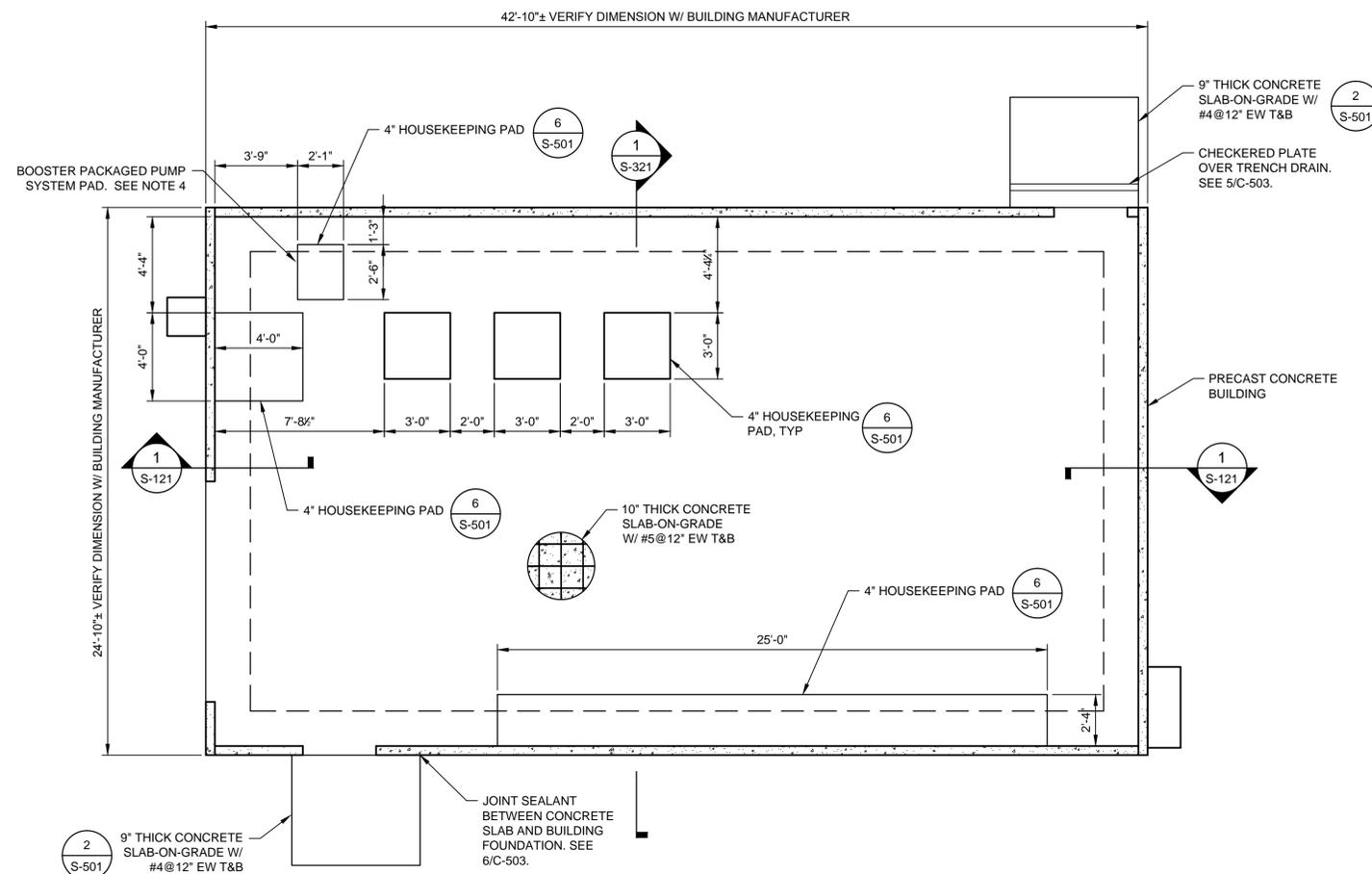
DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE TANK ROOF PLAN AND SECTION		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

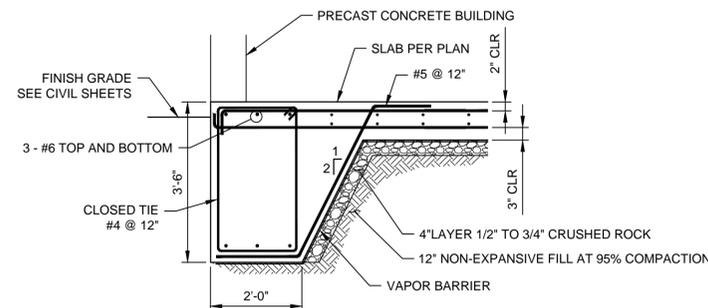
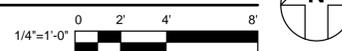
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DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-102	SHT. 24 OF 60	
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

SHEET GENERAL NOTES

1. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR INFORMATION NOT SHOWN.
2. REFERENCE T/SLAB EL(+)'0'-0" = DATUM EL 46.68.
3. CONTRACTOR TO SUBMIT BUILDING ANCHORAGE DETAILS TO ENGINEER PRIOR TO POURING FOUNDATION.
4. SIZE AND LOCATION OF THE BOOSTER PACKAGED PUMP SYSTEM PAD IS APPROXIMATE. CONTRACTOR TO COORDINATE WITH SELECTED SYSTEM.
5. INSTALL CONTROL JOINTS AT 15' MAX. KEEPING EACH SECTION AS SQUARE AS POSSIBLE, NOT TO EXCEED 1:2 RATIO. SEE DETAIL 5/S501.
6. HOUSEKEEPING PAD DIMENSIONS FOR BIDDING PURPOSES ONLY. COORDINATE SIZE AND LOCATION WITH EQUIPMENT MANUFACTURER. PAD TO EXTEND MINIMUM 4" BEYOND EQUIPMENT FOOTPRINT.



FOUNDATION PLAN



SECTION

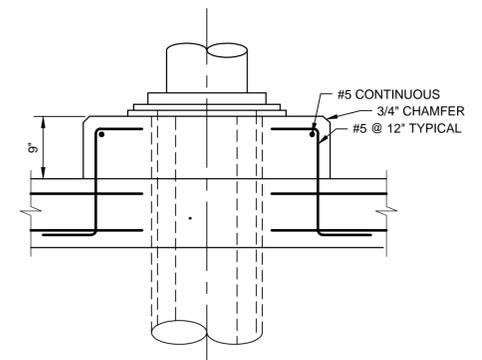
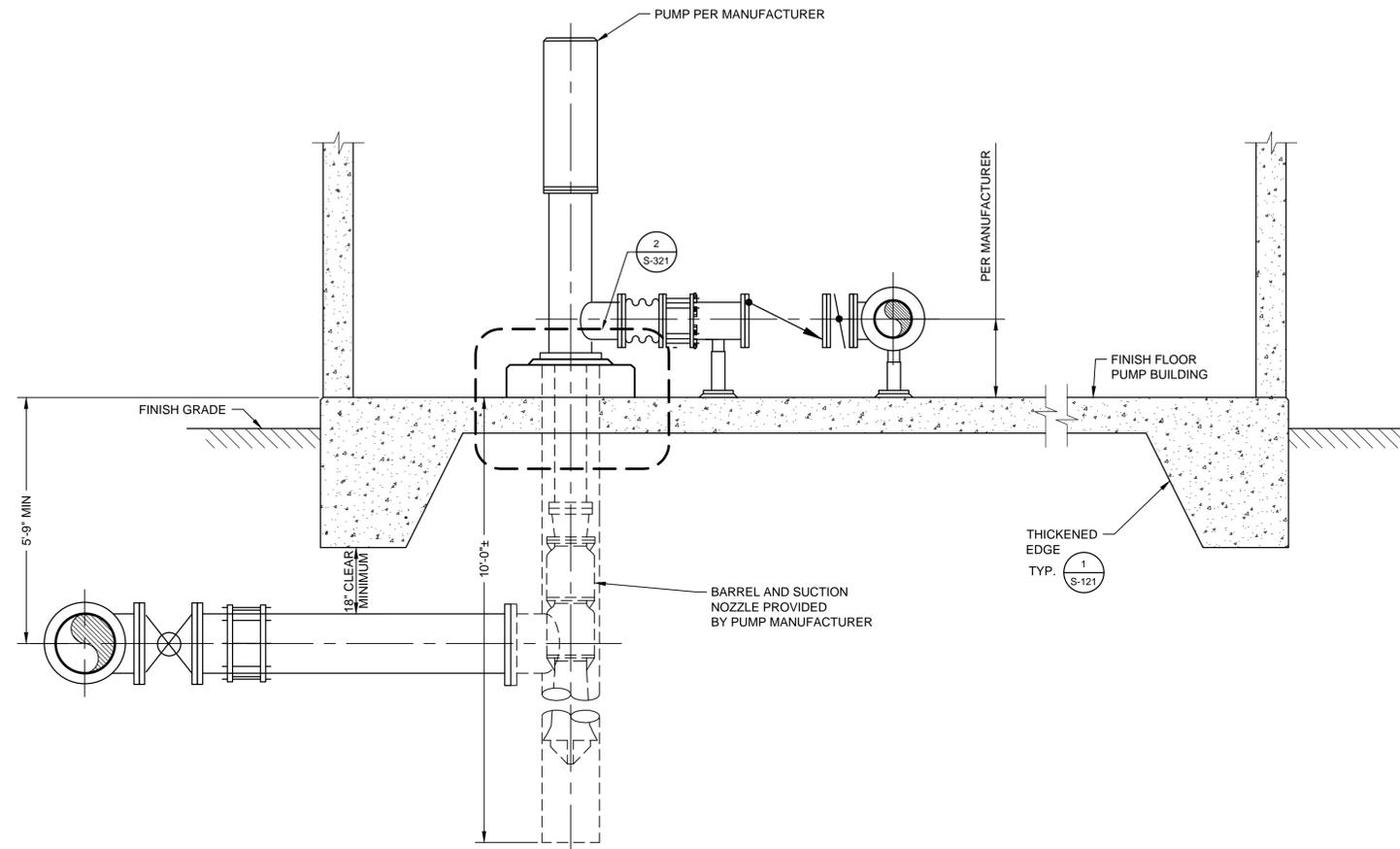


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DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 PUMP BUILDING - FOUNDATION PLAN

PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY JP	DRAWN BY SEB
CHECKED BY CL/EM	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-121	SHT. 25 OF 60	
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4



1 VERTICAL TURBINE PUMP SECTION
S-121 NOT TO SCALE

2 PUMP CONNECTION DETAIL
S-321 NOT TO SCALE



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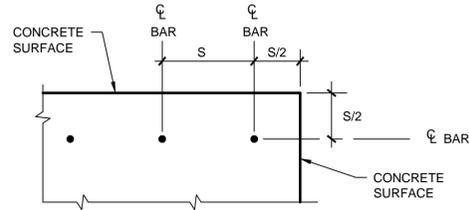
CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE PUMP BUILDING - SECTIONS		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	JP	DRAWN BY MY
CHECKED BY	CL/EM	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	S-321	SHT. 26 OF 60
HORIZ.	NONE	VERT. NONE
DWG. NO.	W-3200-4	

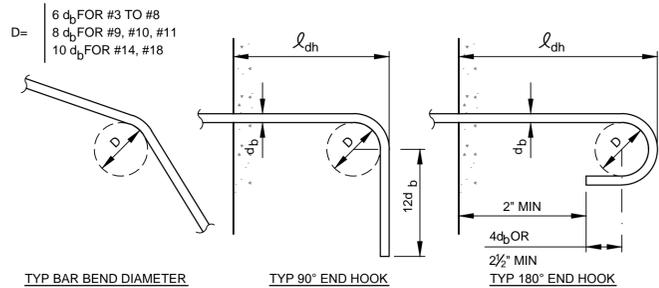
BAR SIZE	DEVELOPMENT LENGTH (l_d)											
	3000 PSI CONC (f_c)				4000 PSI CONC (f_c)				5000 PSI CONC (f_c)			
	TOP		OTHER		TOP		OTHER		TOP		OTHER	
#3	13	22	12	17	12	19	12	15	12	17	12	13
#4	18	29	14	22	15	25	12	19	14	23	12	17
#5	22	36	17	28	19	31	15	24	17	28	13	22
#6	26	43	20	33	23	37	18	29	20	34	16	26
#7	38	63	29	48	33	54	25	42	29	49	23	38
#8	43	72	33	55	37	62	29	48	34	56	26	43
#9	49	81	37	62	42	70	33	54	38	63	29	48
#10	56	89	43	69	49	78	38	60	44	69	34	54
#11	68	98	52	76	59	85	45	66	53	76	41	59

BAR SIZE	TENSION LAP SPLICE LENGTH (CLASS 'B' SPLICE)											
	3000 PSI CONC (f_c)				4000 PSI CONC (f_c)				5000 PSI CONC (f_c)			
	TOP		OTHER		TOP		OTHER		TOP		OTHER	
#3	17	28	16	22	16	25	16	19	16	22	16	17
#4	23	38	18	29	20	33	16	25	18	29	16	23
#5	28	47	22	36	25	41	19	31	22	36	17	28
#6	34	56	26	43	29	49	23	38	26	44	20	34
#7	49	82	38	63	43	71	33	55	38	63	30	49
#8	56	93	43	72	49	81	38	62	44	72	34	56
#9	63	105	49	81	55	91	42	70	49	81	38	63
#10	73	116	56	90	63	101	49	78	57	90	44	70
#11	88	128	68	99	76	111	59	85	68	99	53	76

- NOTES:
- LENGTHS SHOWN ARE FOR GRADE 60 UNCOATED BARS.
 - LENGTHS SHOWN ARE IN INCHES.
 - INCREASE LENGTHS 30% FOR LIGHT WEIGHT CONCRETE
 - TOP BARS: HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THEM.
 - THE QUANTITY 'S' IS DEFINED AS FOLLOWS:

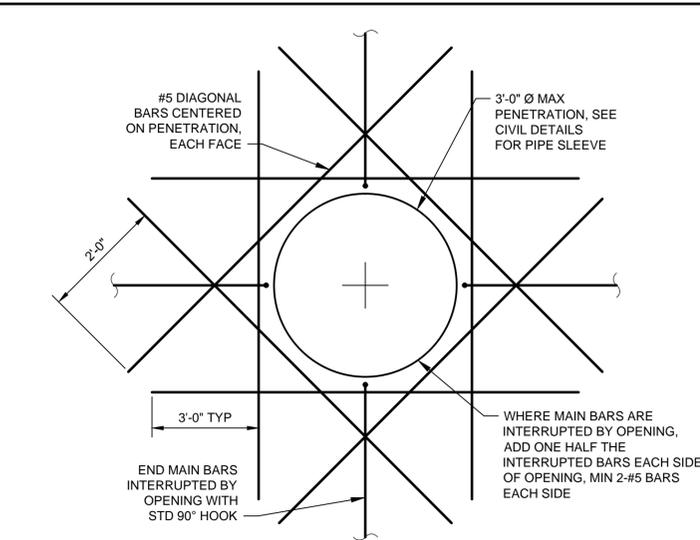


1 BAR DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS
TYP SCALE: NOT TO SCALE

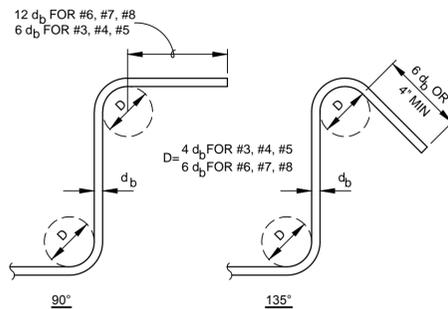


4 BAR BENDS AND END HOOKS
TYP SCALE: NOT TO SCALE

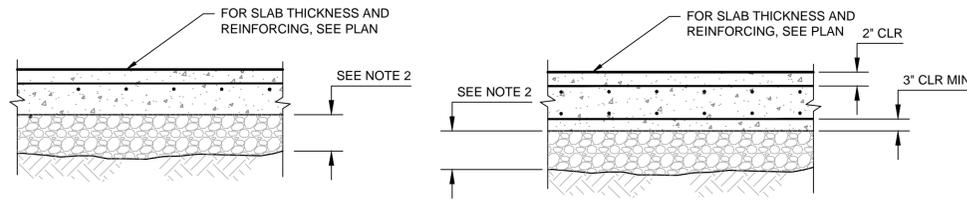
BAR SIZE	MINIMUM TENSION EMBEDMENT LENGTHS FOR STANDARD END HOOKS ON REINFORCING BARS			
	NORMAL WEIGHT CONCRETE, f_c PSI			
#3	6	6	6	6
#4	8	7	6	6
#5	10	9	8	7
#6	12	10	9	9
#7	14	12	11	10
#8	16	14	12	11
#9	18	15	14	13
#10	20	17	16	14
#11	22	19	17	16
#14	38	33	29	27
#18	50	43	39	35



7 EXTRA REINFORCEMENT AT OPENINGS
TYP SCALE: NOT TO SCALE



8 STIRRUP AND TIE HOOKS
TYP SCALE: NOT TO SCALE

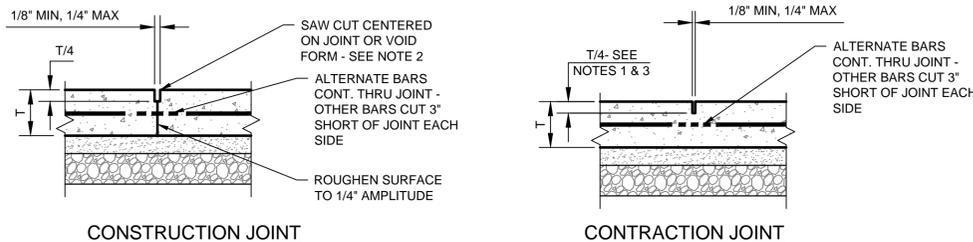


SINGLE MAT

DOUBLE MAT

- NOTES:
- SUBGRADE PREPARATION - REMOVE AND REPLACE UPPER 24 INCHES OF SUBGRADE BENEATH BOTTOM OF AGGREGATE BASE LAYER AND 3 FEET LATERALLY BEYOND SLAB WITH NON-EXPANSIVE FILL MEETING REQUIREMENTS OF SOILS REPORT. COMPACT AND MOISTURE CONDITION SUBGRADE IN ACCORDANCE WITH SOILS REPORT.
 - 6" MIN OF CALTRANS CLASS 1 PERMEABLE MATERIAL TYPE "A" COMPACTED TO AT LEAST 95% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D 1557.

2 EXTERIOR SLAB ON GRADE
TYP SCALE: NOT TO SCALE



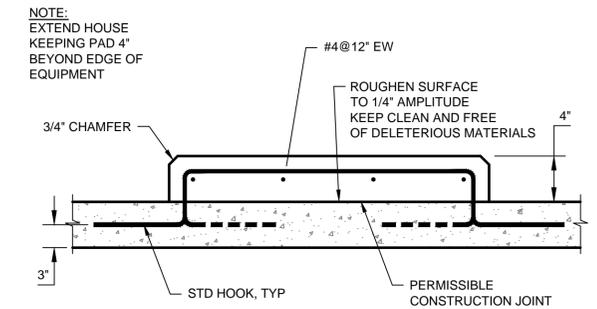
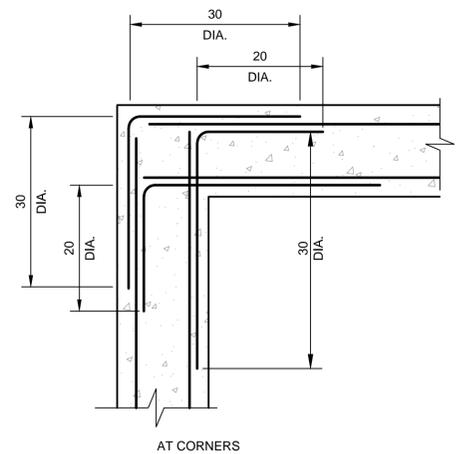
CONSTRUCTION JOINT

CONTRACTION JOINT

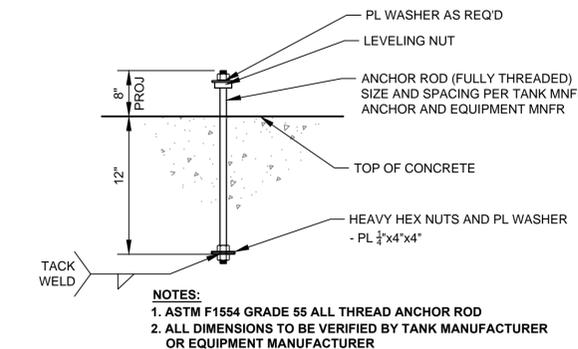
- NOTES:
- SAWCUT JOINTS WITHIN 12 HOURS AFTER PLACING CONCRETE
 - REMOVE VOID FORM AFTER PLACING CONCRETE.
 - DEPRESS REINFORCEMENT IN VICINITY OF SAWCUT TO AVOID DAMAGING REINFORCEMENT

5 SLAB CONTROL JOINTS
TYP SCALE: NOT TO SCALE

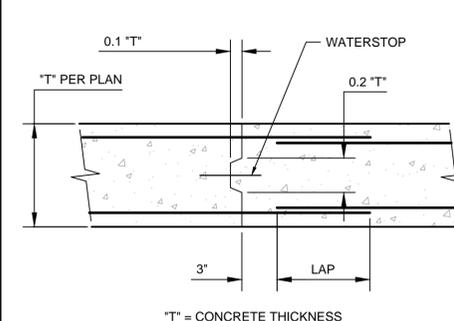
3 WALL JUNCTION
TYP SCALE: NOT TO SCALE



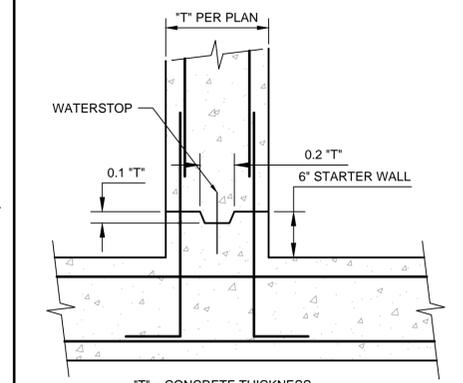
6 HOUSEKEEPING PAD
TYP SCALE: NOT TO SCALE



9 TYP CAST-IN-PLACE ANCHOR ROD DETAIL
TYP SCALE: NOT TO SCALE



10 SLAB CONSTRUCTION JOINT
TYP SCALE: NOT TO SCALE



11 STARTER WALL
TYP SCALE: NOT TO SCALE



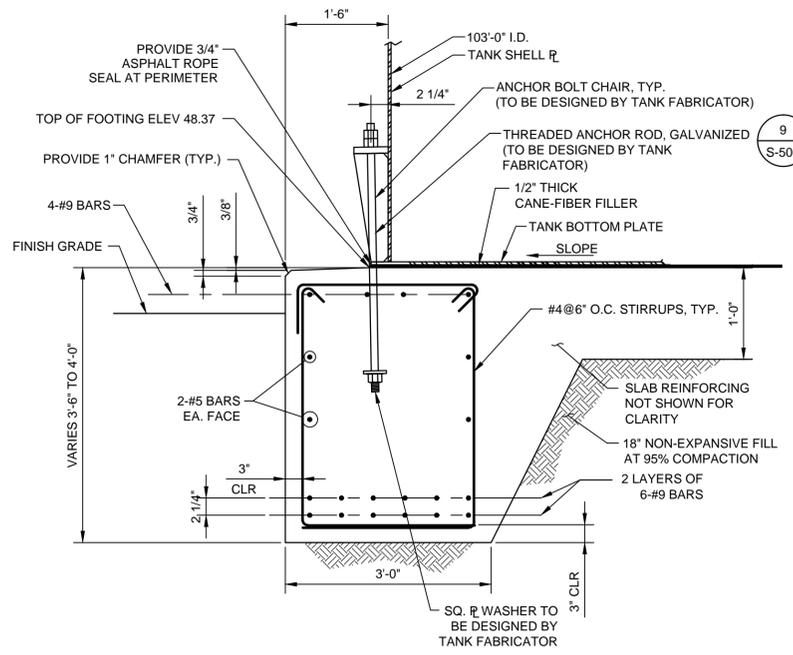
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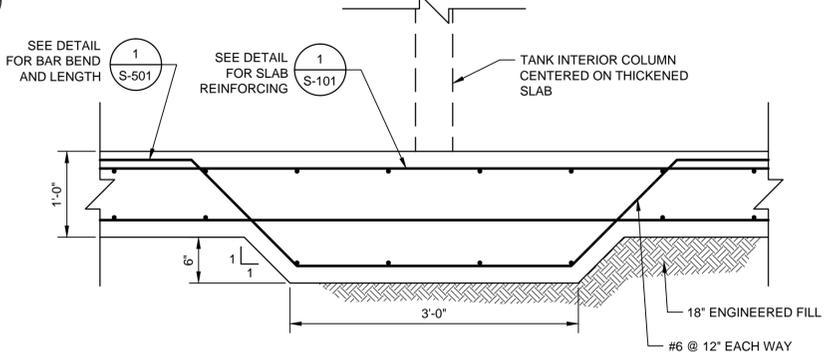
CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
TYPICAL STRUCTURAL DETAILS

APPROVED DATE
DIRECTOR OF WATER & SEWER UTILITIES

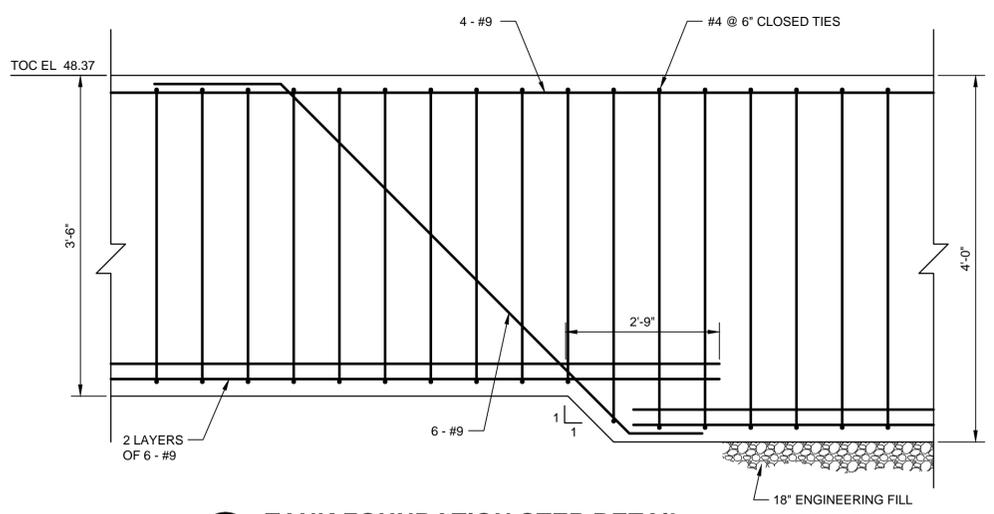
PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY JP	DRAWN BY CB
CHECKED BY CL/EM	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-501	SHT. 27 OF 60	
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4



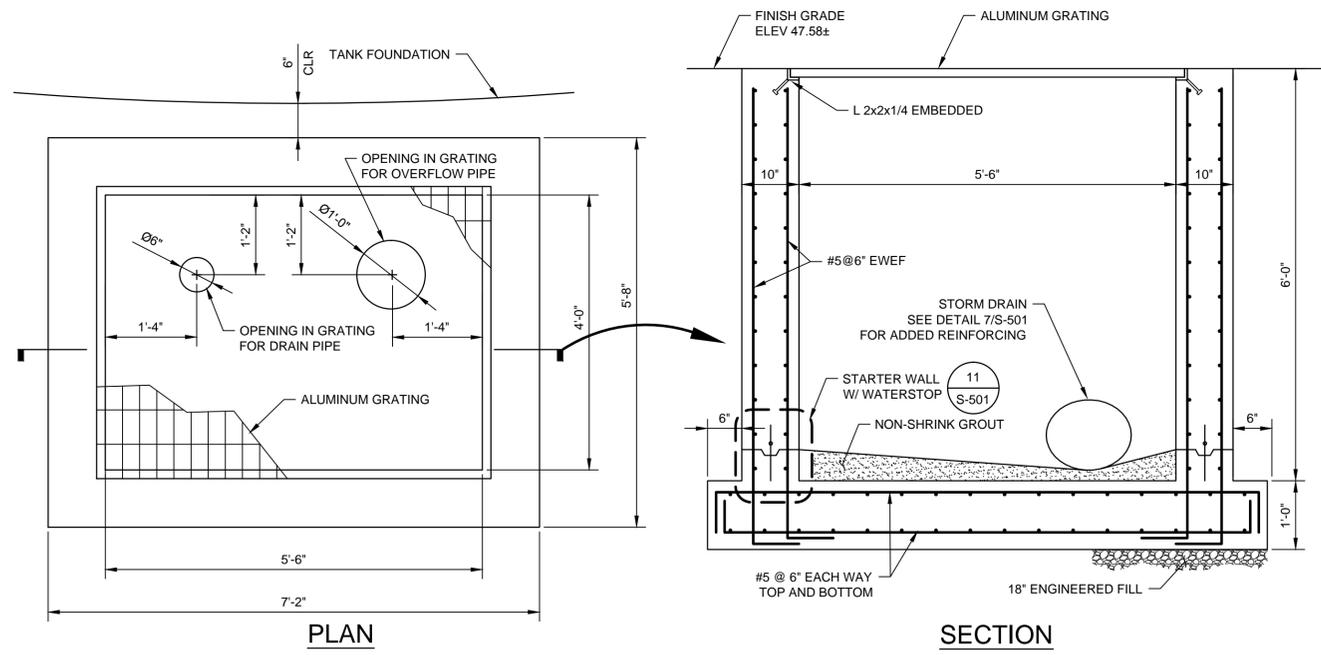
1 TANK ANCHORAGE AND THICKENED EDGE
S-101 NOT TO SCALE



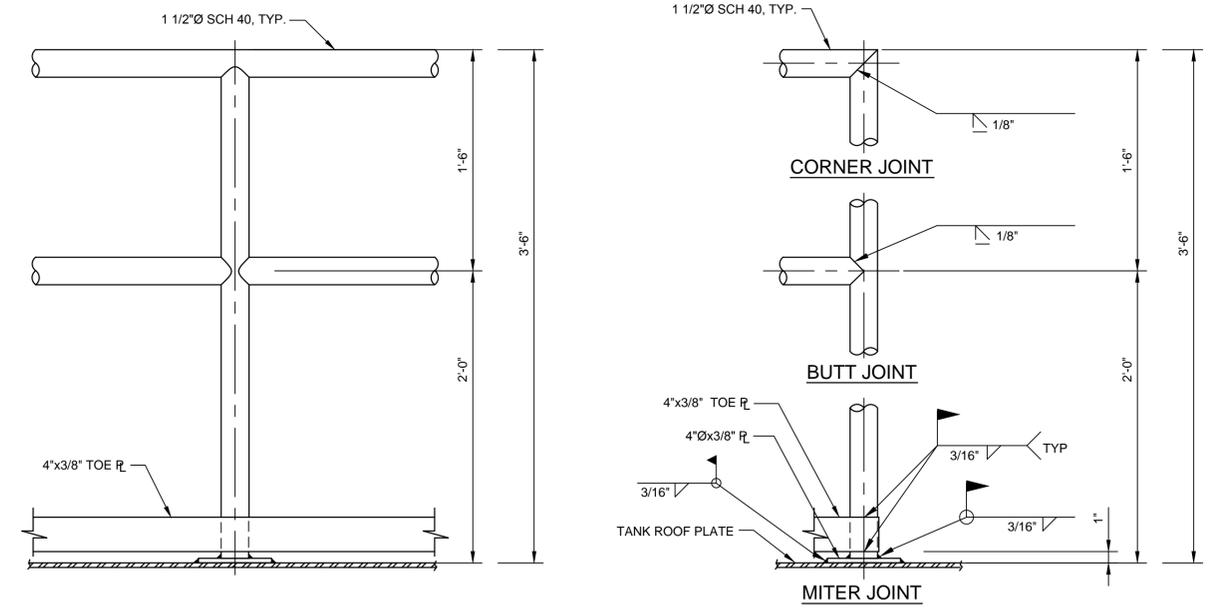
2 INTERIOR TANK COLUMN FOUNDATION DETAIL
S-101 NOT TO SCALE



3 TANK FOUNDATION STEP DETAIL
S-101 NOT TO SCALE



4 OVERFLOW BOX DETAIL
S-507 NOT TO SCALE



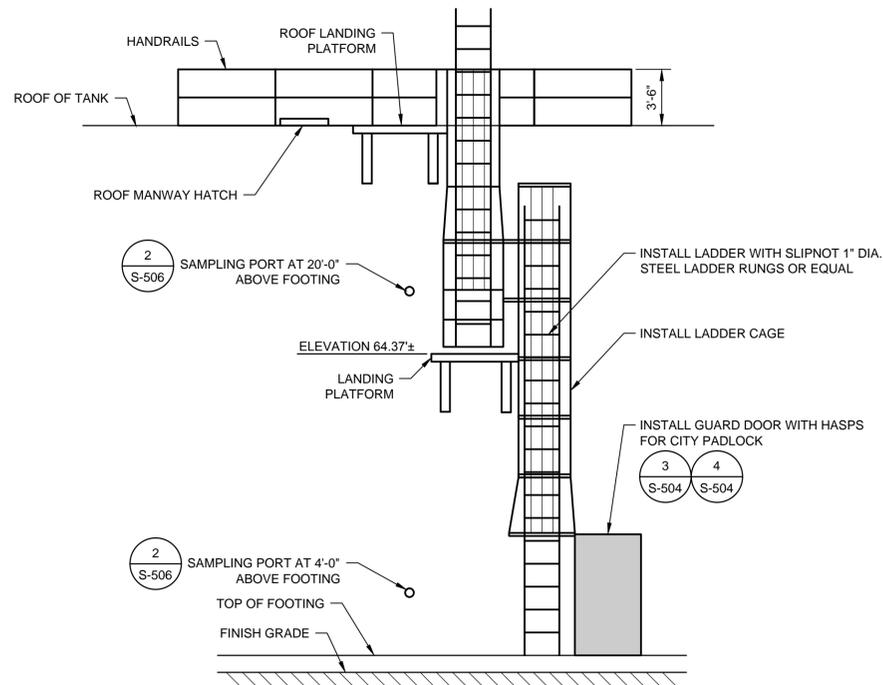
5 GUARDRAIL DETAIL
S-503 NOT TO SCALE



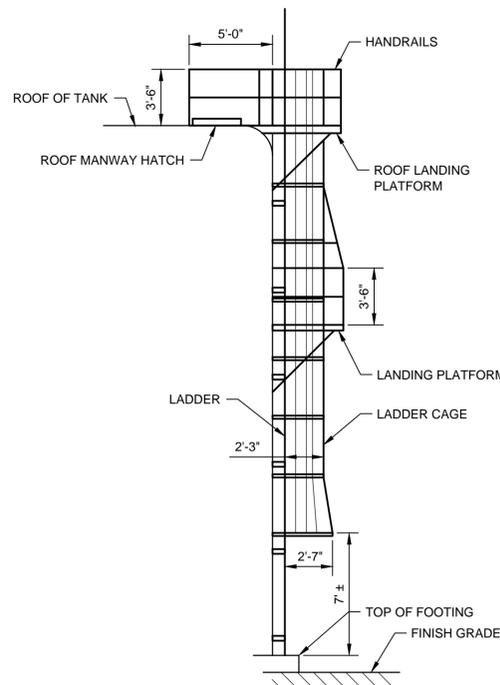
DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE STRUCTURAL DETAILS		
APPROVED	DATE	BY
DIRECTOR OF WATER & SEWER UTILITIES		

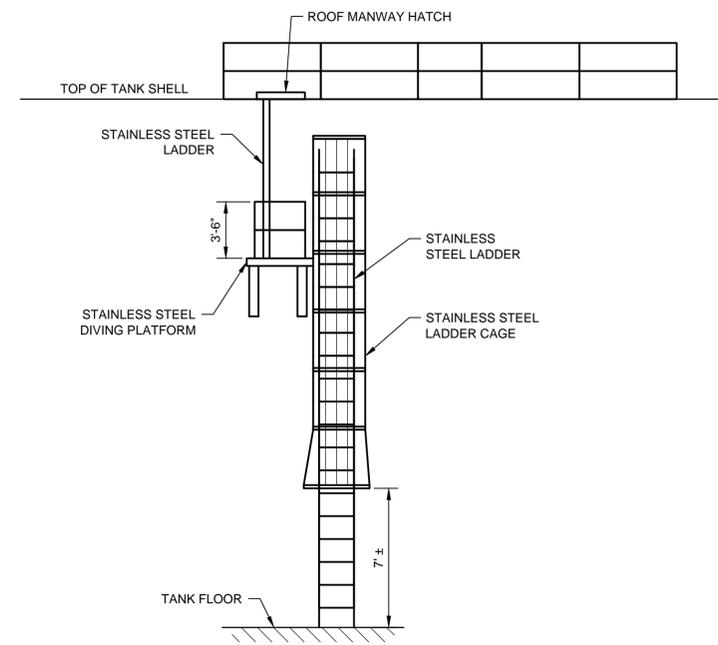
PROJ. NO. 592-1423-80300-7054-30236		
DESIGNED BY JP	DRAWN BY MY/CB	
CHECKED BY CL/EM	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-502	SHT. 28 OF 60	
HORIZ. NONE	VERT. NONE	DWG. NO. W-3200-4



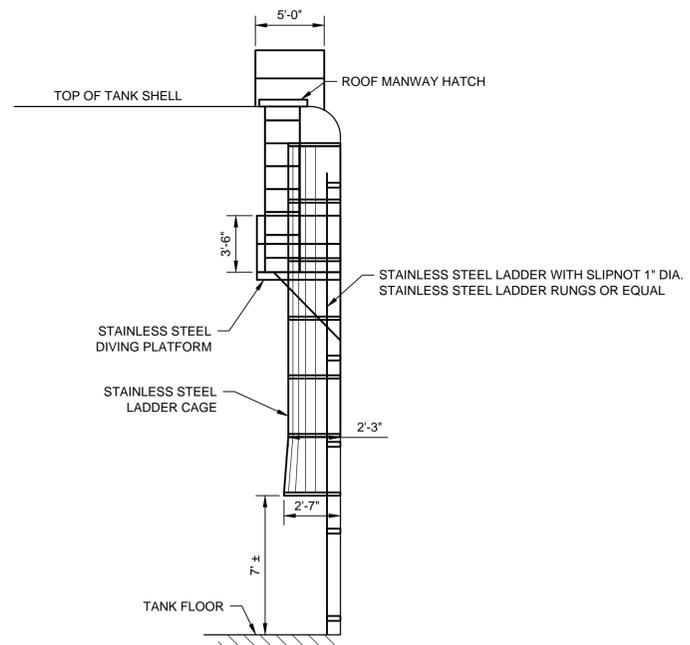
1 EXTERIOR LADDER ASSEMBLY DETAIL - FRONT VIEW
S-102 NOT TO SCALE



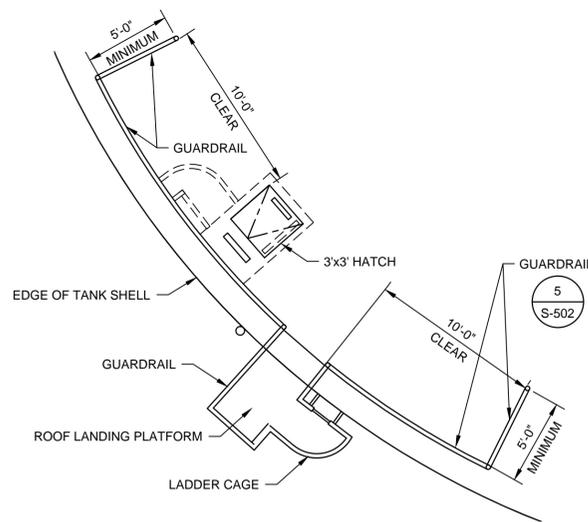
2 EXTERIOR LADDER ASSEMBLY DETAIL - PROFILE
S-102 NOT TO SCALE



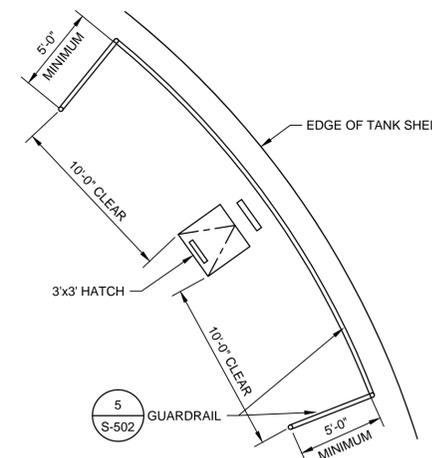
3 INTERIOR LADDER ASSEMBLY DETAIL - FRONT VIEW
S-102 NOT TO SCALE



4 INTERIOR LADDER ASSEMBLY DETAIL - PROFILE
S-102 NOT TO SCALE



5 TANK ROOF RAILING DETAIL
S-102 NOT TO SCALE



6 TANK ROOF RAILING DETAIL
S-102 NOT TO SCALE

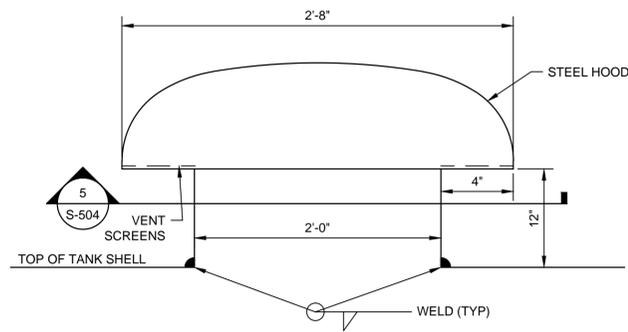


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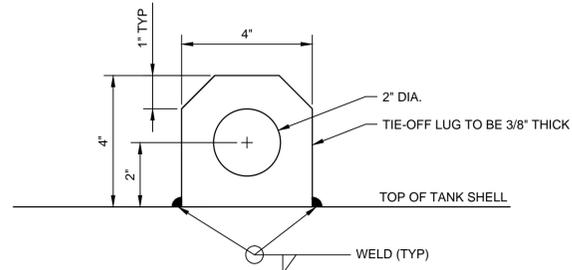
DATE	REVISION	BY

CITY OF SANTA CLARA		
WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION		
1651 MARTIN AVENUE		
STRUCTURAL DETAILS		
APPROVED	DATE	
DIRECTOR OF WATER & SEWER UTILITIES		

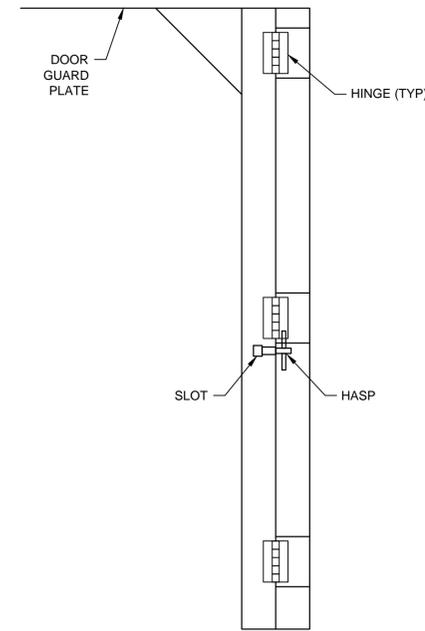
PROJ. NO. 592-1423-80300-7054-30236			
DESIGNED BY	JP	DRAWN BY	CB
CHECKED BY	CL/EM	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	S-503	SHT.	29 OF 60
HORIZ.	NONE	VERT.	NONE
DWG. NO.	W-3200-4		



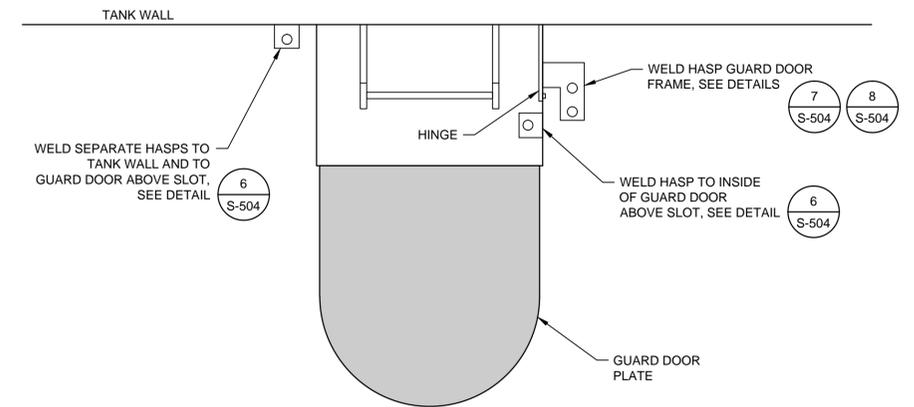
1 ROOF VENT DETAIL - FRONT VIEW
S-102 NOT TO SCALE



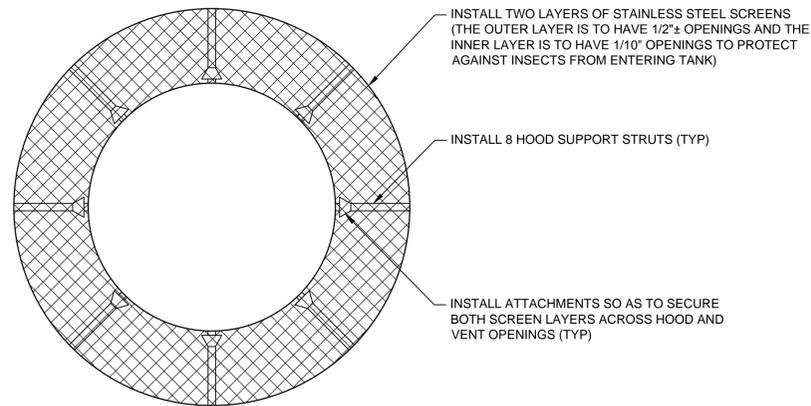
2 TIE-OFF DETAIL - FRONT VIEW
S-102 NOT TO SCALE



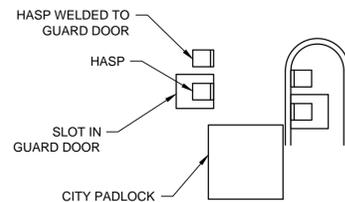
3 GUARD DOOR DETAIL - SIDE VIEW
S-503 NOT TO SCALE



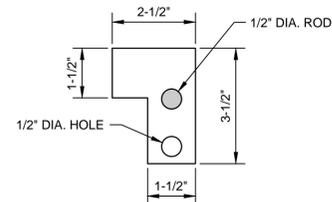
4 GUARD DOOR DETAIL - TOP VIEW
S-503 NOT TO SCALE



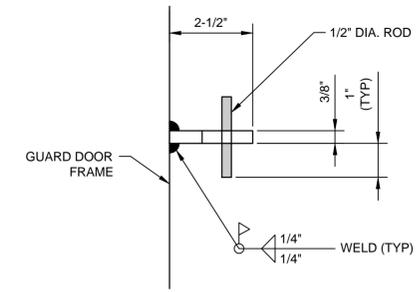
5 ROOF VENT DETAIL - BOTTOM VIEW
S-504 NOT TO SCALE



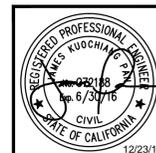
6 HASP DETAIL - SIDE VIEW
S-504 NOT TO SCALE



7 HASP DETAIL - TOP VIEW
S-504 NOT TO SCALE



8 HASP DETAIL - SIDE VIEW
S-504 NOT TO SCALE

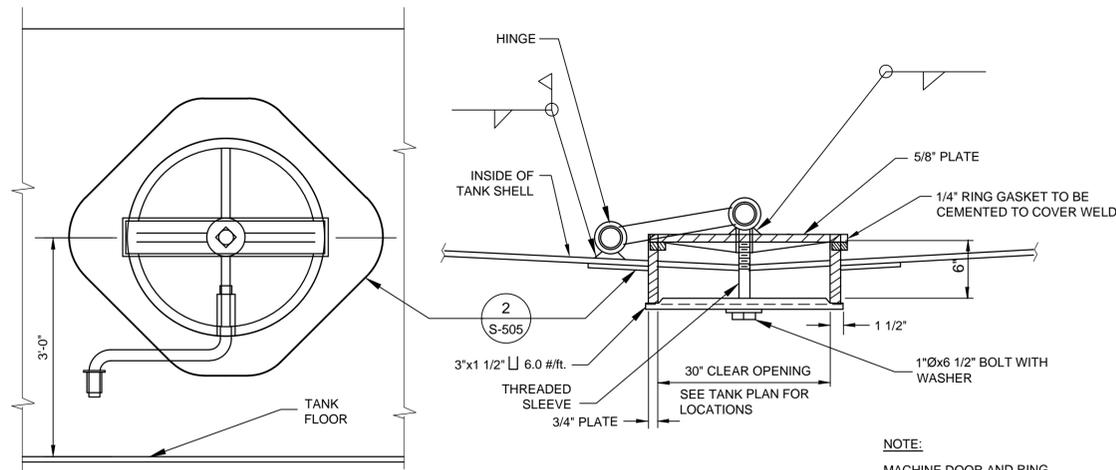


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DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE STRUCTURAL DETAILS		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

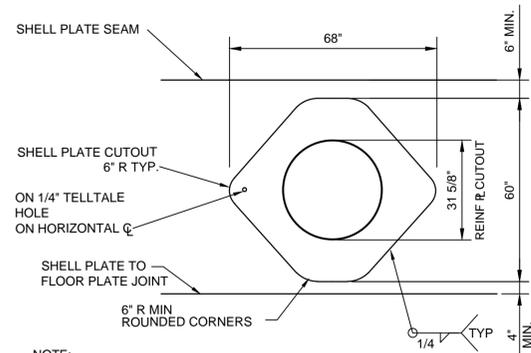
PROJ. NO. 592-1423-80300-7054-30236		
DESIGNED BY	JP	DRAWN BY MY
CHECKED BY	CL/EM	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	S-504	SHT. 30 OF 60
HORIZ. NONE	VERT. NONE	DWG. NO. W-3200-4



ELEVATION

SECTION

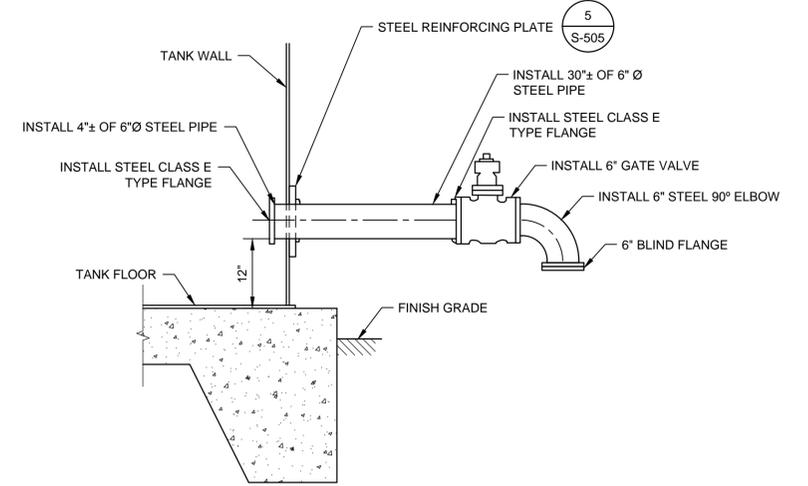
1 ENTRY MANWAY DETAIL
S-102 NOT TO SCALE



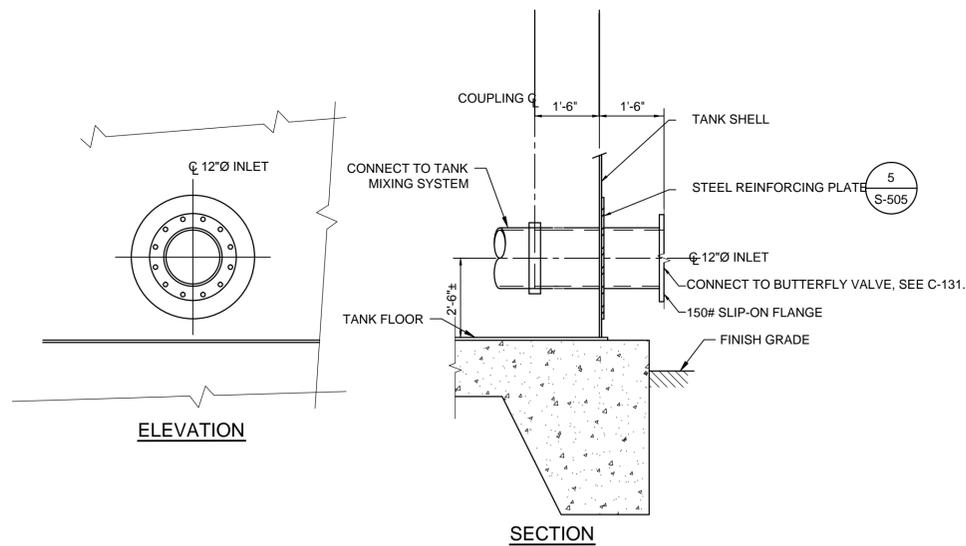
NOTE:

1. STEEL REINFORCING PLATE SHALL BE SHAPED TO FIT TANK CURVATURE.
2. STEEL REINFORCING PLATE THICKNESS TO BE DETERMINED BY THE TANK SUPPLIER.
3. COORDINATE REINFORCING PLATE CUTOUT SIZE WITH MANWAY.
4. TANK SUPPLIER TO PROVIDE REINFORCEMENT PLATE DESIGN.

2 SHELL REINFORCEMENT DETAIL
S-505 NOT TO SCALE



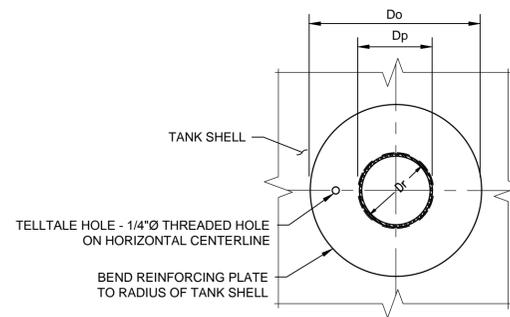
3 DRAIN DETAIL
S-507 NOT TO SCALE



ELEVATION

SECTION

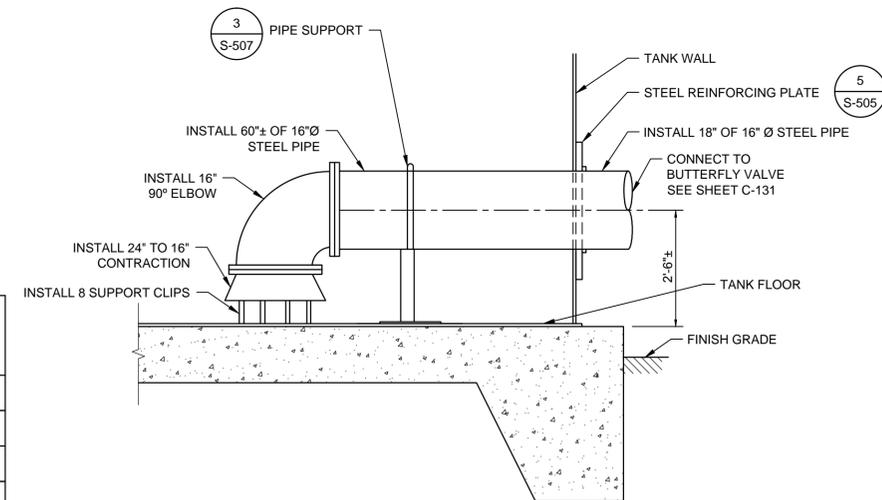
4 12" INLET PIPE PENETRATION
S-102 NOT TO SCALE



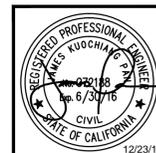
SERVICE	D PIPE OUTSIDE DIAMETER (INCHES)	Do (INCHES)	Dp DIA OF HOLE IN SHELL R _L (INCHES)	Dr DIA OF HOLE IN REINF. R _L (INCHES)	t PLATE THICKNESS (INCHES)
4" EMERGENCY TAP	4 1/2"	18"	4"	4 5/8"	MATCH SHELL R _L
6" DRAIN	6 5/8"	20"	6 1/8"	6 3/4"	MATCH SHELL R _L
12" INLET & OVERFLOW	12 3/4"	30"	13 1/4"	12 7/8"	MATCH SHELL R _L
16" OUTLET	16"	34"	16 1/2"	16 1/8"	MATCH SHELL R _L

NOTE:
TANK SUPPLIER TO PROVIDE REINFORCEMENT PLATE DESIGN.

5 SHELL REINFORCEMENT PLATE
S-505 NOT TO SCALE



6 OUTLET DETAIL
S-102 NOT TO SCALE

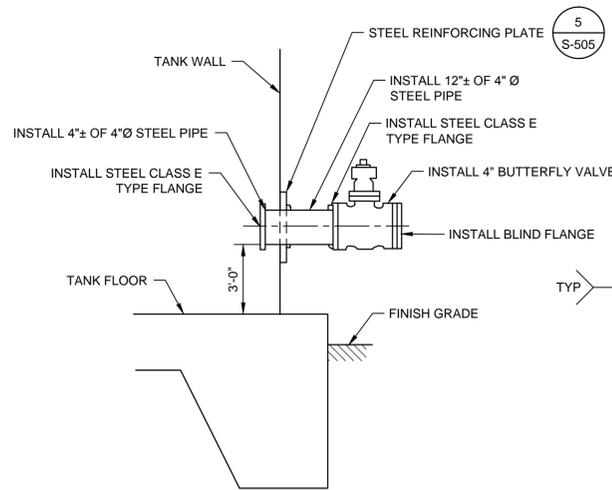


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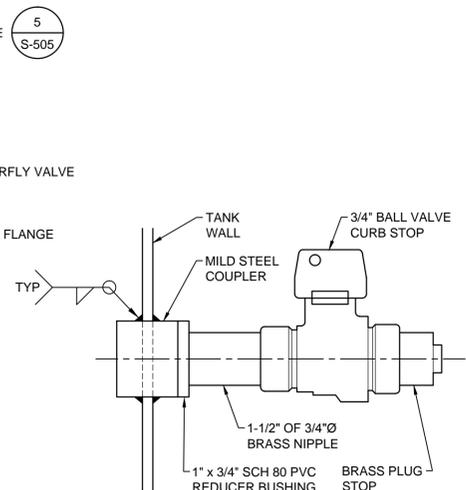
DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE STRUCTURAL DETAILS		
APPROVED	DATE	BY
DIRECTOR OF WATER & SEWER UTILITIES		

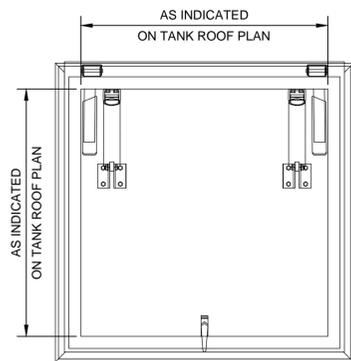
PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY JP	DRAWN BY CB
CHECKED BY CL/EM	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-505	SHT. 31 OF 60	
HORIZ. NONE	VERT. NONE	DWG. NO. W-3200-4



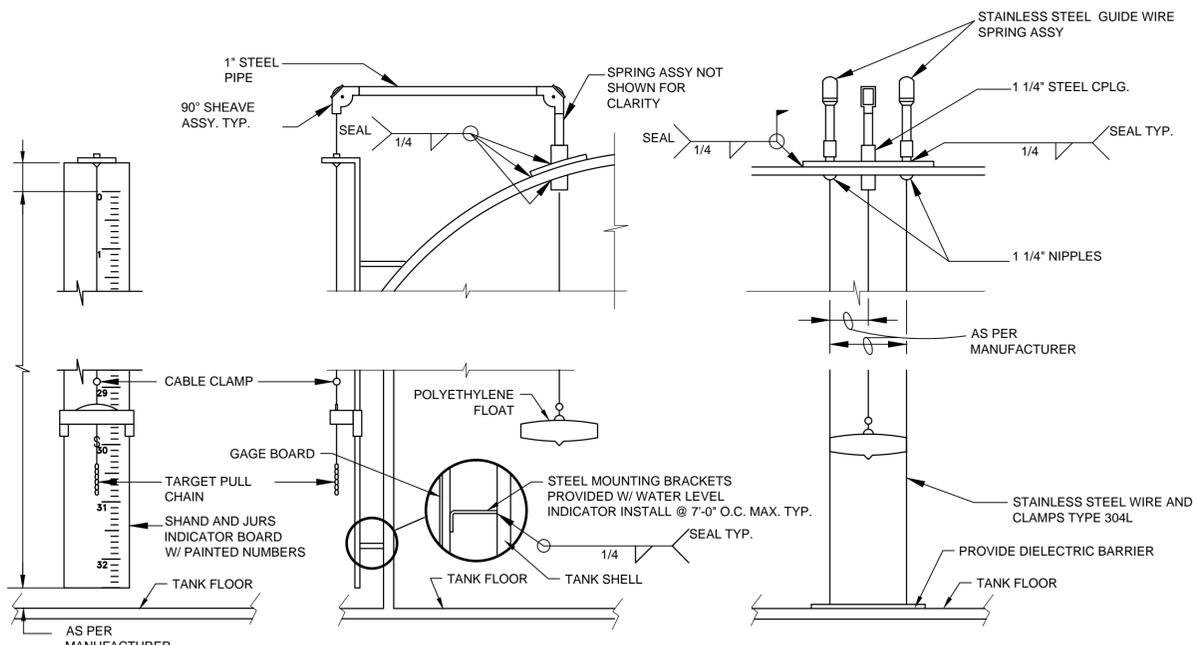
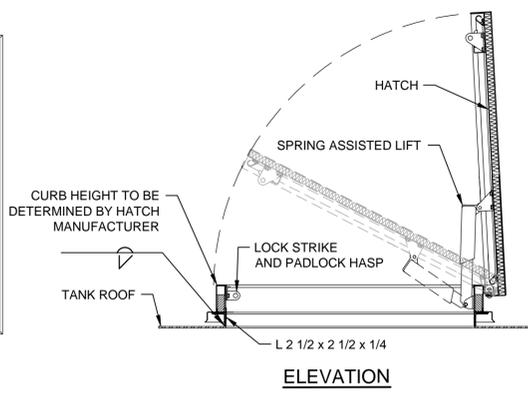
1 EMERGENCY TAP
S-102 NOT TO SCALE



2 SAMPLING PORT
S-102 NOT TO SCALE



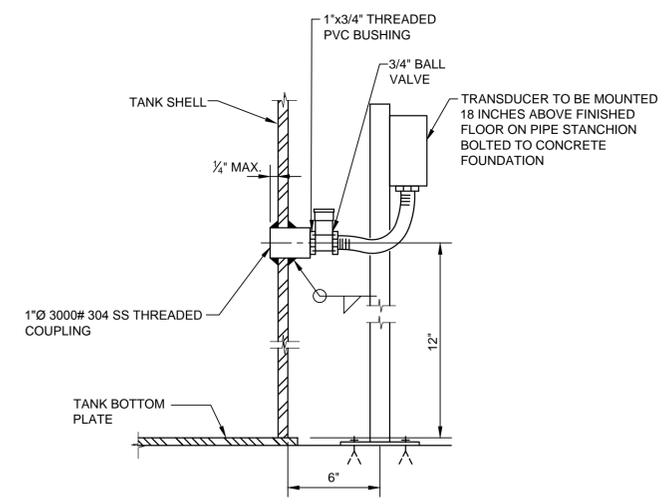
3 ROOF HATCH DETAIL
S-102 NOT TO SCALE



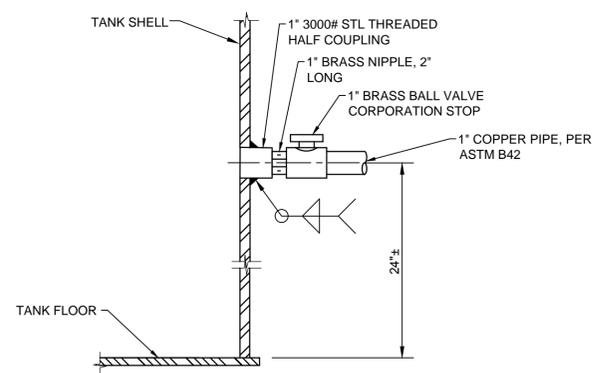
INDICATOR BOARD

NOTE: LEVEL INDICATOR BOARD SHALL BE CONSTRUCTED HALF SCALE.

4 TANK WATER LEVEL INDICATOR
S-102 NOT TO SCALE



5 ALTITUDE SENSOR PENETRATION DETAIL
S-102 NOT TO SCALE



6 ALTITUDE VALVE SENSING LINE PENETRATION DETAIL
VAR NOT TO SCALE

NOTE: CONTRACTOR TO ENSURE THAT SENSING LINE TAP AT TANK IS HIGHER THAN CONNECTION TO VALVE INSIDE THE PUMP STATION.

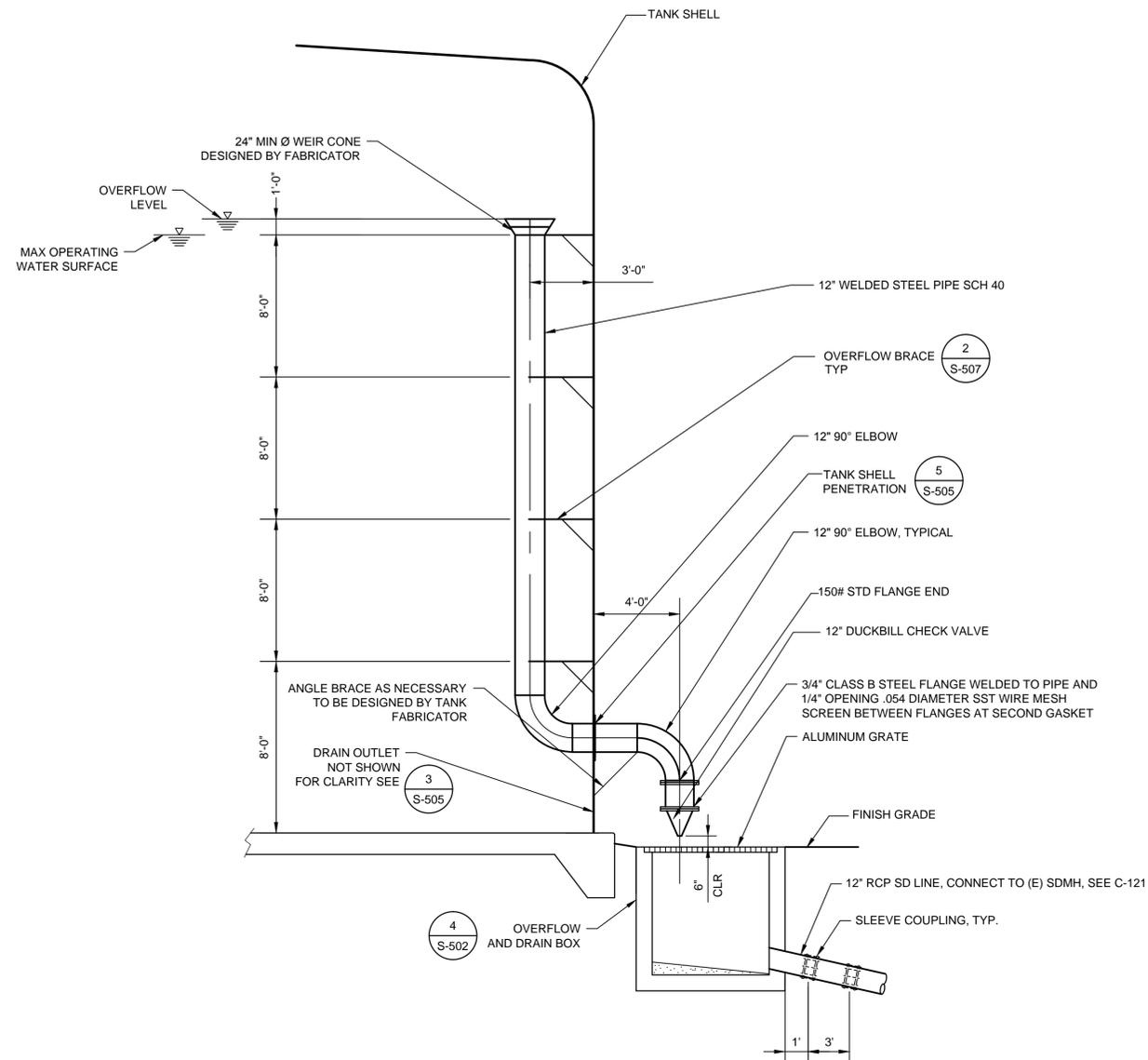


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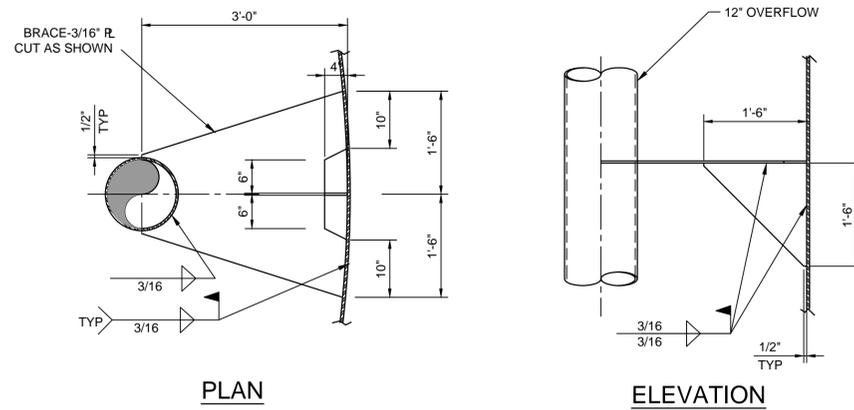
DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
STRUCTURAL DETAILS

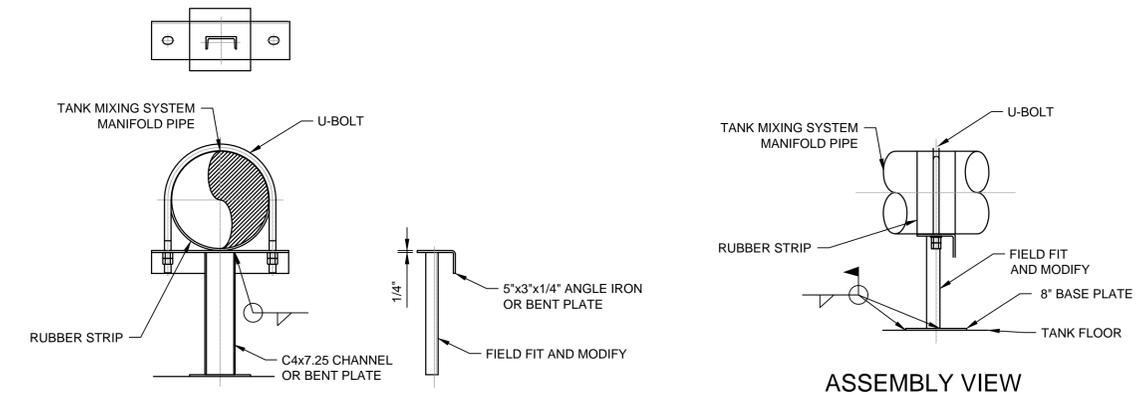
PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY JP	DRAWN BY CB
CHECKED BY CL/EM	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. S-506	SHT. 32 OF 60	
HORIZ. -	VERT. -	DWG. NO. W-3200-4



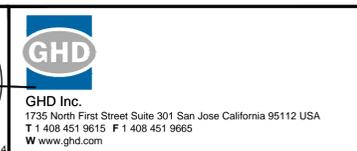
1 TANK OVERFLOW DETAIL
S-102 NOT TO SCALE



2 TANK OVERFLOW BRACE
S-507 NOT TO SCALE



3 MIXING SYSTEM PIPE SUPPORT
S-505 C-133 NOT TO SCALE



DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE STRUCTURAL DETAILS		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	JP	DRAWN BY CB
CHECKED BY	CL/EM	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	S-507	SHT. 33 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4

ABBREVIATIONS			
A	AMPERES, AREA	GPS	GALLONS PER SECOND
ABS	ACRYLONITRILE-BUTADIENE -STYRENE	HD	HEAD
AD	AREA DRAIN	HG	MERCURY
AFF	ABOVE FINISHED FLOOR	HWR	HEATING WATER RETURN
AG	ABOVE GRADE	HWS	HEATING WATER SUPPLY
APPROX	APPROXIMATE	HP	HORSEPOWER
AS	AIR SEPARATOR	HR	HOSE REEL, HOUR
AVG	AVERAGE	HT	HEIGHT
BD	BALANCE DAMPER	HVAC	HEATING, VENTILATION & CONDITIONING
BDD	BACK DRAFT DAMPER	HW	HOT WATER
BFP	BACK FLOW PREVENTER	HWR	HOT WATER RETURN
BG	BELOW GRADE	HZ	FREQUENCY
BHP	BRAKE HORSEPOWER	ID	INSIDE DIAMETER
BOD	BOTTOM OF DUCT	INVERT	INVERT ELEVATION
BTU	BRITISH THERMAL UNIT	IW	INDIRECT WASTE
BTUH	BRITISH THERMAL UNIT PER HOUR	KW	KILOWATTS
		KWH	KILOWATTS PER HOUR
C	CELSIUS		
CL	CENTERLINE		
CCW	COUNTER CLOCKWISE	L	LENGTH
CD	CEILING DIFFUSER	LAT	LEAVING AIR TEMPERATURE
	CONDENSATE DRAIN	LBS	POUNDS
CFM	CUBIC FEET PER MINUTE	LF	LINEAR FEET
CH	CHILLER	LPG	LIQUID PETROLEUM GAS
CHWP	CHILLED WATER PUMP	LTG	LIGHTING
CHWR	CHILLED WATER RETURN	LVG	LEAVING
CHWS	CHILLED WATER SUPPLY	LWT	LEAVING WATER TEMPERATURE
CI	CAST IRON		
CMPR	COMPRESSOR	MAX	MAXIMUM
CONT	CONTINUED	MBH	1,000 BTUH
CT	COOLING TOWER	MCC	MOTOR CONTROL CENTER
CU	COPPER	MD	MOTORIZED DAMPER
CU FT	CUBIC FEET	MFR	MANUFACTURER
CU IN	CUBIC INCHES	MIN	MINIMUM, MINUTE
CW	COLD WATER, CLOCKWISE	MTD	MOUNTED
CWP	CONDENSER WATER PUMP	MUA	MAKE UP AIR
CWR	CONDENSER WATER RETURN		
CWS	CONDENSER WATER SUPPLY	(N)	NEW
CWV	COMBINATION WASTE & VENT	NC	NORMALLY CLOSED, NOISE CRITERIA
		NIC	NOT IN CONTRACT
		NO	NORMALLY OPEN, NUMBER
		NTS	NOT TO SCALE
D	DEPTH		
DB	DECIBEL, DRY BULB		
DEG	DEGREE(S)		
DIA	DIAMETER	OA	OUTSIDE AIR
DN	DOWN	OBD	OPPOSED BLADE DAMPER
DPT	DIFFERENTIAL PRESSURE TRANSMITTER	OC	ON CENTER
		OD	OUTSIDE DIAMETER
DS	DOWN SPOUT	ORD	OVERFLOW ROOF DRAIN
DWG	DRAWING		
DWV	DRAIN, WASTE, VENT PIPE	PB	POLYBUTYLENE
		PE	POLYETHYLENE
(E)	EXISTING	PPM	PARTS PER MILLION
EA	EACH	POC	POINT OF CONNECTION
EAT	ENTERING AIR TEMPERATURE	PSF	POUNDS PER SQUARE FOOT
EF	EXHAUST FAN	PSI	POUNDS PER SQUARE INCH
EFF	EFFICIENCY	PSIA	POUNDS PER SQUARE INCH, ABSOLUTE
EG	EXHAUST GRILLE	PSIG	POUNDS PER SQUARE INCH, GAGE
ELEV	ELEVATION	PVC	POLYVINYL CHLORIDE
ENT	ENTERING		
ESP	EXTERNAL STATIC PRESSURE	RA	RETURN AIR
		RD	ROOF DRAIN
F	FLOW	REQ	REQUIRED
FACP	FIRE ALARM CONTROL PANEL	RG	RETURN GRILLE
FCO	FLOOR CLEAN OUT	RH	RELATIVE HUMIDITY
FD	FLOOR DRAIN, FIRE DAMPER	RPM	REVOLUTIONS PER MINUTE
FDC	FIRE DEPARTMENT CONNECTION	RPS	REVOLUTIONS PER SECOND
FM	FLOW METER		
FP	FIRE PROTECTION	SAD	SEE ARCHITECTURAL DRAWINGS
FPI	FINS PER INCH	STD	STANDARD
FFM	FEET PER MINUTE	SOV	SHUT OFF VALVE
FPS	FEET PER SECOND	SD	SUPPLY DIFFUSER, STORM DRAIN
FS	FLOW SWITCH	SS	SANITARY SEWER, STAINLESS STEEL
FSD	FIRE SMOKE DAMPER		
FSP	FIRE SPRINKLER	TD	TEMPERATURE DIFFERENTIAL
FT	FOOT, FEET	TEMP	TEMPERATURE
		TOD	TOP OF DUCT
		TP	TOTAL STATIC PRESSURE
G	GAS	TYP	TYPICAL
GA	GAUGE		
GALV	GALVANIZED		
GPD	GALLONS PER DAY	UON	UNLESS OTHERWISE NOTED
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	V	VENT, VOLT

PIPING LEGEND	
SYMBOL	DESCRIPTION
— DW —	DOMESTIC WATER
— FW —	FIRE WATER
— SS —	SANITARY SEWER
— ST —	STORM
— FOS —	FUEL OIL (SUPPLY)
— FOR —	FUEL OIL (RETURN)
— QP —	PRESSURE GAGE
— Q —	PRESSURE GAGE AND COCK
— R —	PRESSURE REDUCING VALVE
— S —	RELIEF OR SAFETY VALVE
— T —	STRAINER
— T —	TEMPERATURE GAGE
— P —	PUMP (PLAN)
— P —	PUMP (SCHEMATIC)
— E —	EXPANSION LOOP
— C —	CAP
— R —	CONCENTRIC REDUCER
— U —	UNION
— V —	THREE-WAY MANUAL VALVE
— B —	BALL VALVE
— L —	BUTTERFLY VALVE
— D —	DIAPHRAGM VALVE
— G —	GATE VALVE
— G —	GLOBE VALVE
— C —	CHECK VALVE
— P —	POINT OF CONNECTION
— F —	FLEXIBLE CONNECTOR
— T —	THERMOMETER
— P —	PETE'S PLUG
— Y —	FIRE DEPARTMENT Y-CONNECTION

ANNOTATION SYMBOLS

SECTION IDENTIFICATION

SECTION INDICATOR

SECTION

SHEET NUMBER ON WHICH SECTION WAS TAKEN

SECTION LETTER

SHEET NUMBER ON WHICH SECTION A APPEARS

DETAIL IDENTIFICATION

DETAIL NUMBER

DETAIL

SHEET NUMBER ON WHICH DETAIL WAS TAKEN *

DETAIL NUMBER

SHEET NUMBER ON WHICH DETAIL APPEARS

* "VAR" INDICATES THAT DETAIL IS REFERENCED FROM MULTIPLE DWGS

KEYNOTE

DEMOLITION NOTE

MECH. ROOM

ROOM NAME AND ROOM NUMBER

EQUIPMENT DESIGNATION (SEE SCHEDULE)

PHOTO NUMBER AND SHEET SHOWN

- ### GENERAL MECHANICAL NOTES
- INSTALL PIPING TO BEST SUIT FIELD CONDITIONS AND COORDINATE WITH THE INSTALLATION WORK OF OTHER TRADES. THESE DRAWINGS ARE DIAGRAMMATIC, DO NOT SCALE TO DETERMINE EXACT LOCATION OF PIPING.
 - PROTECT ALL EXISTING EQUIPMENT THAT IS TO REMAIN. VERIFY WITH OWNER WHAT SYSTEMS WILL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION. NOTIFY THE OWNER PRIOR TO SHUTTING DOWN ANCILLARY SYSTEMS OR EQUIPMENT.
 - REPAIR AND/OR REPLACE ALL EXISTING UTILITIES, STRUCTURAL ELEMENTS, EQUIPMENT, PIPING, CONDUIT, DUCTWORK, ETC. THAT IS DAMAGED OR BECOMES INOPERABLE AS A RESULT OF THIS WORK.
 - COORDINATE MODIFICATIONS TO EXISTING SYSTEMS WITH OWNER TO MINIMIZE SHUTDOWN TIME OF BUILDING SYSTEMS.
 - FOR ALL MECHANICAL AND PIPING SYSTEMS CONTROLS, PROVIDE CONDUIT AND WIRING IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS AND MANUFACTURER'S REQUIREMENTS.

- ### GENERAL SHEET NOTES
- ABBREVIATIONS ON THIS SHEET APPLY ONLY TO THE MECHANICAL DRAWINGS, REFER TO OTHER DISCIPLINES FOR APPLICABLE SYMBOLS NOT PROVIDED HERE.
 - THIS IS A STANDARD ABBREVIATION AND LEGEND SHEET, THEREFORE, SOME ABBREVIATIONS AND LEGEND SYMBOLS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.
 - DO NOT SCALE DRAWINGS.



DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
ABBREVIATIONS, LEGEND, AND GENERAL NOTES

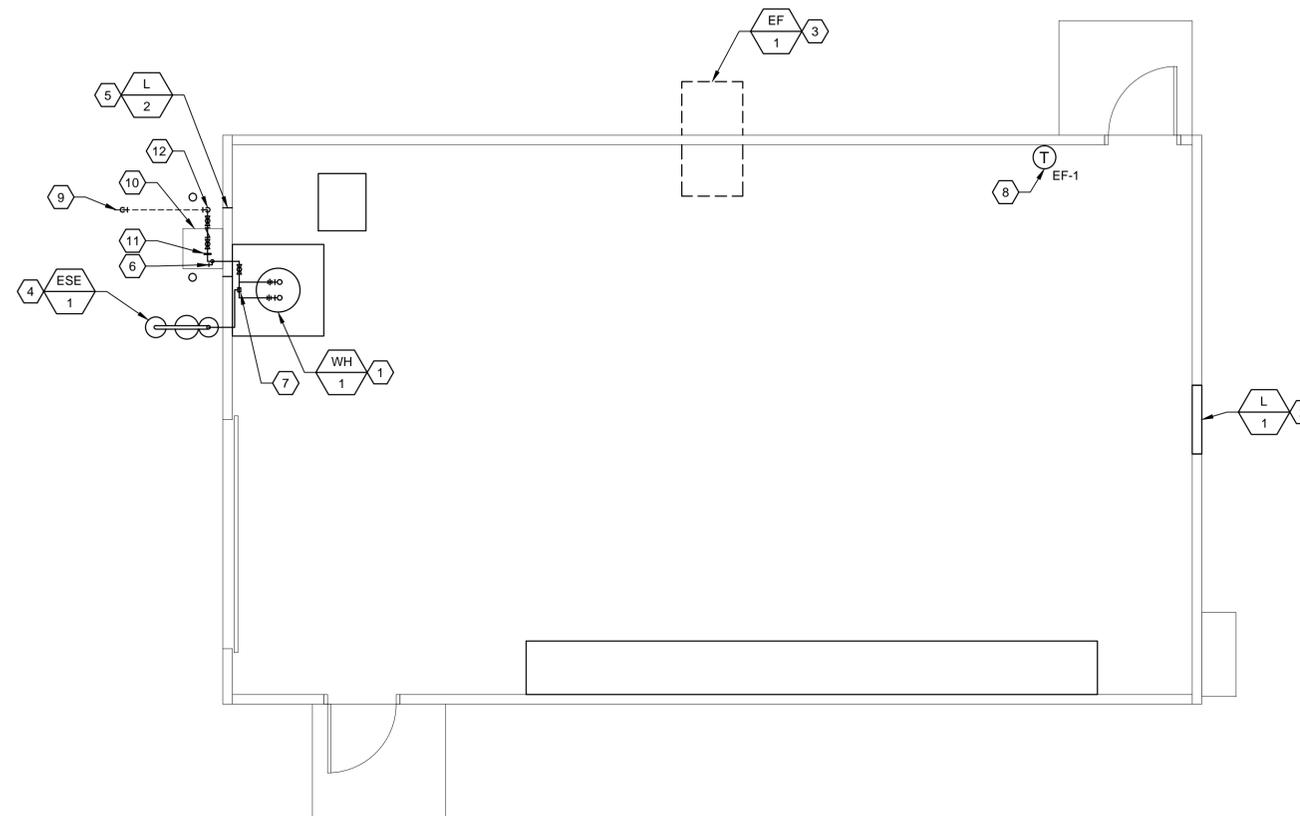
PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	XX	DRAWN BY	XX
CHECKED BY	XX	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	M-001	SHT.	34 OF 60
HORIZ. NOTED		VERT.	-
		DWG. NO.	W-3200-4

SHEET GENERAL NOTES

- COORDINATE EQUIPMENT OPENINGS WITH BUILDING MANUFACTURER

KEYNOTES

- INSTALL WH-1 ON CONCRETE PAD PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE AN ALUMINUM WATER HEATER PAN 4 INCHES GREATER IN DIAMETER THAN THE WATER HEATER. TERMINATE ONE INCH DIAMETER PAN DRAIN 6" OUTSIDE OF BUILDING AND INSTALL INSECT SCREEN AT DRAIN TERMINATION. ROUTE PRESSURE AND TEMPERATURE RELIEF TO 4" ABOVE PAN. PROVIDE SEISMIC TANK SUPPORT AND EXPANSION TANK SUPPORT.
- INSTALL L-1 IN WALL WITH TOP AT 11'-0" ABOVE FINISH FLOOR, FLASH AND SEAL WATERTIGHT.
- INSTALL EF-1 WITH TOP AT 11'-0" ABOVE FINISH FLOOR, FLASH AND SEAL OPENING WEATHERTIGHT.
- INSTALL ESE-1 PER MANUFACTURER'S RECOMMENDATIONS AND CLEARANCES.
- INSTALL L-2 BOTTOM OF LOUVER AT 3'-0" ABOVE FINISH FLOOR, FLASH, SEAL WATERTIGHT.
- INSTALL HOSE BIB DOWNSTREAM OF BACKFLOW PREVENTER.
- PROVIDE THERMOSTATIC MIXING VALVE IN ACCESSIBLE LOCATION TO SERVE ESE-1.
- MOUNT THERMOSTAT AT 48" ABOVE FINISH FLOOR, WIRE WITH 0-90 MINUTE OVERRIDE ABOVE THERMOSTAT AT 80°F, ADJUSTABLE.
- SEE CIVIL PLANS FOR WATER SUPPLY CONTINUATION.
- PROVIDE 21"x21"x9" CONCRETE PAD WITH 2 LAYERS OF #4 AT 12" EW T&B, SEE DETAIL 2 ON SHEET S-501.
- PROVIDE PIPE SUPPORT ON SOUTH END OF BACKFLOW PREVENTER, SEE DETAIL 1 ON SHEET C-504.
- PROVIDE BALL VALVE AT WATER SUPPLY AS IT COMES UP FROM GRADE.



MECHANICAL PLAN

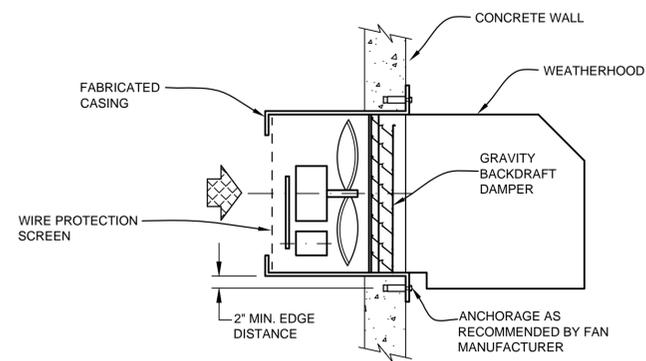


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WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE		
MECHANICAL PLAN - PUMP BUILDING		
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	EPO	DRAWN BY SEB
CHECKED BY	XX	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	M-101	SHT. 35 OF 60
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4



WALL MOUNTED EXHAUST FAN

LOUVER SCHEDULE							
MARK	MANUFACTURER	MODEL	AIRFLOW (CFM)	PRESSURE DROP (IN W.G.)	LOUVER SIZE H X W (IN)	FREE AREA SQ FT	WEIGHT (LBS)
L-1	RUSKIN	ELF6375DX	3150	0.065	36 X 36	4.8	40
L-2	RUSKIN	ELF6375DX	3150	0.065	36 X 36	4.8	40

- ACCESSORIES:
 1. INSECT SCREEN
 2. CLEAR ANODIZED FINISH

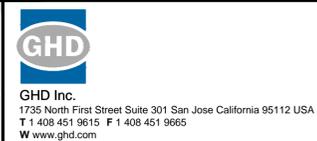
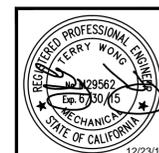
PROPELLER EXHAUST FAN SCHEDULE									
MARK	MANUFACTURER	MODEL	AIRFLOW (CFM)	EXT. STATIC PRESS. (IN W.G.)	ELECTRICAL			ACOUSTIC (SONES)	WEIGHT (LBS)
					HP	VOLT	PHASE		
EF-1	GREENHECK	SE2-24-620-B10	6300	0.125	1.0	120	1	25	110

- ACCESSORIES:
 1. WALL HOUSING, 45 DEGREE WEATHERHOOD, OSHA SCREEN, THERMOSTAT WITH TIMED OVERRIDE, ELECTRIC DISCONNECT

ELECTRIC WATER HEATER SCHEDULE											
MARK	MANUFACTURER	MODEL	OUTPUT (GALLONS)	VOLUME (GALLONS)	90F RECOVERY (GALLONS)	ELECTRICAL			EMPTY WEIGHT (LBS)	FULL WEIGHT (LBS)	SERVICE
						VOLTS	PHASE	Kw			
WH-1	A O SMITH	ECT 80	4.5	80	21.0	208	1	4.5	208	900	EMER. SHOWER/EYEWASH

EMERGENCY SHOWER/EYEWASH SCHEDULE						
MARK	MANUFACTURER	MODEL	EYEWASH MIN. FLOW (GPM)	SHOWER MIN. FLOW (GPM)	SUPPLY CONNECTION (INCHES)	SERVICE
ESE-1	BRADLEY	S19-310BFSS	5.0	20.0	1.25	PUMP BUILDING

- ACCESSORIES:
 1. THERMOSTATIC MIXING VALVE RATED FOR RANGE OF FLOWS INDICATED



DATE	REVISION	BY	CITY OF SANTA CLARA			PROJ. NO.
			WATER & SEWER UTILITIES			592-1423-80300-7054-30236
			CORPORATION YARD WATER STORAGE TANK AND PUMP STATION			DESIGNED BY EPO
			MECHANICAL DETAILS			DRAWN BY SEB
			APPROVED	DATE		CHECKED BY XX
						YEAR 2014
						DATE DEC 2014
						BLK. BK. PG. 55 AND 56
						DRAWING NO. M-501
						SHT. 36 OF 60
						HORIZ. NOTED
						VERT. -
						DWG. NO. W-3200-4

ABBREVIATIONS	
(D) DEMOLISH	IG ISOLATED GROUND
(E) EXISTING	JB JUNCTION BOX
(F) FUTURE	
(N) NEW	
A AMPERES	KAIC KILO-AMPS INTERRUPTING CAPACITY
AC ALTERNATING CURRENT	KV KILOVOLT
AF AMP FRAME	KVA KILOVOLT-AMP
AFF ABOVE FINISHED FLOOR	KW KILOWATT
AFG ABOVE FINISHED GRADE	KWH KILOWATT-HOUR
AHJ AUTHORITY HAVING JURISDICTION	
AHU AIR HANDLING UNIT	LPS LOW PRESSURE SODIUM
AIC AMPS INTERRUPTING CAPACITY	LV LOW VOLTAGE
ANN ANNUNCIATOR	MCB MAIN CIRCUIT BREAKER
ATS AUTOMATIC TRANSFER SWITCH	MCC MOTOR CONTROL CENTER
AWG AMERICAN WIRE GAUGE	MCP MOTOR CIRCUIT PROTECTOR
BAT BATTERY	MFR MANUFACTURER
BFG BELOW FINISH GRADE	MH METAL HALIDE
	MLO MAIN LUGS ONLY
CATV CABLE TELEVISION	MTS MANUAL TRANSFER SWITCH
C CONDUIT	MV MEDIUM VOLTAGE
CB CIRCUIT BREAKER	
CCTV CLOSED CIRCUIT TELEVISION	NIC NOT IN CONTRACT
CO CONDUIT ONLY	NL NIGHT LIGHT
COMPT COMPARTMENT	NTS NOT TO SCALE
CPT CONTROL POWER TRANSFORMER	
CT CURRENT TRANSFORMER	OC ON CENTER
CU COPPER	
DC DIRECT CURRENT	PA PUBLIC ADDRESS
	PT POTENTIAL TRANSFORMER
EF EXHAUST FAN	PVC POLYVINYL CHLORIDE
EGU ENGINE GENERATOR UNIT	PB PULL BOX, ELECTRICAL
EM EMERGENCY	
EMT ELECTRICAL METALLIC TUBING	RECPT RECEPTACLE, OUTLET
ENT ELECTRICAL NON-METALLIC TUBING	RGS RIGID GALVANIZED STEEL (CONDUIT)
EP EXPLOSION PROOF	RVSS REDUCED VOLTAGE SOFT START
	RTU REMOTE TERMINAL UNIT
FA FIRE ALARM	TV TELEVISION MONITOR (SET)
FACP FIRE ALARM CONTROL PANEL	TVSS TRANS. VOLT. SURGE SUPPRESSOR
FC FOOT CANDLE	
FU FUSE	
	UF UNDER FLOOR
GND GROUND	UG UNDERGROUND
GFCI GROUND FAULT CIRCUIT INTERRUPTER	UON UNLESS OTHERWISE NOTED
GFI GROUND FAULT INTERRUPTER	UPS UNINTERRUPTIBLE POWER SUPPLY
GFR GROUND FAULT RELAY	
	V VOLT
HID HIGH INTENSITY DISCHARGE	VA VOLT-AMP
HOA "HAND-OFF-AUTO" SWITCH	VFD VARIABLE FREQUENCY DRIVE
HP HORSEPOWER	
HPS HIGH PRESSURE SODIUM	WP WEATHERPROOF
HVAC HEATING, VENTILATION & AIR-CONDITIONING	WPI WEATHERPROOF IN USE

SWITCHING	
	LIGHT SWITCH, SPST - MOUNTING HEIGHT: +44" AFF, UON
	LIGHT SWITCH, DPST - MOUNTING HEIGHT: +44" AFF, UON
	LIGHT SWITCH, 3-WAY - MOUNTING HEIGHT: +44" AFF, UON
	LOW VOLTAGE SWITCH, MOMENTARY CONTACT, 3-POS., CENTER-OFF, MOUNTING HEIGHT: +44" AFF, UON
	TIMER SWITCH - MOUNTING HEIGHT: +44" AFF, UON
	CIRCUIT AND SWITCH DESIGNATION FOR LIGHTING FIXTURE
	CIRCUIT AND RELAY DESIGNATION FOR LIGHTING FIXTURES (SEE CORRESPONDING LIGHTING CONTROL PANEL RELAY SCHEDULE)
	DIMMER SWITCH - MOUNTING HEIGHT: +44" AFF, UON
	OCCUPANCY SENSOR POWER PACK, 1-CIRCUIT, MOUNTED ABOVE CEILING
	OCCUPANCY SENSOR POWER PACK, 2-CIRCUIT MOUNTED ABOVE CEILING
	OCCUPANCY SENSOR, CEILING MOUNTED, LINE VOLTAGE
	OCCUPANCY SENSOR, CEILING MOUNTED, LOW VOLTAGE
	OCCUPANCY SENSOR, WALL MOUNTED, LINE VOLTAGE, 1-CIRCUIT MOUNTING HEIGHT: +44" AFF, UON
	OCCUPANCY SENSOR, WALL MOUNTED, LINE VOLTAGE, 2-CIRCUIT MOUNTING HEIGHT: +44" AFF, UON
	PHOTO CONTROL SWITCH - MOUNT ON BUILDING EXTERIOR
	TIME CLOCK FOR LIGHTING CONTROL

LIGHTING	
	FLUORESCENT FIXTURE, RECESSED
	RECESSED DOWN LIGHT FIXTURE
	RECESSED DIRECTIONAL FIXTURE (ARROW INDICATES AIMING)
	FLUORESCENT FIXTURE, SURFACE MOUNTED
	SURFACE, PENDANT OR OTHER FIXTURE
	FLUORESCENT FIXTURE, WALL MOUNTED
	WALL-MOUNTED HID, INCANDESCENT, OR COMPACT FLUORESCENT FIXTURE
	FLUORESCENT FIXTURE, PENDANT OR CABLE HUNG
	BATH FAN WITH INTEGRAL LIGHT
	EXIT SIGN, SINGLE FACE WITH DIRECTIONAL ARROWS AS INDICATED
	EXIT SIGN, DOUBLE FACE WITH DIRECTIONAL ARROWS AS INDICATED
	EXIT SIGN, LOW LEVEL
	COMBINATION EXIT/EMERGENCY LIGHT FIXTURE MOUNTING HEIGHT: +8'-0" AFF, UON
	EMERGENCY FIXTURE MOUNTING HEIGHT: +8'-0" AFF, UON
	DENOTES FIXTURE CONNECTED TO EMERGENCY CIRCUIT
	ADJUSTABLE SPOT OR FLOOD (ARROW INDICATES AIMING)
	OUTDOOR SITE LIGHT, POLE MOUNTED LUMINAIRE ARROW INDICATES AIMING DIRECTION, IF APPLICABLE
	BOLLARD OR POST-TOP FIXTURE

OBJECT LINES	
	NEW OBJECTS (HEAVY CONTINUOUS LINES, UNDERGROUND CONDUIT HEAVY DASHED LINES)
	EXISTING OBJECTS TO REMAIN. MAY INCLUDE NEW CIRCUITING ETC. (FINE CONTINUOUS LINES, UNDERGROUND CONDUIT FINE DASHED LINES)
	EXISTING OBJECTS TO BE DEMOLISHED (EXTRA FINE DASHED LINES, SCREENED)

ANNOTATION	
	KEYNOTE
	DEMOLITION NOTE
	RACEWAY, FEEDER OR CIRCUIT DESIGNATION (SEE SCHEDULE)
	LIGHTING FIXTURE TYPE DESIGNATION (SEE SCHEDULE)
	DETAIL INDICATOR
	SECTION INDICATOR
	MECHANICAL EQUIPMENT DESIGNATION (SEE SCHEDULE)

ELECTRICAL SYMBOLS LEGEND	
POWER	
	DUPLEX RECEPTACLE, 15A 125V 2P 3W, GROUNDING TYPE, MOUNTING HEIGHT: +18" AFF UON
	DUPLEX RECEPTACLE - SPLIT WIRED, SWITCHED
	DUPLEX RECEPTACLE - EMERGENCY POWER
	DUPLEX RECEPTACLE - CEILING MOUNTED
	FLOOR RECEPTACLE, 15A 125V 2P 3W, GROUNDING TYPE, FLUSH TYPE UON
	DOUBLE DUPLEX RECEPTACLE, 15A 125V 2P 3W, GROUNDING TYPE, MOUNTING HEIGHT: +18" AFF UON
	SINGLE RECEPTACLE, 20A 125V 2P 3W, GROUNDING TYPE, MOUNTING HEIGHT: +18" AFF UON
	SPECIAL PURPOSE RECEPTACLE AS DESIGNATED SEE 'SPECIAL SYMBOLS' ON EACH SHEET
	DUAL SERVICE RECESSED FLOOR BOX WITH DUPLEX AND DATA RECEPTACLES
	JUNCTION BOX, CODE SIZED UON
	FLOOR JUNCTION BOX
	DISCONNECT SWITCH - FUSED WHERE APPLICABLE
	MOTOR STARTER, COMBINATION WITH DISCONNECT SWITCH
	MOTOR STARTER OR CONTROLLER
	MOTOR CONNECTION
	CEILING EXHAUST FAN
	WATER HEATER
	POWER POLE: P=POWER, T=TELEPHONE, D=DATA, C=COMBINATION
	TEST PORT
	GROUND ROD
	GUY WIRE AND ANCHOR
	THERMOSTAT (SEE MECHANICAL DRAWINGS) COORDINATE MOUNTING HEIGHT
	BYPASS TIMER OR TIME SWITCH
	PUSHBUTTON
	LIGHTING CONTACTOR

EQUIPMENT	
	MAIN SWITCHBOARD
	DISTRIBUTION PANEL BOARD
	COMBINATION METER/MAIN SERVICE PANEL
	BRANCH CIRCUIT PANEL BOARD, SURFACE OR FLUSH MOUNTED
	LIGHTING CONTROL PANEL
	SIGNAL TERMINAL CABINET OR CONTROL PANEL SURFACE OR FLUSH MOUNTED
	SIGNAL TERMINAL BACKBOARD
	CONCRETE UNDERGROUND HAND HOLE (NUMBER DENOTES CHRISTY SIZE)
	TRANSFORMER

CONDUIT	
	CONDUIT INSTALLED ABOVE GRADE
	CONDUIT INSTALLED UNDERGROUND OR UNDER SLAB
	CONDUIT STUB-OUT WITH CAP
	FLEXIBLE CONDUIT WHIP TO LIGHT FIXTURE OR EQUIPMENT
	INDICATES CIRCUIT BREAKER I.D. CONDUIT HOME RUN TO DESIGNATED PANEL, TERMINAL, OR CONTROL CABINET
	INDICATES BRANCH PANEL
	COMMA INDICATES MULTIPLE SINGLE POLE CIRCUITS
	SLASH INDICATES MULTI-POLE CIRCUIT
	NOTE FOR CONDUIT: THE TIC MARKS INDICATE THE QUANTITY OF #12 AWG WIRES OR, IF INDICATED, THE QUANTITY OF OTHER SIZE WIRE OR CABLES.
	SEE THE SINGLE LINE DIAGRAM FOR FEEDER SIZES. EXAMPLES: $\text{---} \# \# \# = (3) \#12$ $\text{---} \# \# = (2) \#10$ $\text{---} \#1 = (1) \text{TYPE F1 CABLE. SEE CABLE SCHEDULE.}$

COMMUNICATION	
	CCTV CAMERA, CEILING MOUNT
	INTERCOM CALL IN SWITCH - MOUNTING HEIGHT: +44" AFF, UON
	TELEPHONE OUTLET FOR WALL MOUNTED TELEPHONE MOUNTING HEIGHT: +44" AFF UON
	DATA OUTLET - MOUNTING HEIGHT: +18" AFF UON
	DENOTES # OF TELEPHONE JACKS TELEPHONE/DATA OUTLET, FLUSH TYPE UON MOUNTING HEIGHT: +18" AFF UON
	DENOTES # OF DATA JACKS
	SURFACE RACEWAY WITH POWER AND TELEPHONE/DATA RECEPTACLES AS INDICATED
	CATV OUTLET - MOUNTING HEIGHT: +96" AFF UON
	AUDIO/VIDEO OUTLET - MOUNTING HEIGHT: +18" AFF UON
	CLOCK WITH BUZZER - MOUNTING HEIGHT: SEE PLANS
	BELL, STANDARD 6" - MOUNTING HEIGHT: SEE PLANS PA SYSTEM
	SPEAKER - WALL MOUNTED
	PA SYSTEM SPEAKER - CEILING MOUNTED
	PA SYSTEM HORN - MOUNTING HEIGHT: SEE PLANS

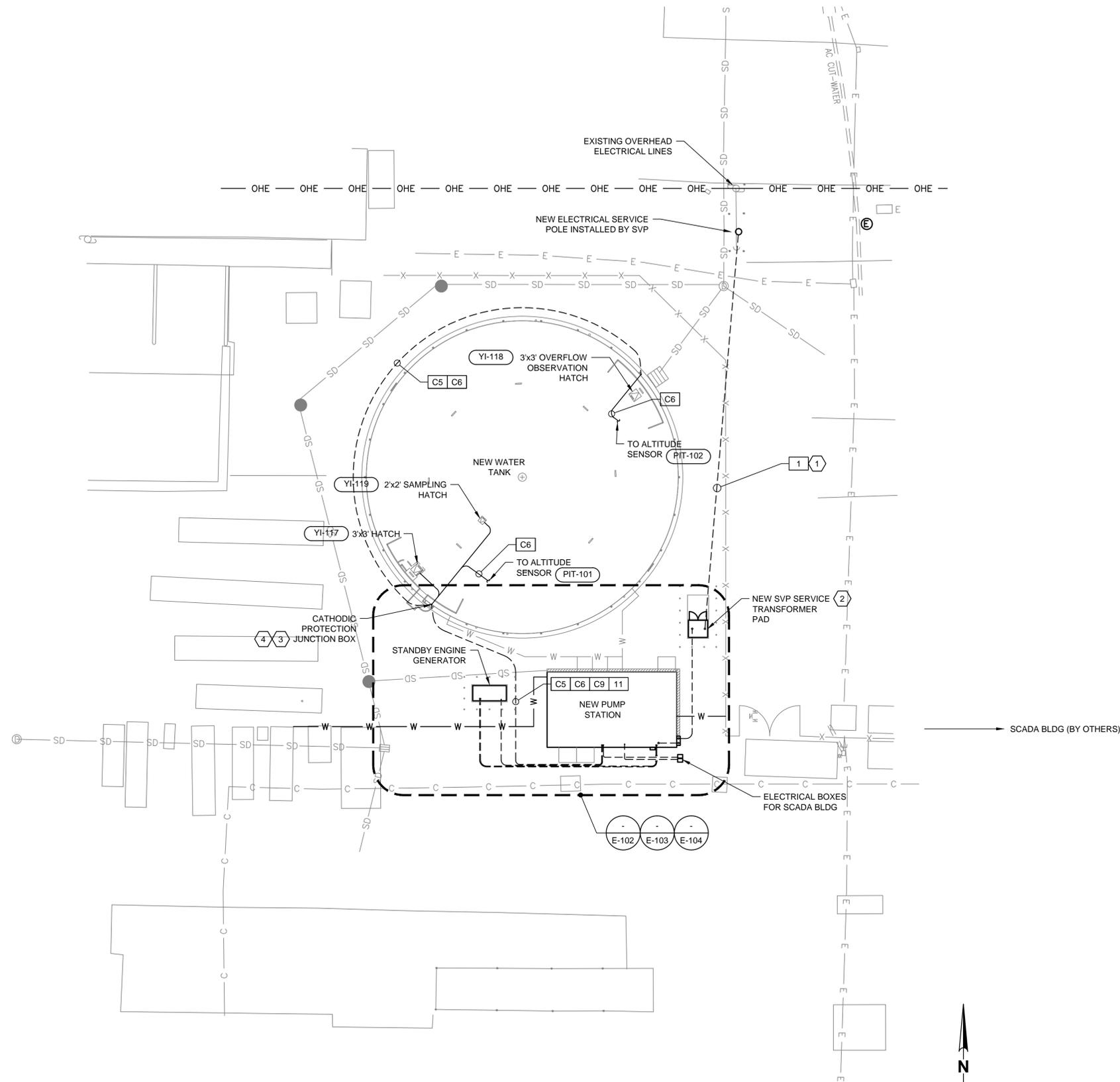
GENERAL ELECTRICAL NOTES	
1.	GENERATOR IS CLASSIFIED AS "OPTIONAL STANDBY ENGINE GENERATOR" PER CEC 701.2. SEE DRAWING E601, SINGLE LINE DIAGRAM FOR SIZING AND CONNECTION INFORMATION. GENERATOR SHALL SERVE THE FOLLOWING OPTIONAL STANDBY LOADS: A. 37.5KVA TRANSFORMER FEEDING (N) STATION DISTRIBUTION PANEL B. 225A STATION DIST. PANEL C. 3 PUMPS, 100 HORSEPOWER EACH D. 5 HORSEPOWER EOC SERVICE PUMP E. 100A SERVICE FOR SCADA BUILDING
2.	400 GALLON SUB-BASE FUEL TANK SHALL BE DOUBLE-WALL STEEL LABEL ABOVEGROUND TANK ON BOTH SIDES AND/OR TANK ENCLOSURE WITH 400 GALLONS DIESEL FUEL - COMBUSTIBLE LIQUID - NO SMOKING
3.	LABEL ALL DOORS, AREAS, PIPING, TUBING, TANKS, EXHAUST DUCTS, CONTAINERS, ETC. IN ACCORDANCE WITH SANTA CLARA FIRE DEPARTMENT GUIDELINES. ADDITIONAL LABELING/SIGNAGE MAY BE REQUIRED UPON FIELD INSPECTION (2009 SCMFEC).
4.	INSTALL HAZARD IDENTIFICATION SIGNS AS SPECIFIED IN NFPA 70A OR UFC 79-3 AT THE ENTRANCES TO LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED, AND ON STATIONARY ABOVEGROUND TANKS.
5.	AFTER INSTALLATION AND PRIOR TO PLACING IN SERVICE, PNEUMATICALLY TEST PRIMARY HORIZONTAL TANKS AT 3-5 PSIG FOR 60 MINUTES. THE INTERSTITIAL SPACE OF HORIZONTAL TANKS SHALL EITHER BE PNEUMATICALLY TESTED AT 3-5 PSIG FOR 60 MINUTES OR BY VACUUM AT 5.3 INCHES HG (17.9KPA). VERTICAL PRIMARY TANKS SHALL BE PNEUMATICALLY TESTED AT 1.5-2.5 PSIG FOR 60 MINUTES OR PERFORM A VACUUM TEST FOR 30 MINUTES. THE INTERSTITIAL SPACE OF VERTICAL TANKS SHALL EITHER BE PNEUMATICALLY TESTED AT 1.5-2.5 PSIG FOR 60 MINUTES OR BY VACUUM AT 5.3 INCHES HG (17.9KPA).
6.	A SANTA CLARA FIRE DEPARTMENT ROUGH AND FINAL INSPECTION IS REQUIRED.
7.	IN THE EVENT OF FAILURE OF THE NORMAL POWER SUPPLY, THE LEGALLY REQUIRED STANDBY POWER SYSTEM WILL BE AVAILABLE WITHIN THE TIME REQUIRED FOR THE APPLICATION BUT NOT TO EXCEED 60 SECONDS.
8.	CONTRACTOR SHALL PROVIDE NAME PLATE ON ALL SWITCHBOARDS AND PANEL BOARDS INDICATING IDENTIFICATION AND LOCATION OF THE SUPPLY SOURCE.
9.	CONTRACTOR SHALL AFFIX ENGINEER PROVIDED, ARC FLASH, SHOCK HAZARD AND PPE LABELS TO ALL ELECTRICAL EQUIPMENT (SWITCHBOARDS, PANEL BOARDS, INDUSTRIAL CONTROL PANELS AND MOTOR CONTROL CENTERS).
10.	CONTRACTOR SHALL PROVIDE FEEDER IDENTIFICATION PER NEC ART. 215.12 (C), WHEN MORE THAN ONE NOMINAL VOLTAGE EXISTS. IDENTIFICATION MEANS BY SYSTEM VOLTAGE AND PHASE CONFIGURATION SHALL BE POSTED AT EACH PANEL BOARDS OR SIMILAR DISTRIBUTION EQUIPMENT.
11.	DISCONNECTING MEANS FOR TRANSFORMER SHALL BE WITHIN SIGHT OR LOCATION MARKED ON TRANSFORMER. DISCONNECT SHALL BE PROVIDED WITH PERMANENT MEANS TO LOCK DISCONNECT IN THE OPEN POSITION.
12.	CONTRACTOR SHALL PROVIDE SIGNAGE AT THE SERVICE MAIN DISCONNECT INDICATING TYPE AND LOCATION OF SECONDARY SOURCE OF POWER.
13.	ALL TRANSFER SWITCHES SHALL BE LISTED AND LABELED FOR EMERGENCY USE.
14.	DRAWINGS INDICATE THE REQUIRED EQUIPMENT, DEVICES, FIXTURES, ETC. AND THEIR RELATED CIRCUITING REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE DEVICE LOCATIONS WITH ALL DISCIPLINES.
15.	ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2011 NEC AS AMENDED BY THE 2013 CALIFORNIA ELECTRICAL CODE.
16.	ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.



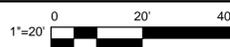
DATE	REVISION	BY

CITY OF SANTA CLARA	
WATER & SEWER UTILITIES	
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION	
1651 MARTIN AVENUE	
ELECTRICAL ABBREVIATIONS, LEGEND, AND GENERAL NOTES	
APPROVED	DATE
DIRECTOR OF WATER & SEWER UTILITIES	

PROJ. NO. 592-1423-80300-7054-30236	
DESIGNED BY MY	DRAWN BY MY
CHECKED BY SD	YEAR 2014
DATE DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO. E-001	SHT. 37 OF 60
HORIZ. NOTED	VERT. -
DWG. NO. W-3200-4	



ELECTRICAL SITE PLAN



SHEET GENERAL NOTES

1. MAINTAIN 12-INCH CLEAR BETWEEN ELECTRICAL CONDUITS AND WATER PIPING FOR ALL UNDERGROUND INSTALLATIONS AND CROSSINGS.
2. ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.

KEYNOTES

1. PROVIDE AND INSTALL (2) 5' EMPTY CONDUITS WITH PULLROPE FROM NEW ELECTRICAL SERVICE POLE TO NEW SVP SERVICE TRANSFORMER. TRENCH SHALL BE PER SVP STANDARD UG1000 SHEET 34. PVC CONDUIT SHALL BE PER SVP STANDARD UG1000 SHEET 7. SVP WILL PULL CONDUCTORS. COORDINATE WORK WITH SVP.
2. POUR 7-FOOT BY 14-FOOT 3-INCH PAD FOR SVP TRANSFORMER. PER SVP STANDARD UG1000 SHEET 15, PROVIDE 5-FOOT CLEARANCE ON ALL SIDES AROUND PAD. SVP WILL INSTALL THE TRANSFORMER. COORDINATE WORK WITH SVP. CONTRACTOR TO PROVIDE BOLLARDS AS INDICATED ON DRAWING. SEE DETAIL 5/C-502 FOR BOLLARD INSTALLATION DETAIL. CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL WORK FROM THE SVP TRANSFORMER TO THE PUMP STATION BUILDING.
3. PROVIDE CONDUIT, CABLE AND APPURTENANCES BETWEEN CATHODIC PROTECTION RECTIFIER, JUNCTION BOX AT TANK LADDER AND PANELBOARD AS INDICATED.
4. CONDUIT ROUTED UP TANK TO BE FASTENED TO LADDER STAND-OFF.

SHEET SPECIAL SYMBOLS

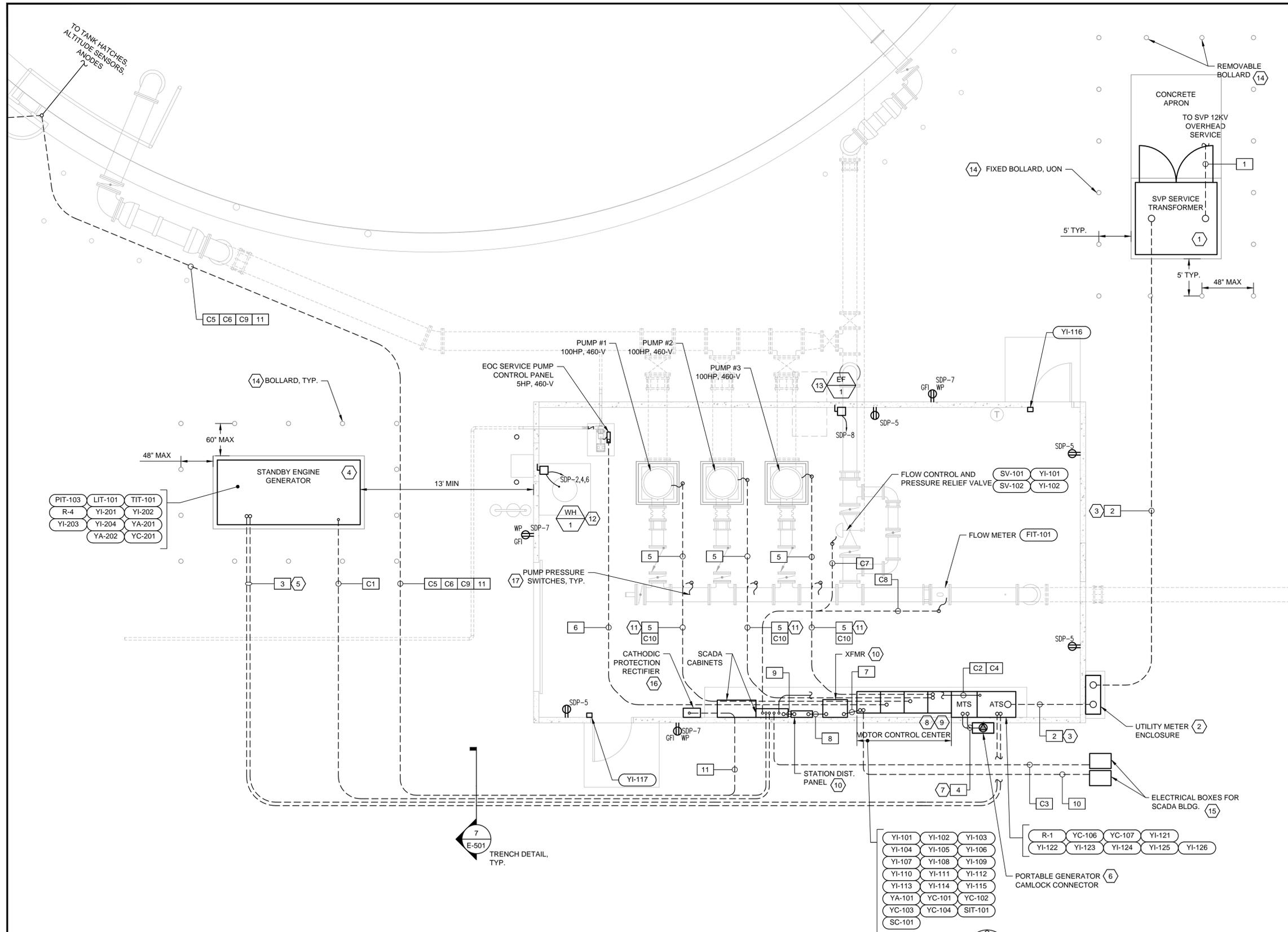
- XX CONDUIT IDENTIFICATION TAG. REFERENCE SHEET E602
- XX-XXX INSTRUMENTATION IDENTIFICATION TAG.



DATE	REVISION	BY

CITY OF SANTA CLARA		
WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE ELECTRICAL SITE PLAN		
APPROVED	DATE	BY
DIRECTOR OF WATER & SEWER UTILITIES		

PROJ. NO. 592-1423-80300-7054-30236			
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-101	SHT.	38 OF 60
HORIZ. NOTED		VERT.	-
DWG. NO.	W-3200-4		



SHEET GENERAL NOTES

- BRANCH CIRCUIT CONDUIT ROUTES OMITTED FOR CLARITY. SEE PANEL SCHEDULES FOR CONNECTION INFORMATION.
- SUPPORT AND SECURE ALL OVERHEAD CONDUIT TO STRUCTURE.
- ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES, UNLESS OTHERWISE NOTED.

KEYNOTES

- SVP WILL PROVIDE AND INSTALL SERVICE TRANSFORMER ON CONTRACTOR PROVIDED CONCRETE PAD.
- PROVIDE NEMA 3R EUCERC UTILITY METER ENCLOSURE RATED 480/277V, 3 PHASE, 4 WIRE, 80A, 30KAIC, SQUARE D TYPE I LINE SPEED-D SWITCHBOARD AND MAIN SERVICE DISCONNECT RATED 800A, SQUARE D TYPE MH. SVP WILL PROVIDE AND INSTALL UTILITY METER AND INSTRUMENT TRANSFORMERS IN CONTRACTOR PROVIDED NEMA 3R EUSERC UTILITY METER ENCLOSURE.
- PROVIDE AND INSTALL CABLES AND CONDUIT BETWEEN SVP SERVICE TRANSFORMER, SVP METER CABINET AND ATS/MCC EQUIPMENT. SEE DRAWING E-601 AND E-602 FOR SIZING AND CONNECTION INFO. TRENCH SHALL BE PER UG1000 SHEET 34. PVC CONDUIT SHALL BE PER SVP STANDARD UG1000 SHEET 7.
- PROVIDE AND INSTALL STANDBY ENGINE GENERATOR WITH SUB-BASE DIESEL FUEL TANK, EXHAUST MUFFLER, SEISMIC ANCHORING AND ALL OTHER APPURTENANCES REQUIRED FOR A COMPLETE AND OPERATIONAL STANDBY POWER SYSTEM. SEE SINGLE LINE DIAGRAM FOR RATINGS AND CONNECTION INFORMATION.
- PROVIDE AND INSTALL CABLE AND CONDUIT BETWEEN ENGINE GENERATOR CIRCUIT BREAKER AND SWITCHBOARD AUTOMATIC TRANSFER SWITCH. SEE DRAWING E601, SINGLE LINE DIAGRAM FOR SIZING AND CONNECTION INFORMATION.
- PROVIDE AND INSTALL (2) SETS OF CAMLOCK CONNECTORS (EACH RATED 400 AMPS) IN NEMA 3R ENCLOSURE FOR CONNECTING PORTABLE GENERATOR.
- PROVIDE AND INSTALL CONDUIT AND CABLE BETWEEN PORTABLE GENERATOR CAMLOCK CONNECTORS AND MANUAL TRANSFER SWITCH (MTS). CAMLOCK CONNECTORS TO BE IN NEMA 3R ENCLOSURE.
- PROVIDE AND INSTALL FRONT-ALIGNED SWITCHBOARD AND MOTOR CONTROL CENTER LINE-UP IN NEMA 3R ENCLOSURE. SEE DETAIL 1/E-501 AND SINGLE LINE DIAGRAM FOR LAYOUT AND EQUIPMENT RATING.
- PROVIDE SEISMIC ANCHORING PER DETAIL 4/E-501.
- PROVIDE AND INSTALL TRANSFORMER, PANELBOARD, CONDUIT AND CABLE AS INDICATED. SEE ELECTRICAL SCHEDULE AND SINGLE LINE DIAGRAM FOR SIZING AND CIRCUIT INFORMATION.
- PROVIDE AND INSTALL (N) CONDUCTOR FOR MOTOR POWER AND HEATER IN (N) CONDUIT. SEE SINGLE LINE DIAGRAM.
- PROVIDE 240-V, 30 AMP, 3 POLE HEAVY-DUTY DISCONNECT SWITCH FOR ELECTRIC WATER HEATER IN NEMA 1 ENCLOSURE. MOUNT ADJACENT TO EWH-1.
- PROVIDE 120-V, 20 AMP, 1 POLE HEAVY DUTY DISCONNECT SWITCH FOR EXHAUST FAN IN NEMA 1 ENCLOSURE. CONNECT THERMOSTAT AND TIMER SWITCH FOR CONTROLS.
- PROVIDE BOLLARDS. SEE DETAIL 5 ON DRAWING C-502.
- PROVIDE 10-INCHx17-INCHx12-INCH DEEP TRAFFIC RATED CONCRETE ELECTRICAL BOXES WITH COVER. CHRISTY CATALOG #B1017.
- CATHODIC PROTECTION RECTIFIER TO BE MOUNTED ON WALL PER DRAWING CP-502.
- PROVIDE AND INSTALL PUMP CONTROL HIGH/LOW PRESSURE SWITCHES AND ASSOCIATED CONDUIT AND CABLE FOR EACH 100HP MOTOR. PRESSURE SWITCHES TO PROVIDE BACKUP CONTROL OF PUMP MOTOR.

SHEET SPECIAL SYMBOLS

- XX CONDUIT IDENTIFICATION TAG. REFERENCE SHEET E602
- XX-XXX INSTRUMENTATION IDENTIFICATION TAG.

ELECTRICAL - POWER PLAN

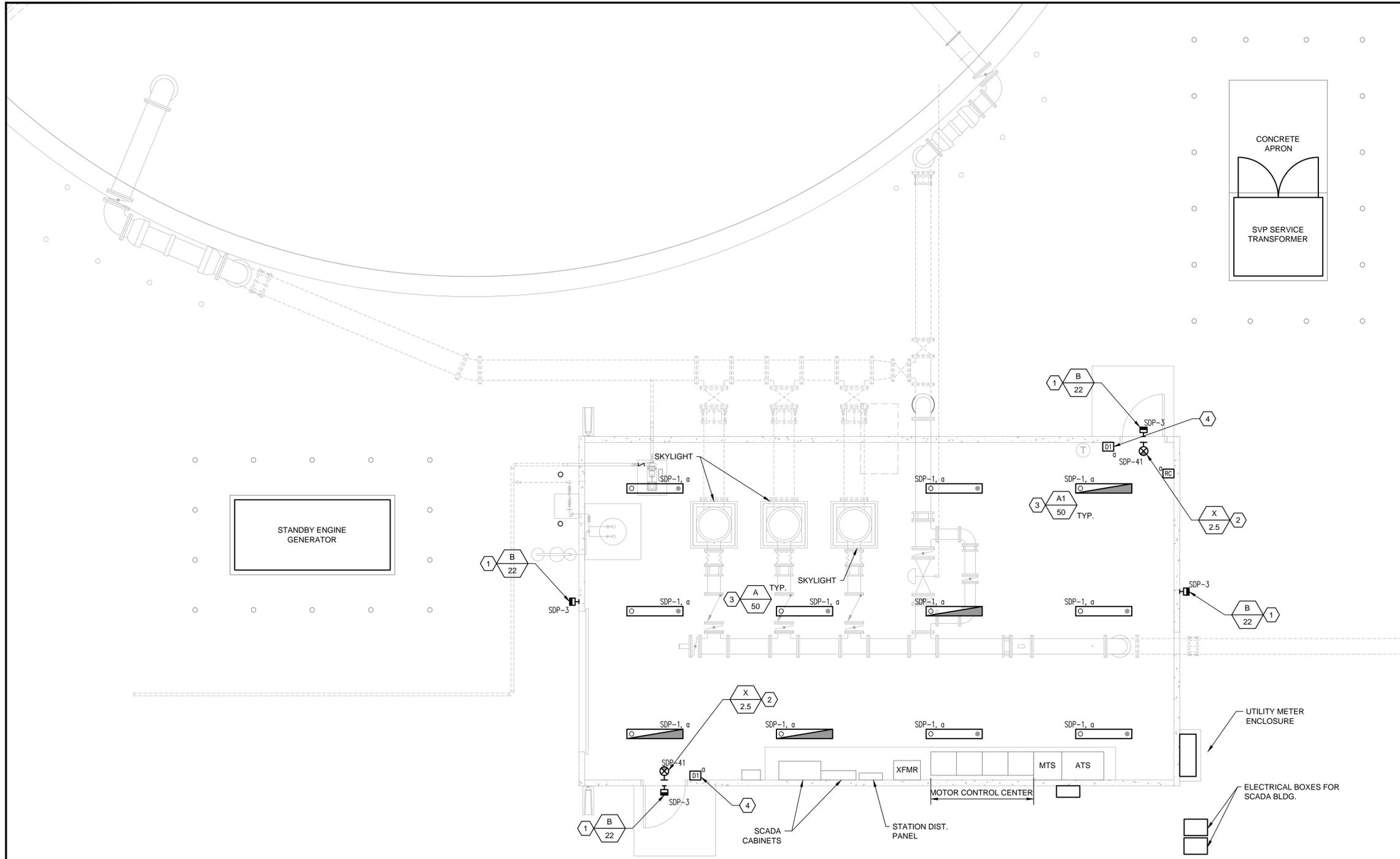


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DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
ELECTRICAL - POWER PLAN

PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY NW	DRAWN BY NW
CHECKED BY SD	DATE DEC 2014	YEAR 2014
DRAWING NO. E-102	APPROVED DATE	BLK. BK. PG. 55 AND 56
		SHT. 39 OF 60
		DWG. NO. W-3200-4



SHEET GENERAL NOTES

1. BRANCH CIRCUIT CONDUIT ROUTING OMITTED FOR CLARITY. SEE PANEL SCHEDULES ON SHEET E-602 FOR CONNECTION INFO.
2. ALPHABETIC HEX NOTES INDICATE LIGHTING FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE ON SHEET E-602 FOR ADDITIONAL INFORMATION.
3. SECURE ALL NEW OVERHEAD ELECTRICAL CONDUIT TO PRIMARY STRUCTURAL ELEMENTS. SEE DETAILS ON SHEET E-502.
4. ALL EXIT SIGNS AND EMERGENCY FIXTURES SHALL BE CIRCUITED AS UN-SWITCHED.
5. ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.

KEYNOTES

1. MOUNT EXTERIOR FIXTURE ON WALL AT 9-FEET ABOVE FINISHED GRADE. CENTER OVER DOOR (WHERE APPLICABLE).
2. MOUNT EXIT SIGN SUCH THAT BOTTOM OF FIXTURE IS 2-INCHES ABOVE DOOR FRAME.
3. MOUNT INTERIOR FIXTURE 10-FEET AFF. ANCHOR FIXTURE PER DETAILS ON SHEET E-502.
4. PROVIDE AND INSTALL WALL DIMMER SWITCH, ROOM CONTROLLER AND OTHER LIGHTING CONTROL COMPONENTS REQUIRED FOR A COMPLETE OPERATING SYSTEM.

SHEET SPECIAL SYMBOLS

- DT** LOW VOLTAGE DIMMING WALL SWITCH. WATTSTOPPER LMDM-101
- RC** 0-10 VOLT DIMMING ROOM CONTROLLER. WATTSTOPPER LMRC-210

ELECTRICAL - LIGHTING PLAN

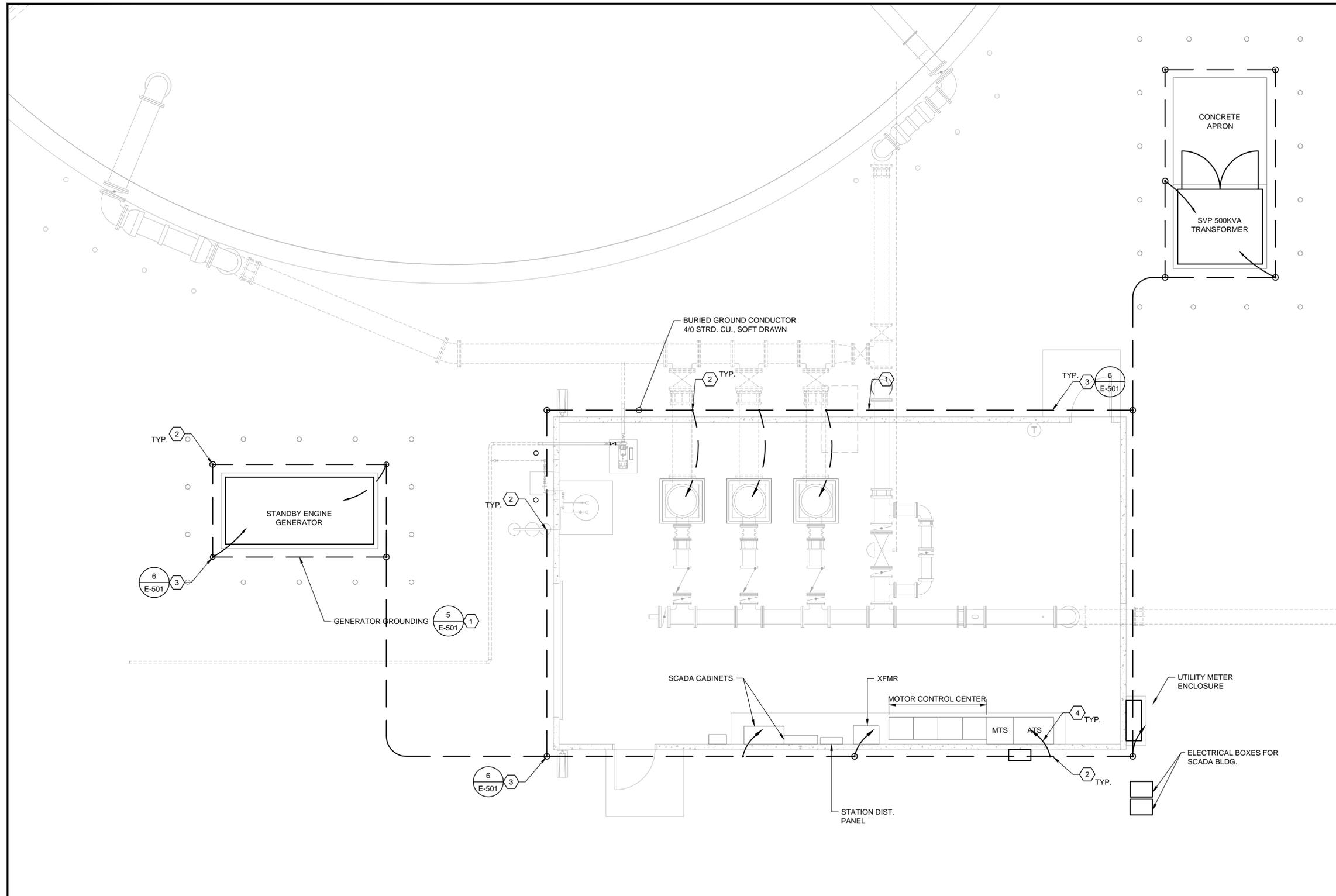


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 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
ELECTRICAL - LIGHTING PLAN

PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY NW	DRAWN BY NW
CHECKED BY SD	YEAR 2014	
DATE DEC 2014	BLK. BK. PG. 55 AND 56	
DRAWING NO. E-103	SHT. 40 OF 60	
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4



SHEET GENERAL NOTES

- COORDINATE WITH FOUNDATION AND CONCRETE WORK. GROUND GRID WILL SHARE THE FOUNDATION AND FOOTING TRENCH.
- ALL GROUNDING CONDUCTORS SHALL BE PLACED 18-INCH BELOW FINISHED GRADE (14-INCH BELOW SUBGRADE).
- ALL EXPOSED GROUNDING CONNECTIONS TO STEEL STRUCTURES, EQUIPMENT, ETC. SHALL BE BURNDY COMPRESSION TYPE OF MECHANICAL BOLTED CONNECTIONS.
- ALL GROUND TAILS SHALL EXTEND 3 FEET ABOVE FINISH GRADE.
- SEE DETAIL 5/E-501 FOR TYPICAL EQUIPMENT GROUNDING DETAIL.
- ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.

KEYNOTES

- PROVIDE AND INSTALL GROUNDING GRID AS INDICATED.
- ALL CONCEALED GROUNDING CONNECTIONS SHALL BE EXOTHERMIC WELDS.
- PROVIDE GROUND WELLS FOR TESTING GROUND GRID RESISTANCE.
- ALL EQUIPMENT SHALL BE BONDED TO THE GROUND GRID.

ELECTRICAL - GROUNDING PLAN

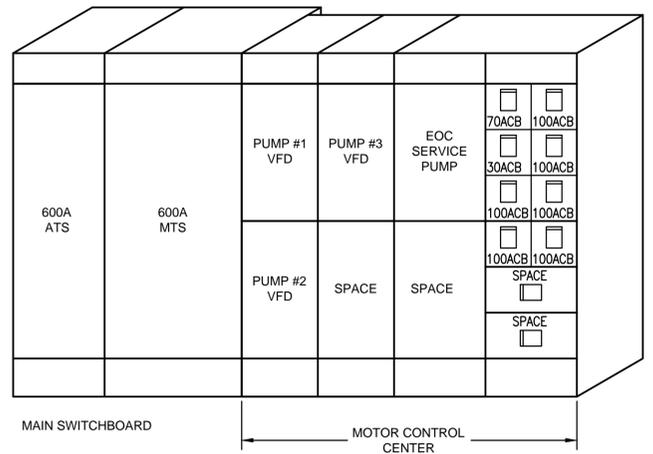


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 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
ELECTRICAL - GROUNDING PLAN

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-104	SHT.	41 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4



NOTE: ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.

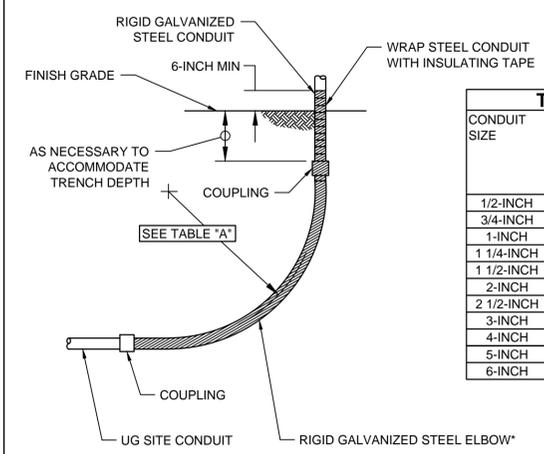
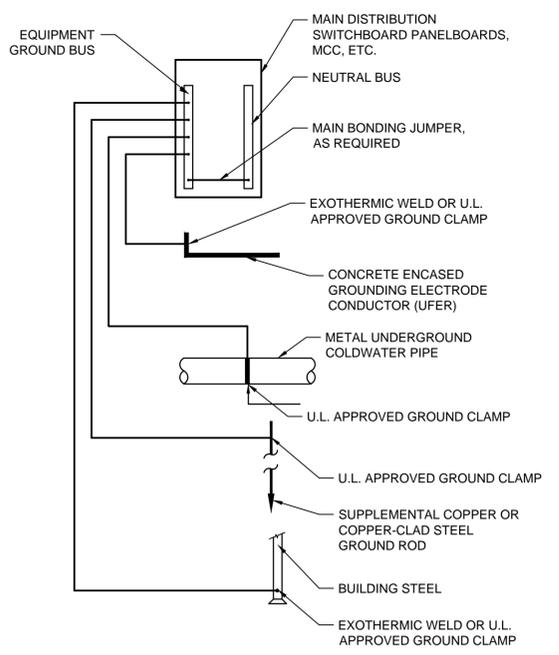


TABLE "A" - RGS

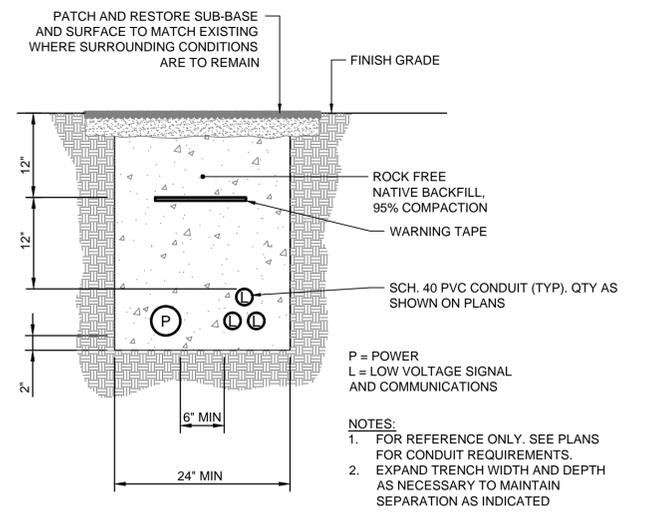
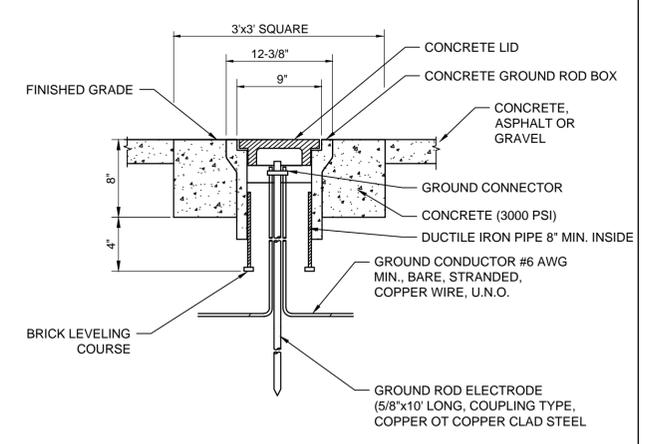
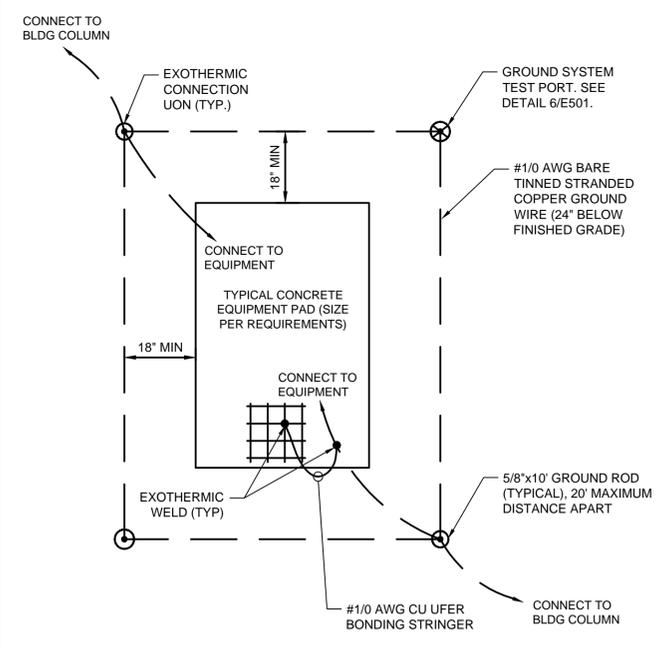
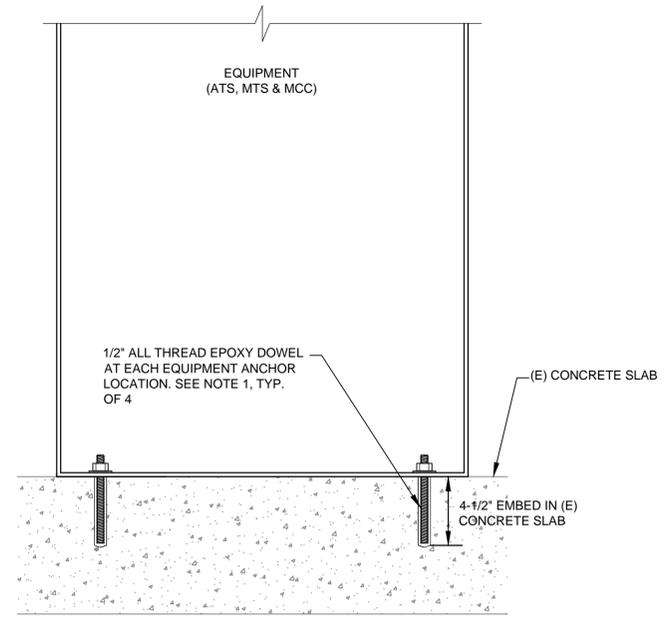
CONDUIT SIZE	MINIMUM ELBOW RADIUS REQUIREMENTS	
	RUNS 0-100 FEET	RUNS GREATER THAN 101 FEET
1/2-INCH	4-INCH	4-INCH
3/4-INCH	4 1/2-INCH	4 1/2-INCH
1-INCH	5 3/4-INCH	5 3/4-INCH
1 1/4-INCH	7 1/4-INCH	7 1/4-INCH
1 1/2-INCH	8 1/4-INCH	8 1/4-INCH
2-INCH	9 1/2-INCH	9 1/2-INCH
2 1/2-INCH	10 1/2-INCH	11 7/16-INCH
3-INCH	13-INCH	13 3/4-INCH
4-INCH	16-INCH	18 1/4-INCH
5-INCH	24-INCH	-
6-INCH	30-INCH	-

1 MAIN SWITCHBOARD AND MCC ELEVATION

2 TYPICAL GROUNDING ELECTRODE SYSTEM

3 CONDUIT STUB UP

NOTES:
1. PROVIDE AND INSTALL SEISMIC ANCHORING USING HILTI HIT-HY 150 MAX-SD EPOXY ANCHORING SYSTEM OR APPROVED EQUAL AND PER MANUFACTURERS INSTALLATION PROCEDURES.



4 TYPICAL SEISMIC ANCHORING

5 TYPICAL EQUIPMENT GROUNDING DETAIL

6 TYPICAL TRAFFIC RATED GROUND ROD AND BOX

7 TYPICAL TRENCH DETAIL

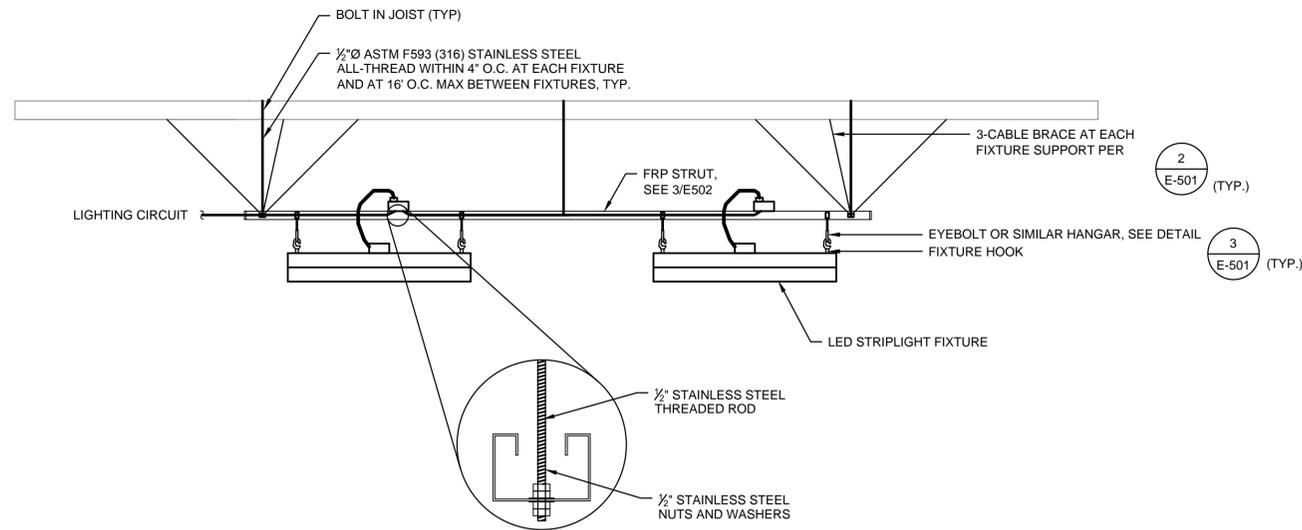


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CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
ELECTRICAL DETAILS - TRENCHING AND GROUNDING

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	MY	DRAWN BY	MY
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-501	SHT.	42 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

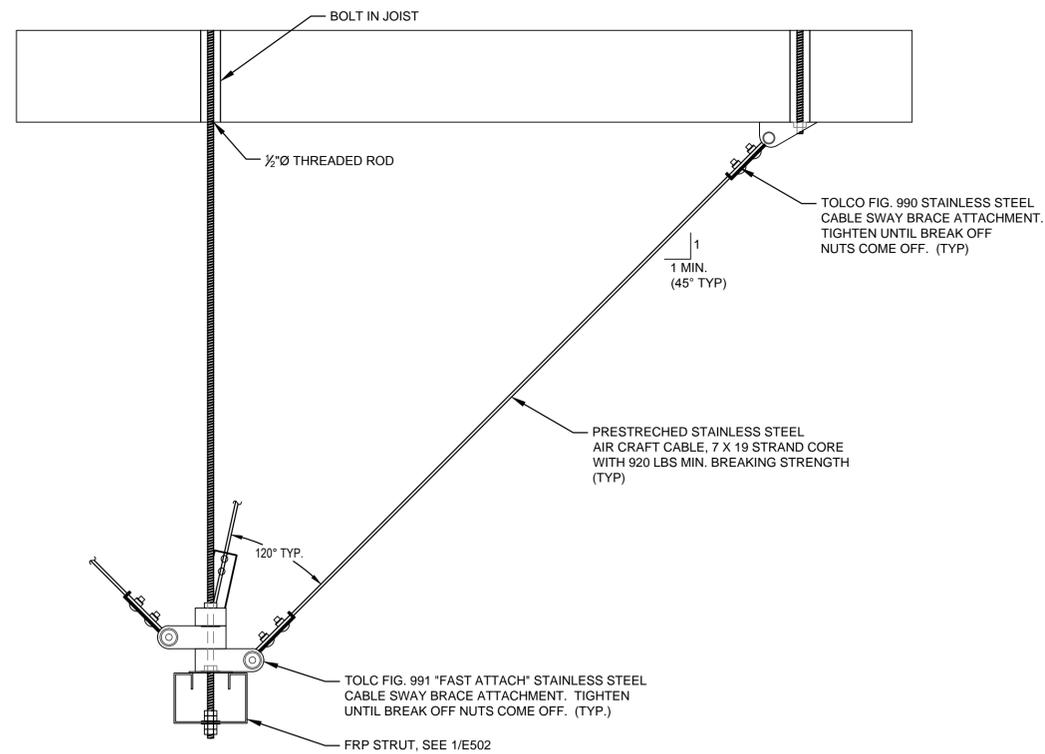


1 FIXTURE MOUNTING DETAIL

NOT TO SCALE

2 NOT USED

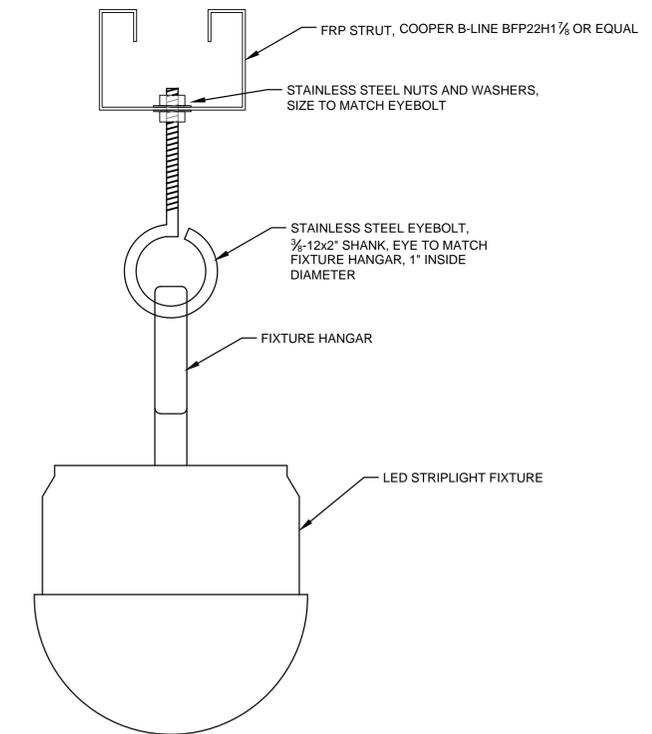
NOT TO SCALE



2 3 CABLE STRUT MOUNTING DETAIL

NOT TO SCALE

3 FIXTURE HANGAR DETAIL





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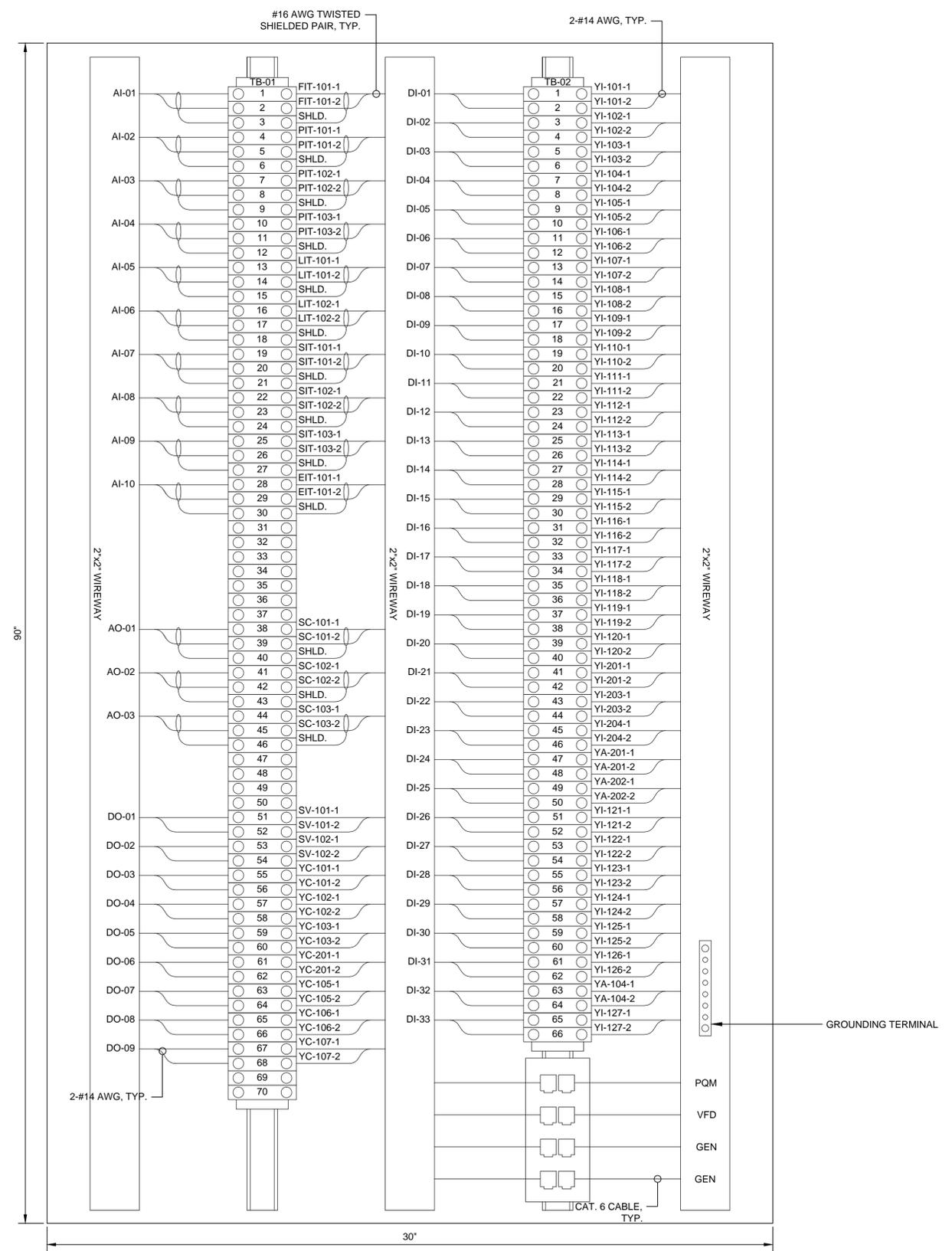
DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
ELECTRICAL DETAILS - EQUIPMENT ANCHORING

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-502	SHT.	43 OF 60
HORIZ. NOTED		VERT.	-
DWG. NO.	W-3200-4		

SHEET GENERAL NOTES

1. DIAGRAM IS NOT INTENDED TO INDICATE ALL CONNECTIONS OR HARDWARE AND IS INTENDED TO CONVEY DESIGN INTENT ONLY.
2. SIZE ALL SYSTEM COMPONENTS BASED ON SYSTEM CONNECTED LOADS.
3. PROVIDE AND CONFIGURE ALL CONNECTIONS, DEVICES AND COMPONENTS AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM.
4. DESIGN BASED ON HOFFMAN FREE-STANDING ENCLOSURE MODEL NO. A722418FSG NEMA 12, 72"x24"x18" WITH BACKPANEL.
5. ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.



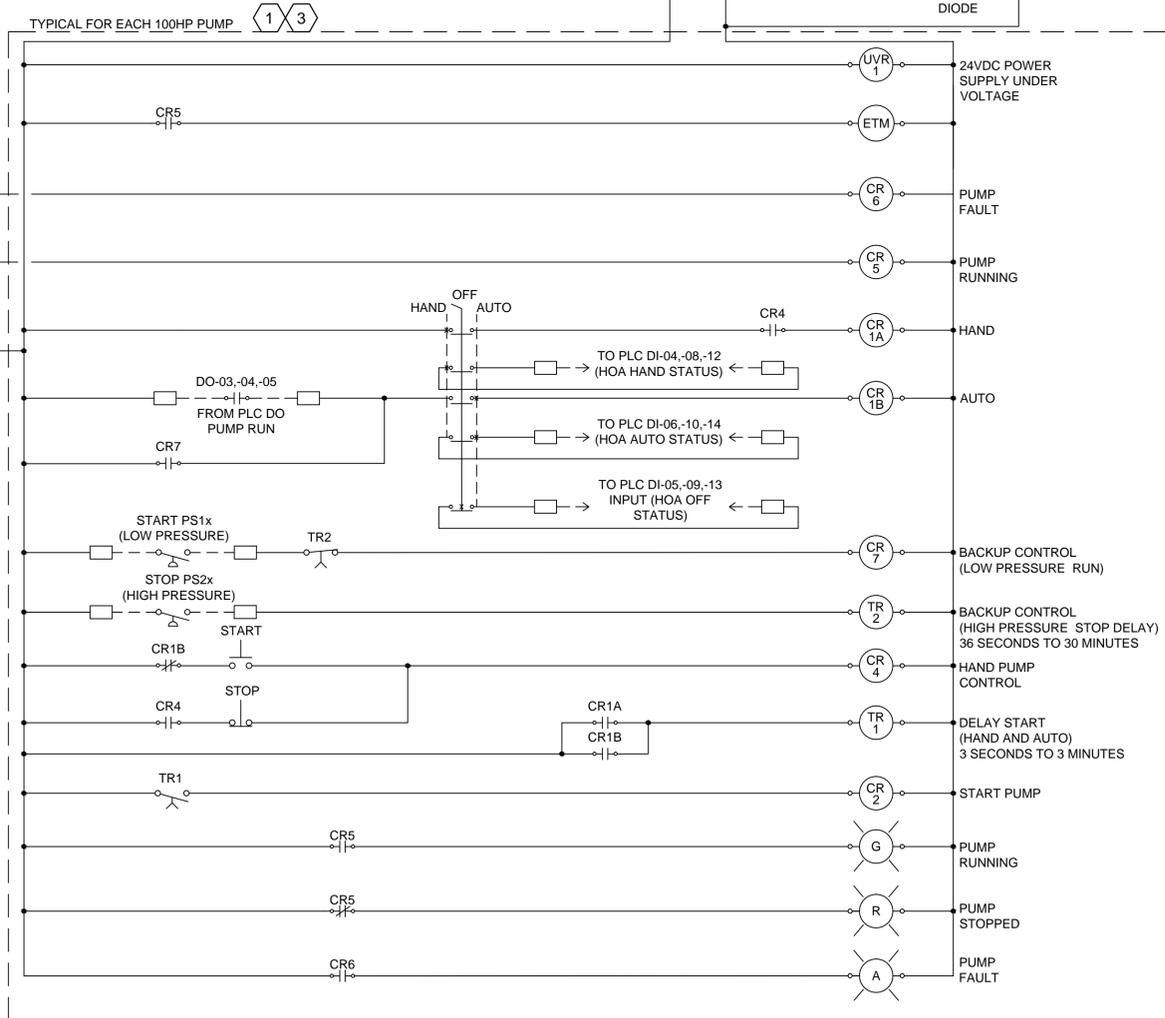
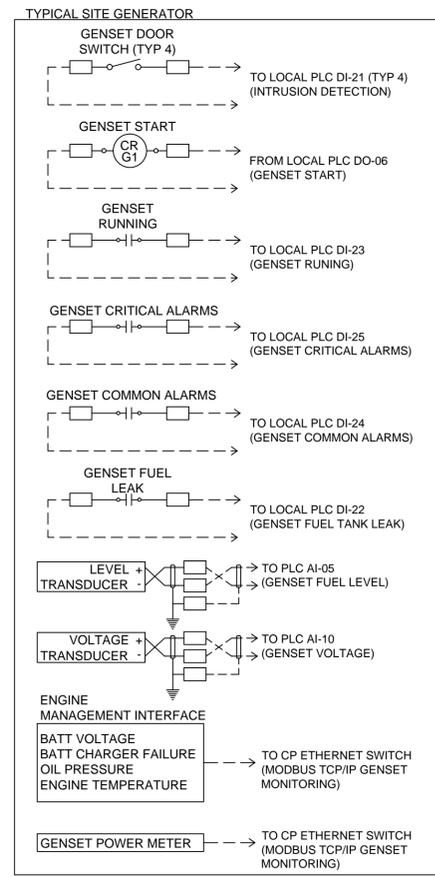
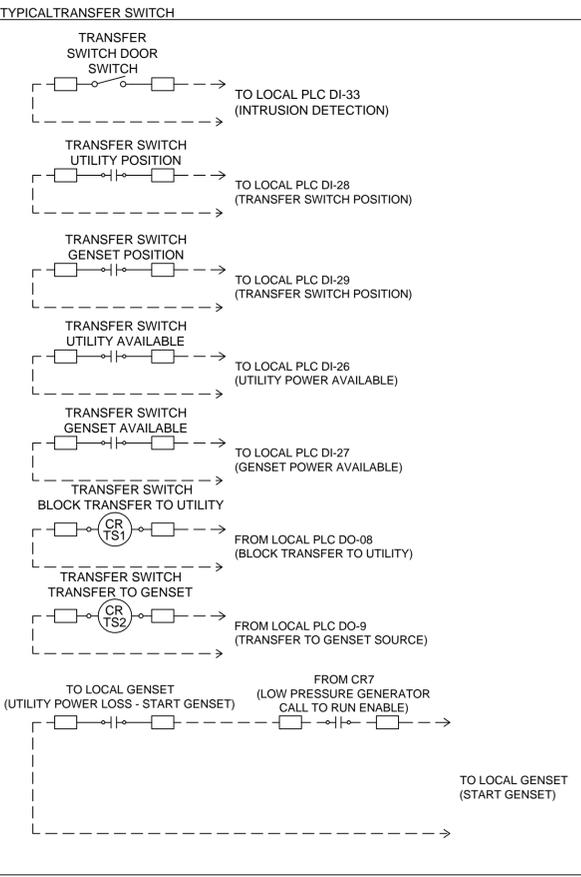
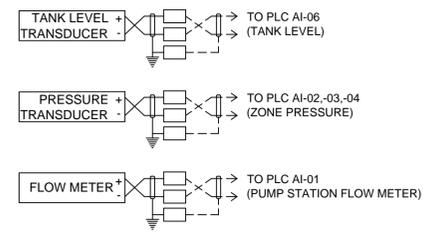
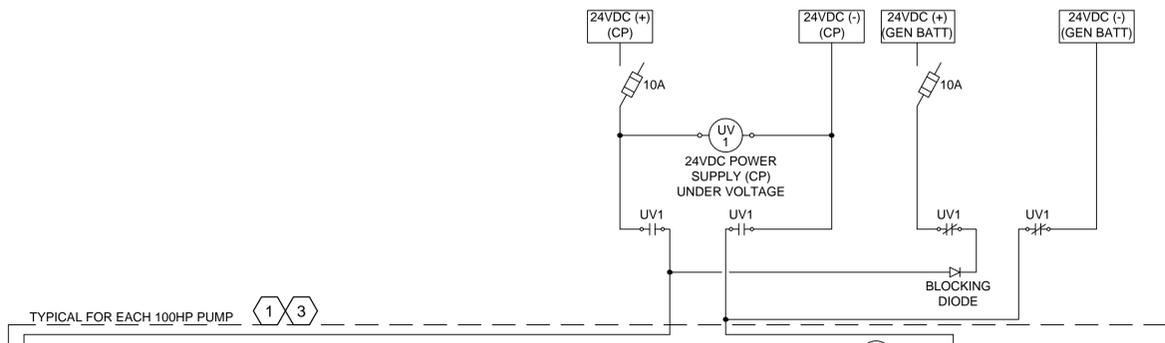
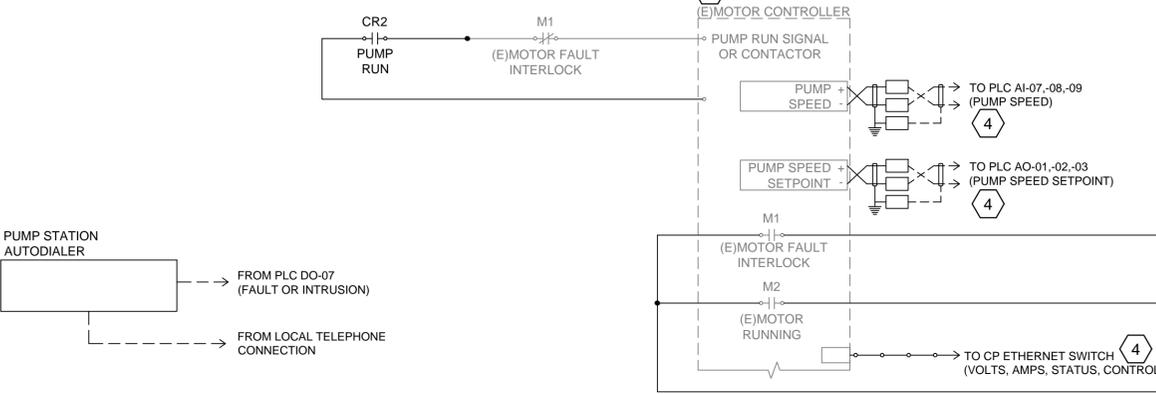
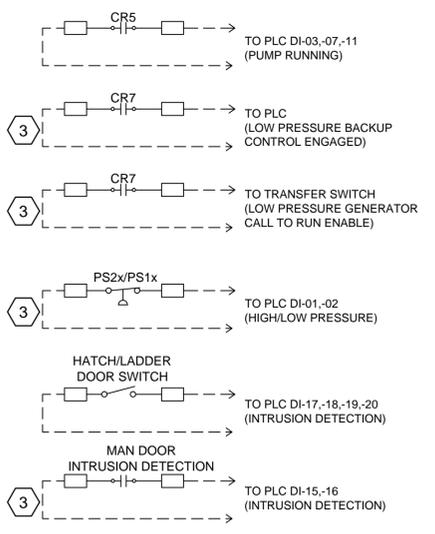
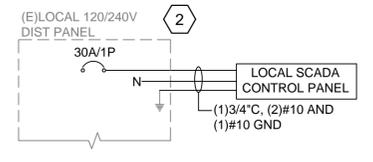
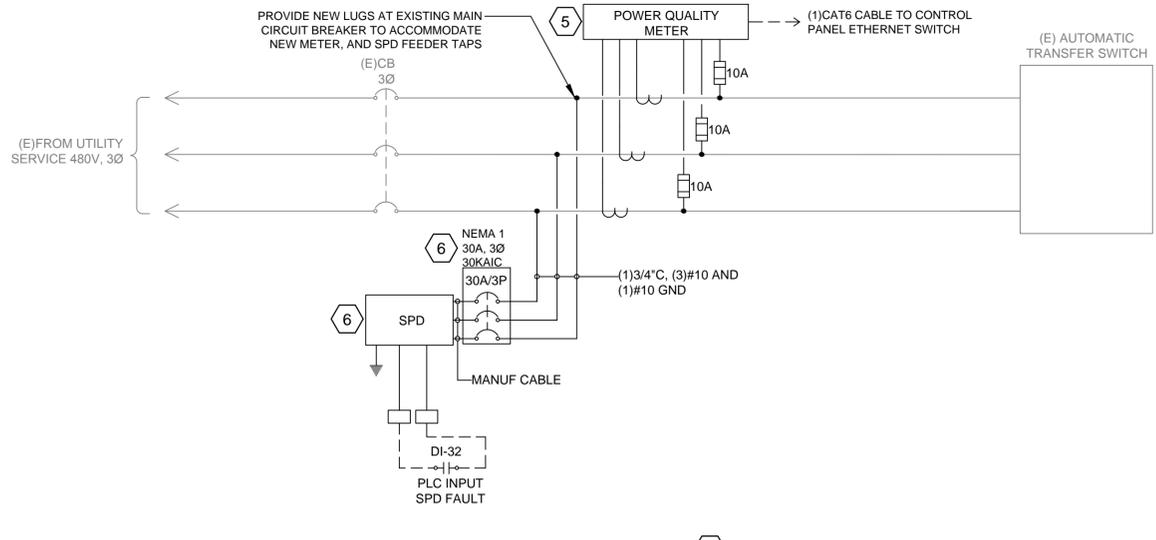
1 TERMINAL CABINET DETAIL



DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 ELECTRICAL DETAILS - I/O TERMINAL CABINET DETAILS

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-503	SHT.	44 OF 60
HORIZ. NOTED		VERT.	-
DWG. NO.	W-3200-4		



- KEY NOTES**
- REFER TO ASSOCIATED PUMP STATION P&ID FOR NUMBER OF PUMPS, PUMP MOTOR CONTROLLER TYPE AND APPLICABILITY OF GENERATOR INTERCONNECTION. DIAGRAM IS TYPICAL FOR EACH PUMP.
 - REFER TO ASSOCIATED PUMP STATION ELECTRICAL PLAN FOR POWER INTERCONNECTION REQUIREMENTS. PROVIDE NEW BREAKER.
 - REFER TO ASSOCIATED PUMP STATION P&ID FOR QUANTITY OF CONTROL ELEMENTS.
 - PROVIDE ONLY FOR PUMPS WITH VFD MOTOR CONTROLLERS. REFER TO ASSOCIATED P&ID TO IDENTIFY MOTOR CONTROLLER TYPE.
 - LOCATE AND CONNECT AT MAIN SWITCHBOARD. METERING AND SURGE PROTECTION DEVICE (SPD) IS FOR PUMP STATION ELECTRICAL SERVICE.
 - MOUNT BREAKER AND SPD WITHIN 36" OF EXISTING PUMP STATION MAIN BREAKER.

- GENERAL NOTES FOR THIS SHEET**
- DIAGRAM IS INTENDED TO CONVEY GENERAL REQUIREMENTS. WHERE REQUIRED BY THE CITY, MODIFY DESIGN AS INDICATED WITHIN THE CONTROL DIAGRAM TO PROVIDE THE INTENDED FUNCTIONALITY.
 - REFER TO PROCESS LOOP DESCRIPTIONS WITHIN PROJECT SPECIFICATIONS FOR INTENDED FUNCTIONALITY, OPERATIONAL REQUIREMENTS, PRESSURE SETPOINTS AND TIME DELAY SETPOINTS.

PROFESSIONAL ENGINEER
 12/31/15
 STATE OF CALIFORNIA

GHD Inc.
 1735 North First Street Suite 301 San Jose California 95112 USA
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CITY OF SANTA CLARA			
WATER & SEWER UTILITIES			
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE			
TYPICAL PUMP STATION CONTROL DIAGRAM			
APPROVED	DATE	BY	DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-504	SHT.	45 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

SHEET GENERAL NOTES

- ALL ELECTRICAL EQUIPMENT INSTALLED INDOORS OR OUTDOORS SHALL BE IN NEMA 3R ENCLOSURES.

KEYNOTES

- SVP WILL PROVIDE AND INSTALL SERVICE TRANSFORMER ON CONTRACTOR PROVIDED CONCRETE PAD.
- SVP WILL PROVIDE AND INSTALL UTILITY METER, INSTRUMENT TRANSFORMER AND MAIN SERVICE DISCONNECT IN CONTRACTOR PROVIDED USERC UTILITY METER, NEMA 3R ENCLOSURE.
- PROVIDE AND INSTALL CABLES AND CONDUIT BETWEEN SVP SERVICE TRANSFORMER, SVP METER CABINET AND ATSMCC EQUIPMENT. SEE DRAWING E-601 FOR SIZING AND CONNECTION INFO.
- PROVIDE AND INSTALL STANDBY ENGINE GENERATOR WITH SUB-BASE DIESEL FUEL TANK, EXHAUST MUFFLER, SEISMIC ANCHORING AND ALL OTHER APPURTENANCES REQUIRED FOR A COMPLETE AND OPERATIONAL STANDBY POWER SYSTEM. SEE SINGLE LINE DIAGRAM FOR RATINGS AND CONNECTION INFORMATION.
- PROVIDE AND INSTALL CABLE AND CONDUIT BETWEEN ENGINE GENERATOR CIRCUIT BREAKER AND SWITCHBOARD AUTOMATIC TRANSFER SWITCH. SEE DRAWING E601, SINGLE LINE DIAGRAM FOR SIZING AND CONNECTION INFORMATION.
- PROVIDE AND INSTALL (2) SETS OF CAMLOCK CONNECTORS (EACH RATED 400 AMPS) IN NEMA 3R ENCLOSURE FOR CONNECTING PORTABLE GENERATOR.
- PROVIDE AND INSTALL CONDUIT AND CABLE BETWEEN PORTABLE GENERATOR CAMLOCK CONNECTORS AND MANUAL TRANSFER SWITCH (MTS).
- PROVIDE AND INSTALL FRONT-ALIGNED SWITCHBOARD AND MOTOR CONTROL CENTER LINE-UP IN NEMA 3R ENCLOSURE. SEE DETAILS AND SINGLE LINE DIAGRAM FOR LAYOUT AND EQUIPMENT RATING.
- PROVIDE SEISMIC ANCHORING PER DETAIL 4/E501.
- PROVIDE AND INSTALL TRANSFORMER, PANELBOARD, CONDUIT AND CABLE AS INDICATED. SEE ELECTRICAL SCHEDULE FOR SIZING AND CIRCUIT INFORMATION.
- PROVIDE SIGN IN FRONT OF ATS AS FOLLOWS:

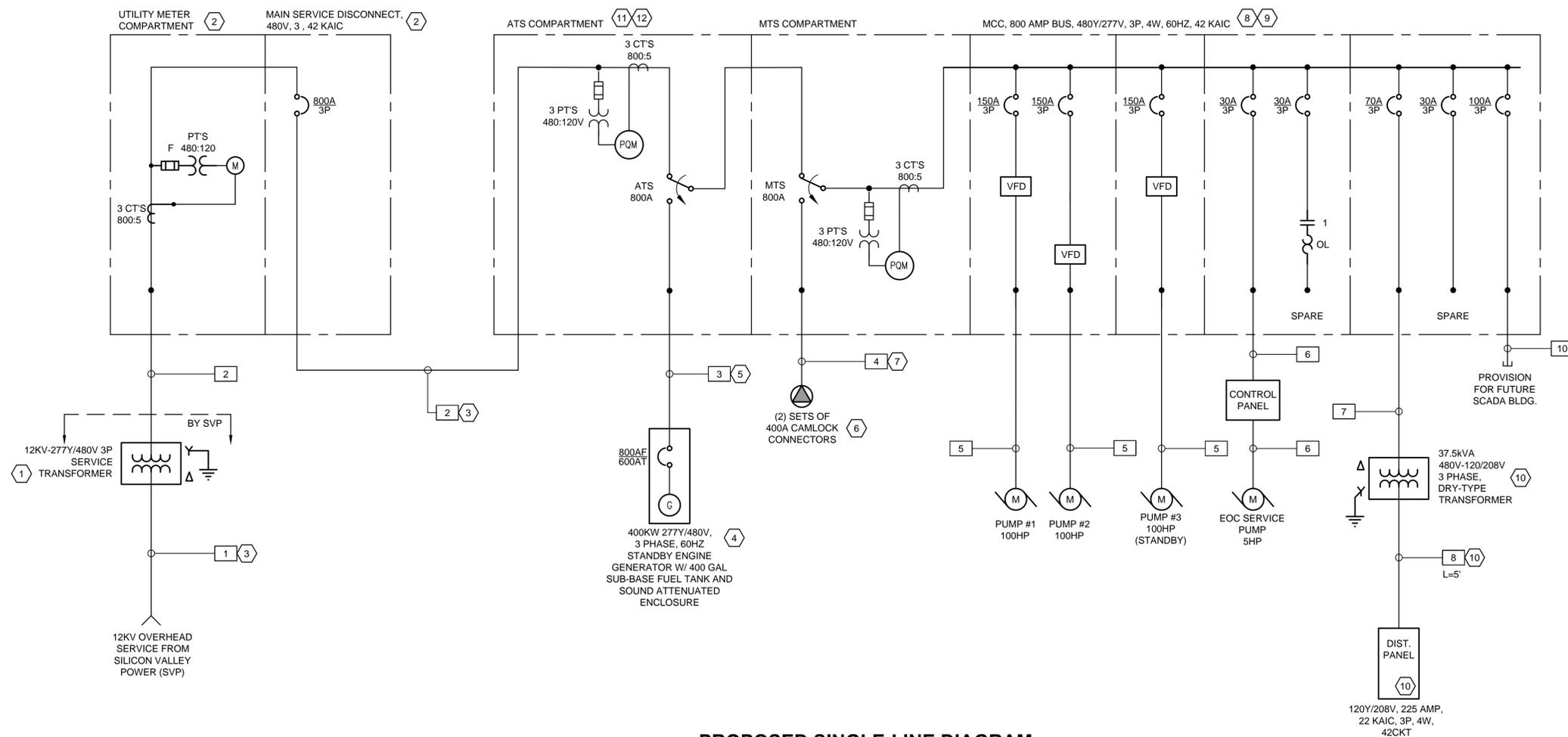
CAUTION
DO NOT BY-PASS OR OPERATE THE "AUTOMATIC TRANSFER SWITCH" TO RUN OR OPERATE THE NON-UTILITY GENERATOR IN PARALLEL WITH THE SVP ELECTRIC UTILITY SOURCE.

THIS "NON-UTILITY GENERATOR" IS NOT AN APPROVED INSTALLATION FOR OPERATING IN PARALLEL WITH THE ELECTRIC UTILITY SOURCE.

- TRANSFER SWITCH OPERATION FOR SINGLE TRANSFER SWITCH INSTALLATIONS:
 - A VOLTAGE DECREASE IN ONE OR MORE PHASES OF THE NORMAL (UTILITY) POWER SOURCE TO LESS THAN 70 PERCENT OF NORMAL SHALL INITIATE THE TRANSFER SEQUENCE. THE TRANSFER SWITCH SHALL START THE ENGINE-GENERATOR UNIT AFTER A TIME DELAY OF TWO OR THREE SECONDS TO PERMIT OVERRIDE OF MOMENTARY DIPS IN THE NORMAL POWER SOURCE. THE TIME-DELAY SHALL BE FIELD ADJUSTABLE FROM ZERO (0) TO FIFTEEN (15) SECONDS.
 - THE TRANSFER SWITCH SHALL TRANSFER THE LOAD FROM NORMAL (UTILITY) TO EMERGENCY SOURCE WHEN THE FREQUENCY AND VOLTAGE OF THE ENGINE-GENERATOR UNIT HAS ATTAINED 90 PERCENT OF RATED VALUE.
 - THE TRANSFER SWITCH SHALL RETRANSFER THE LOAD FROM EMERGENCY TO NORMAL (UTILITY) SOURCE UPON RESTORATION OF NORMAL (UTILITY) SUPPLY IN ALL PHASES TO 90 PERCENT OR MORE OF NORMAL VOLTAGE, AND AFTER A TIME DELAY. THE TIME DELAY SHALL BE FIELD ADJUSTABLE FROM FIVE (5) TO TWENTY-FIVE (25) MINUTES (PRESET FOR TWENTY-FIVE MINUTES). SHOULD THE EMERGENCY SOURCE FAIL DURING THIS TIME, THE TRANSFER SWITCH SHALL IMMEDIATELY TRANSFER TO THE NORMAL (UTILITY) SOURCE WHENEVER IT BECOMES AVAILABLE. AFTER RESTORING TO NORMAL (UTILITY) SOURCE, THE GENERATOR SHALL CONTINUE TO RUN (COOL DOWN PERIOD FOR FIVE (5) MINUTES UNLOADED BEFORE SHUT DOWN. TIME DELAY SHALL BE ADJUSTABLE FROM ZERO (0) TO FIFTEEN (15) MINUTES.

SHEET SPECIAL SYMBOLS

- XX CONDUIT IDENTIFICATION TAG. REFERENCE SHEET E602



PROPOSED SINGLE-LINE DIAGRAM



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DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
ELECTRICAL SINGLE LINE DIAGRAM

PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY NW	DRAWN BY NW
CHECKED BY SD	YEAR 2014	DATE DEC 2014
DRAWING NO. E-601	BLK. BK. PG. 46 OF 60	SHT. 55 AND 56
HORIZ. NOTED	VERT. -	DWG. NO. W-3200-4
APPROVED	DATE	DIRECTOR OF WATER & SEWER UTILITIES

CONDUIT AND CABLE SCHEDULE

POWER					
NO.	FROM	TO	CONDUIT SIZE	CABLE SIZE (600-V, CU, THHN/THWN CONDUCTORS)	REMARKS
1	SVP POWER POLE	SVP TRANSFORMER	2-5"	EMPTY WITH PULL ROPE. SVP TO INSTALL 15KV CONDUCTORS.	
2	SVP TRANSFORMER	CABLE AND METER CT COMPT	2-4"	4-500KCMIL, 1-#1/0 AWG GND IN EACH CONDUIT	
3	STANDBY GENERATOR	ATS	2-4"	4-500KCMIL, 1-#1/0 AWG GND IN EACH CONDUIT	
4	MTS	CAMLOCK CONNECTORS	2-4"	4-500KCMIL, 1-#1/0 AWG GND IN EACH CONDUIT	
5	MCC	PUMP MOTOR	2"	3-#2/0 AWG, #6 AWG GND AND 2-#12 AWG	MOTOR AND MOTOR HEATER CIRCUITS
6	MCC	EOC SERVICE PUMP	3/4"	3-#10 AWG, 1-#10 AWG GND	
7	MAIN SWBD	37.5 kVA XFMR	1-1/4"	3-#4 AWG, 1-#8 AWG GND	
8	37.5 kVA XFMR	STATION DIST. PANEL	2-1/2"	4-#4/0 AWG, 1-#2 AWG GND	
9	STATION DIST. PANEL	TERMINATION CABINET	3/4"	2-#12 AWG, #12 AWG GND	
10	MCC	PROVISION FOR FUTURE SCADA BLDG.	2"	EMPTY WITH PULL ROPE	
11	CATHODIC PROTECTION RECTIFIER	JB/ANODE AT TANK	1"	3-#12 AWG AND (1) 3/C #16 AWG TWISTED SHIELDED PAIR	CATHODIC PROTECTION

CONTROLS					
NO.	FROM	TO	CONDUIT REQUIRED	CABLE QTY AND TYPE	REMARKS
C1	TERMINATION CABINET	STANDBY GENERATOR	2"	(20) #14 AWG, (2) CAT. 6 ETHERNET CABLES	DIGITAL CONTROLS AND ETHERNET
C2	TERMINATION CABINET	ATS	2"	(16) #14 AWG	DIGITAL CONTROLS
C3	TERMINATION CABINET	PROVISION FOR FUTURE SCADA BLDG.	2"	EMPTY WITH PULL ROPE	
C4	TERMINATION CABINET	MCC	2"	(30) #14 AWG, (2) CAT. 6 ETHERNET CABLE	DIGITAL CONTROLS AND ETHERNET
C5	TERMINATION CABINET	FIELD DEVICES- YI-111, YI-112, YI-113, YI-114	2"	(16) #14 AWG	DIGITAL CONTROLS
C6	TERMINATION CABINET	ALTITUDE SENSOR- PIT-101, PIT-102	2"	(2) 2/C #16 AWG TWISTED SHIELDED PAIR	ANALOG CONTROL
C7	TERMINATION CABINET	FLOW CONTROL VALVE - SV-101, YI-119	1"	(6) #14 AWG, (2) #12 AWG AND #12 AWG GND	DIGITAL CONTROLS AND POWER
C8	TERMINATION CABINET	FLOWMETER- FIT-101	1"	(1) 2/C #16 AWG TWISTED SHIELDED PAIR	ANALOG CONTROL
C9	TERMINATION CABINET	CATHODIC PROTECTION RECTIFIER	1"	(5) 2/C #16 AWG TWISTED SHIELDED PAIR	CATHODIC PROTECTION
C10	MCC	PUMP HIGH/LOW PRESSURE SWITCHES	1"	(4) #14 AWG	PUMP BACKUP CONTROL

LIGHTING FIXTURE SCHEDULE

TAG	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	LAMP	FIXTURE INPUT WATTS	MOUNTING	NOTES
A	LENSED LED STRIP LIGHT. 4800K COLOR TEMPERATURE. 72,000 HOUR L70 LIFE.	COOPER-METALUX	SNLED-LD1-48-LN-UNV-L848-CD1-U	LED	49.6	CABLE HUNG USING AYC-CHAIN/SET. SEE DETAILS ON E-502	97 LUMENS/WATT. PROVIDE WITH SEISMIC BRACING AND UTILITY WRAP WIRE GUARD.
A1	LENSED LED STRIP LIGHT WITH EMERGENCY BALLAST	COOPER-METALUX	SNLED-LD1-48-LN-UNV-L848-EL-CD1-U	LED	49.6	CABLE HUNG USING AYC-CHAIN/SET. SEE DETAILS ON E-502	97 LUMENS/WATT. PROVIDE WITH SEISMIC BRACING AND UTILITY WRAP WIRE GUARD.
B	RUGED DIE CAST LED WALL-PACK. ALUMINIUM HOUSING AND POLYCARBONATE PRISMATIC LENS. INTEGRAL PHOTOCEL CONTROL.	COOPER	LDWP-PL-2A-ED-PE120	LED	22	WALL	PHOTOCEL CONTROLLED. MOUNT 9-FEET ABOVE FINISHED GRADE. CENTER OVER DOOR (WHERE APPLICABLE).
X	EDGE-LIT LED EXIT SIGN	LITHONIA	EDG 1 R EL	LED	2.5	SURFACE	BOTTOM OF FIXTURE TO BE 2-INCHES ABOVE DOOR FRAME

PANEL SCHEDULE

PANEL NAME: STATION DIST PANEL												VOLTAGE: 208/120		NEMA RATING: 3R		NOTES:	
MAINS RATING: 200 A MCB				PHASE: 3				AIC RATING: 22K				MOUNTING: SURFACE					
BUS RATING: 225 A				WIRE: 4				DEMAND FACTOR: STD				LOCATION: PUMP BUILDING					
CKT NO.	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	CKT NO.					
1	L	INDOOR LIGHTING	20/1		0.41	A	2.00		30/3	WATER HEATER EWH-1	H	2					
3	L	OUTDOOR LIGHTING	20/1		0.41	B	2.00		--		H	4					
5	R	INDOOR RECEPITS	20/1		0.05	C	2.00		--		H	6					
7	R	OUTDOOR RECEPITS	20/1	GFCI	0.05	A	0.03		20/1	EXHAUST FAN EF-1	H	8					
9	O	I/O TERMINATION CABINET	20/1		0.10	B			20/3	SPARE		10					
11		SPARE	20/1		0.10	C			--			12					
13		SPARE	20/1		0.10	A			--			14					
15		SPARE	20/1		0.10	B	0.50		20/1	CATHODIC PROTECTION	O	16					
17		SPARE	20/1			C			20/1	SPARE		18					
19		SPARE	20/1			A			20/1	SPARE		20					
21		SPARE	20/1			B			20/1	SPARE		22					
23		SPARE	20/1			C			20/1	SPARE		24					
25		SPARE	20/1			A			20/1	SPARE		26					
27		SPARE	20/1			B			20/1	SPARE		28					
29		SPARE	20/1			C			20/1	SPARE		30					
31		SPARE	20/1			A			20/1	SPARE		32					
33		SPARE	20/1			B			20/1	SPARE		34					
35		SPARE	20/1			C			20/1	SPARE		36					
37		SPARE	20/1			A	0.10		20/2	BLOCK HEATER	O	38					
39		SPARE	20/1			B	0.10		--		O	40					
41	L	EXT LIGHTS AND EXITS	20/1		0.07	C	0.10		20/1	BATTERY CHARGER	O	42					
CONNECTED KVA			DEMAND KVA			DEMAND AMPS			USE LEGEND		LOAD TYPE		BREAKER OPTIONS				
PHASE A: 2.7			2.8			23.3			H		HVAC		GFCI - GROUND FAULT CIRCUIT INTERRUPTER LO - LOCK-ON DEVICE PA - PADLOCK ATTACHMENT ST - SHUNT TRIP				
PHASE B: 3.2			3.3			27.6			L		LIGHTING						
PHASE C: 2.3			2.3			19.5			M		MOTOR						
STD DEMAND LOAD BASED ON 125% OF THE LARGEST MOTOR AND 100% OF THE REMAINING MOTORS, 125% OF CONTINUOUS LOADS, 100% OF NONCONTINUOUS LOADS, AND 50% OF RECEPTACLE LOADS BEYOND THE FIRST 10KVA												R		OTHER RECEPTACLE			
												O		PANEL			

3-PHASE DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS	0.88	125%	1.10
TYPE "R": RECEPTACLES (FIRST 10KVA)	0.11	100%	0.11
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS	6.03	100%	6.03
TYPE "P": PANEL LOADS		100%	
TYPE "O": OTHER LOADS	1.20	100%	1.20
	DEMAND KVA:		8.44
	DEMAND AMPS:		23.4



CITY OF SANTA CLARA WATER & SEWER UTILITIES			PROJ. NO. 592-1423-80300-7054-30236
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE ELECTRICAL SCHEDULES			DESIGNED BY NW DRAWN BY NW
APPROVED _____ DATE _____			CHECKED BY SD YEAR 2014
DIRECTOR OF WATER & SEWER UTILITIES			DATE DEC 2014 BLK. BK. PG. 55 AND 56
			DRAWING NO. E-602 SHT. 47 OF 60
			HORIZ. NOTED VERT. - DWG. NO. W-3200-4

INPUT / OUTPUT SCHEDULE								
POINT NO.	DEVICE ID	TYPE OF SIGNAL	SENSING/CONTROLLING DEVICE	FUNCTION / CONTROLS	SCALE	POWER REQUIRED	TERMINATION POINT	REMARKS
AI-01	FIT-101	A-4 TO 20 mA	FLOW TRANSMITTER	12-INCH - FLOW INDICATION	GPM	10-30 VDC	TB-01-1/2/3	FLOW MONITORING IN BOTH DIRECTIONS
AI-02	PIT-101	A-4 TO 20 mA	PRESSURE TRANSMITTER	ALTITUDE SENSOR - PRESSURE INDICATION	PSI	10-30 VDC	TB-01-4/5/6	
AI-03	PIT-102	A-4 TO 20 mA	PRESSURE TRANSMITTER	ALTITUDE SENSOR - PRESSURE INDICATION	PSI	10-30 VDC	TB-01-7/8/9	
AI-04	PIT-103	A-4 TO 20 mA	PRESSURE TRANSMITTER	PUMP DISCHARGE HEADER PRESSURE TRANSDUCER	PSI	-	TB-01-10/11/12	
AI-05	LIT-101	A-4 TO 20 mA	GENERATOR SCADA POINT	GENERATOR FUEL LEVEL INDICATION	LEVEL	-	TB-01-13/14/15	
AI-06	LIT-102	A-4 TO 20 mA	LEVEL TRANSMITTER	TANK-LEVEL INDICATION	LEVEL	-	TB-01-16/17/18	
AI-07	SIT-101	A-4 TO 20 mA	PUMP 1 SCADA POINT	PUMP SPEED INDICATION	SPEED	-	TB-01-19/20/21	
AI-08	SIT-102	A-4 TO 20 mA	PUMP 2 SCADA POINT	PUMP SPEED INDICATION	SPEED	-	TB-01-22/23/24	
AI-09	SIT-103	A-4 TO 20 mA	PUMP 3 SCADA POINT	PUMP SPEED INDICATION	SPEED	-	TB-01-25/26/27	
AI-10	EIT-101	A-4 TO 20 mA	GENERATOR SCADA POINT	MONITOR GENERATOR VOLTAGE	VOLTS	-	TB-01-28/29/30	
AO-01	SC-101	A-4 TO 20 mA	PUMP 1 SCADA POINT	PUMP SPEED SETPOINT	SPEED	-	TB-01-38/39/40	
AO-02	SC-102	A-4 TO 20 mA	PUMP 2 SCADA POINT	PUMP SPEED SETPOINT	SPEED	-	TB-01-41/42/43	
AO-03	SC-103	A-4 TO 20 mA	PUMP 3 SCADA POINT	PUMP SPEED SETPOINT	SPEED	-	TB-01-44/45/46	
DI-01	YI-101	D-NO/NC	CONTACT IN MCC	PUMP HIGH PRESSURE INDICATION	STATUS	-	TB-02-1/2	
DI-02	YI-102	D-NO/NC	CONTACT IN MCC	PUMP LOW PRESSURE INDICATION	STATUS	-	TB-02-3/4	
DI-03	YI-103	D-NO/NC	CONTACT IN MOTOR STARTER 1 AT MCC	PUMP 1 "RUN" STATUS INDICATION	STATUS	-	TB-02-5/6	DO-03 TO "START-STOP" PUMP 1 FROM PLC
DI-04	YI-104	D-NO/NC	CONTACT ON PUMP 1 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "HAND" POSITION	STATUS	-	TB-02-7/8	
DI-05	YI-105	D-NO/NC	CONTACT ON PUMP 1 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "OFF" POSITION	STATUS	-	TB-02-9/10	
DI-06	YI-106	D-NO/NC	CONTACT ON PUMP 1 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "AUTO" POSITION	STATUS	-	TB-02-11/12	
DI-07	YI-107	D-NO/NC	CONTACT IN MOTOR STARTER 2 AT MCC	PUMP 2 "RUN" STATUS INDICATION	STATUS	-	TB-02-13/14	DO-04 TO "START-STOP" PUMP 2 FROM PLC
DI-08	YI-108	D-NO/NC	CONTACT ON PUMP 2 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "HAND" POSITION	STATUS	-	TB-02-15/16	
DI-09	YI-109	D-NO/NC	CONTACT ON PUMP 2 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "OFF" POSITION	STATUS	-	TB-02-17/18	
DI-10	YI-110	D-NO/NC	CONTACT ON PUMP 2 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "AUTO" POSITION	STATUS	-	TB-02-19/20	
DI-11	YI-111	D-NO/NC	CONTACT IN MOTOR STARTER 3 AT MCC	PUMP 3 "RUN" STATUS INDICATION	STATUS	-	TB-02-21/22	DO-05 TO "START-STOP" PUMP 3 FROM PLC
DI-12	YI-112	D-NO/NC	CONTACT ON PUMP 3 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "HAND" POSITION	STATUS	-	TB-02-23/24	
DI-13	YI-113	D-NO/NC	CONTACT ON PUMP 3 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "OFF" POSITION	STATUS	-	TB-02-25/26	
DI-14	YI-114	D-NO/NC	CONTACT ON PUMP 3 "H-O-A" SELECTOR SWITCH	MONITOR "H-O-A" SEL. SWITCH IN "AUTO" POSITION	STATUS	-	TB-02-27/28	
DI-15	YI-115	D-NO/NC	SWITCH CONTACT	MONITOR "OPEN-CLOSED" MAN DOOR 1	STATUS	-	TB-02-29/30	
DI-16	YI-116	D-NO/NC	SWITCH CONTACT	MONITOR "OPEN-CLOSED" MAN DOOR 2	STATUS	-	TB-02-31/32	
DI-17	YI-117	D-NO/NC	SWITCH CONTACT	MONITOR "OPEN-CLOSED" 3'x3' HATCH	STATUS	-	TB-02-33/34	
DI-18	YI-118	D-NO/NC	SWITCH CONTACT	MONITOR "OPEN-CLOSED" 3'x3' OBSERVATION HATCH	STATUS	-	TB-02-35/36	
DI-19	YI-119	D-NO/NC	SWITCH CONTACT	MONITOR "OPEN-CLOSED" 2'x2' SAMPLE HATCH	STATUS	-	TB-02-37/38	
DI-20	YI-120	D-NO/NC	SWITCH CONTACT	MONITOR "OPEN-CLOSED" LADDER DOOR	STATUS	-	TB-02-39/40	
DI-21	YI-201	D-NO/NC	GENERATOR SCADA POINT	GENERATOR DOOR SWITCH	ALARM	-	TB-02-41/42	
DI-22	YI-202	D-NO/NC	GENERATOR SCADA POINT	GENERATOR FUEL LEAK	ALARM	-	TB-02-43/44	
DI-23	YI-204	D-NO/NC	GENERATOR SCADA POINT	GENERATOR "RUN" STATUS INDICATION	ALARM	-	TB-02-45/46	DO-6 TO "START-STOP" GENERATOR FROM PLC
DI-24	YA-201	D-NO/NC	GENERATOR SCADA POINT	GENERATOR "COMMON ALARMS"	ALARM	-	TB-02-47/48	
DI-25	YA-202	D-NO/NC	GENERATOR SCADA POINT	GENERATOR "CRITICAL ALARMS"	ALARM	-	TB-02-49/50	
DI-26	YI-121	D-NO/NC	ATS SCADA POINT	ATS "NORMAL" SOURCE AVAILABLE	STATUS	-	TB-02-51/52	
DI-27	YI-122	D-NO/NC	ATS SCADA POINT	ATS "STANDBY" SOURCE AVAILABLE	STATUS	-	TB-02-53/54	
DI-28	YI-123	D-NO/NC	ATS SCADA POINT	ATS IN NORMAL (UTILITY) POWER POSITION	STATUS	-	TB-02-55/56	POWER TO FACILITY FROM NORMAL (UTILITY) SOURCE
DI-29	YI-124	D-NO/NC	ATS SCADA POINT	ATS IN STANDBY (GENERATOR) POWER POSITION	STATUS	-	TB-02-57/58	POWER TO FACILITY FROM STANDBY (GENERATOR) SOURCE
DI-30	YI-125	D-NO/NC	CONTACT IN BACK PRESSURE VALVE	MONITOR "OPEN-CLOSE" FLOW CONTROL AND PRESSURE RELIEF VALVE	STATUS	-	TB-02-59/60	DO-01 TO "OPEN-CLOSE" SOLENOID VALVE SV-101 FROM PLC
DI-31	YI-126	D-NO/NC	CONTACT IN BACK PRESSURE VALVE	MONITOR "OPEN-CLOSE" FLOW CONTROL AND PRESSURE RELIEF VALVE	STATUS	-	TB-02-61/62	DO-02 TO "OPEN-CLOSE" SOLENOID VALVE SV-102 FROM PLC
DI-32	YA-104	D-NO/NC	SURGE PROTECTING DEVICE SCADA POINT	SURGE PROTECTING DEVICE FAULT	ALARM	-	TB-02-63/64	
DI-33	YI-127	D-NO/NC	SWITCH CONTACT	TRANSFER SWITCH INTRUSION DETECTION	STATUS	-	TB-02-65/66	
DO-01	SV-101	D-NO/NC	SOLENOID VALVE 1	"OPEN-CLOSE" FLOW CONTROL AND PRESSURE RELIEF VALVE	CNTRL	120-VAC	TB-01-51/52	ENERGIZE TO "OPEN".
DO-02	SV-102	D-NO/NC	SOLENOID VALVE 2	"OPEN-CLOSE" FLOW CONTROL AND PRESSURE RELIEF VALVE	CNTRL	120-VAC	TB-01-53/54	ENERGIZE TO "OPEN".
DO-03	YC-101	D-NO/NC	"AUTO" MODE FOR PUMP 1	"START-STOP" PUMP 1 FROM PLC	CNTRL	-	TB-01-55/56	PRESSURE SWITCH IN PUMP DISCHARGE HEADER TO CONTROL ALL 3 PUMPS IN "AUTO" MODE
DO-04	YC-102	D-NO/NC	"AUTO" MODE FOR PUMP 2	"START-STOP" PUMP 2 FROM PLC	CNTRL	-	TB-01-57/58	PRESSURE SWITCH IN PUMP DISCHARGE HEADER TO CONTROL ALL 3 PUMPS IN "AUTO" MODE
DO-05	YC-103	D-NO/NC	"AUTO" MODE FOR PUMP 3	"START-STOP" PUMP 3 FROM PLC	CNTRL	-	TB-01-59/60	PRESSURE SWITCH IN PUMP DISCHARGE HEADER TO CONTROL ALL 3 PUMPS IN "AUTO" MODE
DO-06	YC-201	D-NO/NC	GENERATOR SCADA POINT	"START-STOP" GENERATOR FROM PLC	CNTRL	-	TB-01-61/62	EG UNIT TO START WHEN UTILITY POWER IS LOST AND IF PLC IS CALLING FOR ANY PUMPS TO RUN
DO-07	YC-105	D-NO/NC	PUMP STATION AUTO DIALER	FAULT/INTRUSION FROM PLC	CNTRL	-	TB-01-63/64	
DO-08	YC-106	D-NO/NC	TRANSFER SWITCH SCADA POINT	BLOCK TRANSFER TO UTILITY SOURCE	CNTRL	-	TB-01-65/66	
DO-09	YC-107	D-NO/NC	TRANSFER SWITCH SCADA POINT	TRANSFER TO GENERATOR SOURCE	CNTRL	-	TB-01-67/68	
-	R-4 PIT-103 TIT-101 YI-202	ETHERNET CABLE (CAT. 6)	GENERATOR ENGINE MANAGEMENT INTERFACE	MONITOR GENERATOR BATTERIES VOLTAGE GENERATOR OIL PRESSURE INDICATION GENERATOR ENGINE TEMPERATURE INDICATION GENERATOR BATTERY CHARGER FAILURE	STATUS PSI TEMP ALARM	-	MINI-PATCH PANEL	
-	YA-101 YA-102 YA-103	ETHERNET CABLE (CAT. 6)	MOTOR CONTROL CENTER	PUMP 1 CONTROL FAULT/ALARM PUMP 2 CONTROL FAULT/ALARM PUMP 3 CONTROL FAULT/ALARM	ALARM ALARM ALARM	-	MINI-PATCH PANEL	
-		ETHERNET CABLE (CAT. 6)	GENSET POWER METER			-	MINI-PATCH PANEL	
-		ETHERNET CABLE (CAT. 6)	POWER QUALITY METER			-	MINI-PATCH PANEL	



GHD Inc.
1735 North First Street Suite 301 San Jose California 95112 USA
T 1 408 451 9615 F 1 408 451 9665
W www.ghd.com

DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
ELECTRICAL I/O SCHEDULE

PROJ. NO.	592-1423-80300-7054-30236
DESIGNED BY	NW
DRAWN BY	NW
CHECKED BY	SD
YEAR	2014
DATE	DEC 2014
BLK. BK. PG.	55 AND 56
DRAWING NO.	E-603
SHT.	48 OF 60
HORIZ. NOTED	VERT. -
DWG. NO.	W-3200-4

STATE OF CALIFORNIA
INDOOR LIGHTING
 CEC-NRCC-LTI-01-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS
 Indoor Lighting NRCC-LTI-01-E
 (Page 5 of 5)

Project Name: Walsh Tank Pump Station Date Prepared: 12/2/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 1. I certify that this Certificate of Compliance documentation is accurate and complete.
 Documentation Author Name: Nick Weil Documentation Author Signature: *Nick Weil*
 Company: GHD Signature Date: 12/2/2014
 Address: 2235 Mercury Way, Suite 150 CEA/HERS Certification Identification (if applicable):
 City/State/Zip: Santa Rosa, CA 95404 Phone: 707-523-1010

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:
 1. The information provided on this Certificate of Compliance is true and correct.
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.
 Responsible Designer Name: Shishir Doctor Responsible Designer Signature: *Shishir Doctor*
 Company: GHD Date Signed:
 Address: 1735 N. First Street, Suite 301 License: E13224
 City/State/Zip: San Jose, CA 95112 Phone: 408-451-9615

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
 CEC-NRCC-LTI-02-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Indoor Lighting - Lighting Controls NRCC-LTI-02-E
 (Page 1 of 3)

Project Name: Walsh Tank Pump Station Date Prepared: 12/18/2014

The NRCC-LTI-02-E shall be used to document all mandatory and prescriptive lighting controls that are applicable to the project.

A. Mandatory Lighting Control Declaration Statements
 Indicate if the measure applies:

YES	NO	Control Requirements
		Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with Section 110.9.
		Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
		One or more Track Lighting Integral Current Limiters shall be installed which have been certified to the Energy Commission in accordance with §110.9 and §130.0. An Installation Certificate shall be submitted in accordance with Section 130.4(b).
		A Track Lighting Supplementary Overcurrent Protection Panel shall be installed in accordance with Section 110.9 and Section 130.3. Additionally, an Installation Certificate shall be installed in accordance with Section 130.4(b).
		All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with Section 130.1.
		All luminaires shall be functionally controlled with manually switched ON and OFF lighting controls in accordance with Section 130.1(a).
		General lighting shall be separately controlled from all other lighting systems in an area. Floor and wall display, window display, case display, ornamental, and special effects lighting shall each be separately controlled on circuits that are 20 amps or less. When track lighting is used, general, display, ornamental, and special effects lighting shall each be separately controlled; in accordance with Section 130.0(a)4.
		The general lighting of any enclosed area 100 square feet or larger, with a connected lighting load that exceeds 0.5 watts per square foot shall meet the multi-level lighting control requirements in accordance with Section 130.1(b).
		All installed indoor lighting shall be equipped with controls that meet the applicable Shut-Off control requirements in Section 130.1(c).
		Lighting in all Daylit Zones shall be controlled in accordance with the requirements in Section 130.1(d) and daylit zones are shown on the plans.
		Lighting power in buildings larger than 10,000 square feet shall be capable of being automatically reduced in response to a Demand Responsive Signal in accordance with Section 130.1(e).
		Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with Section 130.4. (a). The controls required to meet the Acceptance Requirements include automatic daylight controls, automatic shut-OFF controls, and demand responsive controls.

Registration Number: Registration Date/Time: HERS Provider: June 2013
 CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
 CEC-NRCC-LTI-02-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Indoor Lighting - Lighting Controls NRCC-LTI-02-E
 (Page 2 of 3)

Project Name: Walsh Tank Pump Station Date Prepared: 12/18/2014

A separate document must be filled out for Conditioned and Unconditioned Spaces. This page is used only for the following:
 CONDITIONED SPACES UNCONDITIONED SPACES

MANDATORY AND PRESCRIPTIVE INDOOR LIGHTING CONTROL SCHEDULE, PAF CALCULATION, and FIELD INSPECTION CHECKLIST

Lighting Control Schedule	Standards Complying With ¹ (✓ all that apply, or enter 'E' if Exempted)										PAF Credit Calculation ²			✓ if Acceptance Test Required	Field Inspector	
	A	B	C	D	E	F	G	H	I	J	K	L	M			N
Location in Building	Type/Description of Lighting Control (i.e.: occupancy sensor, automatic time switch, dimmer, automatic daylight, etc...)	# of Units	§130.1(a)	§130.0(b)	§130.1(c)	§130.1(d)	§130.1(e)	§140.6(d)	§140.6(d)		Watts of Controlled Lighting	PAF	Control Credit (K x L)		Pass	Fail
Room	Dimming - Manual								✓	546	0.10	55				
INSTALLED WATTS PAGE TOTAL: 55																
IF MULTIPLE PAGES ARE USED, ENTER SUM TOTAL OF ALL PAGES HERE: 55																

1. §130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive; §140.6(d) = Additional lighting controls installed to earn a PAF; §140.6(d) = Prescriptive Secondary Sidelit Daylight Controls.
 2. Check Table 140.6-A for correct Factor. PAFs shall not be traded between conditioned and unconditioned spaces. As a condition to earn a PAF, an Installation Certificate is also required to be filled out, signed, and submitted.

Registration Number: Registration Date/Time: HERS Provider: June 2013
 CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

STATE OF CALIFORNIA
INDOOR LIGHTING – LIGHTING CONTROLS
 CEC-NRCC-LTI-02-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Indoor Lighting - Lighting Controls NRCC-LTI-02-E
 (Page 3 of 3)

Project Name: Walsh Tank Pump Station Date Prepared: 12/18/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 1. I certify that this Certificate of Compliance documentation is accurate and complete.
 Documentation Author Name: Nick Weil Documentation Author Signature: *Nick Weil*
 Company: GHD Signature Date: 12/18/2014
 Address: 2235 Mercury Way, Suite 150 CEA/HERS Certification Identification (if applicable):
 City/State/Zip: Santa Rosa, CA 95404 Phone: 707-523-1010

RESPONSIBLE PERSON'S DECLARATION STATEMENT
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 Responsible Designer Name: Shishir Doctor Responsible Designer Signature: *Shishir Doctor*
 Company: GHD Date Signed:
 Address: 1735 N. First Street, Suite 301 License: E13224
 City/State/Zip: San Jose, CA 95112 Phone: 408-451-9615

Registration Number: Registration Date/Time: HERS Provider: June 2013
 CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance



DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 ELECTRICAL ENERGY COMPLIANCE - 2

APPROVED DATE BY DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO.	592-1423-80300-7054-30236		
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-702	SHT.	50 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
 CEC-NRCC-LTI-03-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
 Certificate of Compliance - Indoor Lighting Power Allowance (Page 1 of 4)
 Project Name: Walsh Tank Pump Station Date Prepared: 12/18/2014

ALLOWED LIGHTING POWER (Chose Method)
 A separate page must be filled out for Conditioned and Unconditioned Spaces. This page is only for: CONDITIONED spaces UNCONDITIONED spaces

A. SUMMARY TOTALS OF LIGHTING POWER ALLOWANCES
 If using Complete Building Method for compliance, use only the total in column (a) as total allowed building watts.
 If using Area Category Method, Tailored Method, or a combination of Area Category and Tailored Method for compliance, use only the total in column (b) as the total allowed building watts

	(a)	(b)
1. Complete Building Method Allowed Watts. Documented in section B of NRCC-LTI-03-E (below on this page)	915	
2. Area Category Method Allowed Watts. Documented in section C-1 of NRCC-LTI-03-E (below on this page)		
3. Tailored Method Allowed Watts. Documented in section A of NRCC-LTI-04-E		
TOTAL ALLOWED BUILDING WATTS. Enter number into correct cell on NRCC-LTI-01, Page 2, Row 1	915	

Check here if building contains both conditioned and unconditioned areas.

B. COMPLETE BUILDING METHOD LIGHTING POWER ALLOWANCE

A	B	C	D
TYPE OF BUILDING (From §140.6 Table 140.6-B)	WATTS PER (ft ²)	COMPLETE BLDG. AREA	ALLOWED WATTS
Comp Bldg Ind Work, Low Bay	1.00	915	915
Total Area:			
Total Watts. Enter Total Watts into section A, row 1 (Above on this page)			915

C-1 AREA CATEGORY METHOD TOTAL LIGHTING POWER ALLOWANCES (C-2 plus C-3)

Watts
Total from section C-2
Total from section C-3
Total Watts. Enter Total Watts into section A, row 2 (Above on this page)

Registration Number: CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance Registration Date/Time: HERS Provider: June 2013

STATE OF CALIFORNIA
INDOOR LIGHTING POWER ALLOWANCE
 CEC-NRCC-LTI-03-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTI-03-E
 Certificate of Compliance - Indoor Lighting Power Allowance (Page 4 of 4)
 Project Name: Walsh Tank Pump Station Date Prepared: 12/2/2014

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Nick Weil Documentation Author Signature: *Nick Weil*
 Company: GHD Signature Date: 12/2/2014
 Address: 2235 Mercury Way, Suite 150 CEA/HERS Certification Identification (if applicable):
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 Company: GHD Date Signed:
 Address: 1735 N. First Street, Suite 301 License: E13224
 City/State/Zip: San Jose, CA 95112 Phone: 408-451-9615

Registration Number: CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance Registration Date/Time: HERS Provider: June 2013

STATE OF CALIFORNIA
OUTDOOR LIGHTING
 CEC-NRCC-LTO-01-E (Revised 06/13) CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-LTO-01-E
 Outdoor Lighting (Page 1 of 3)
 Project Name: Walsh Tank Pump Station Date Prepared: 12/2/2014

Project Address: Nick Weil Total Illuminated Hardscape Area: 500

General Information
 Phase of Construction: New Construction Addition Alteration
 Outdoor Lighting Zone (OLZ) OLZ-1 OLZ-2 OLZ-3 OLZ-4
 The OLZ is: Default in accordance with §10-114, or Amended by the AHJ

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Nick Weil Documentation Author Signature: *Nick Weil*
 Company: GHD Signature Date: 12/2/2014
 Address: 2235 Mercury Way, Suite 150 CEA/HERS Certification Identification (if applicable):
 City/State/Zip: Santa Rosa, CA 95404 Phone: 707-523-1010

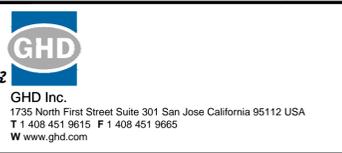
RESPONSIBLE PERSON'S DECLARATION STATEMENT
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 Company: GHD Date Signed:
 Address: 1735 N. First Street, Suite 301 License: E13224
 City/State/Zip: San Jose, CA 95112 Phone: 408-451-9615

LIGHTING COMPLIANCE DOCUMENTS (check box for each document included)
 For detailed instructions on the use of this and all Energy Efficiency Standards compliance documents, refer to the Nonresidential Manual published by the California Energy Commission.

NRCC-LTO-01-E Certificate of Compliance
 NRCC-LTO-02-E Outdoor Lighting Controls Certificate of Compliance
 NRCC-LTO-03-E Outdoor Lighting Power Allowance Certificate of Compliance

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2013

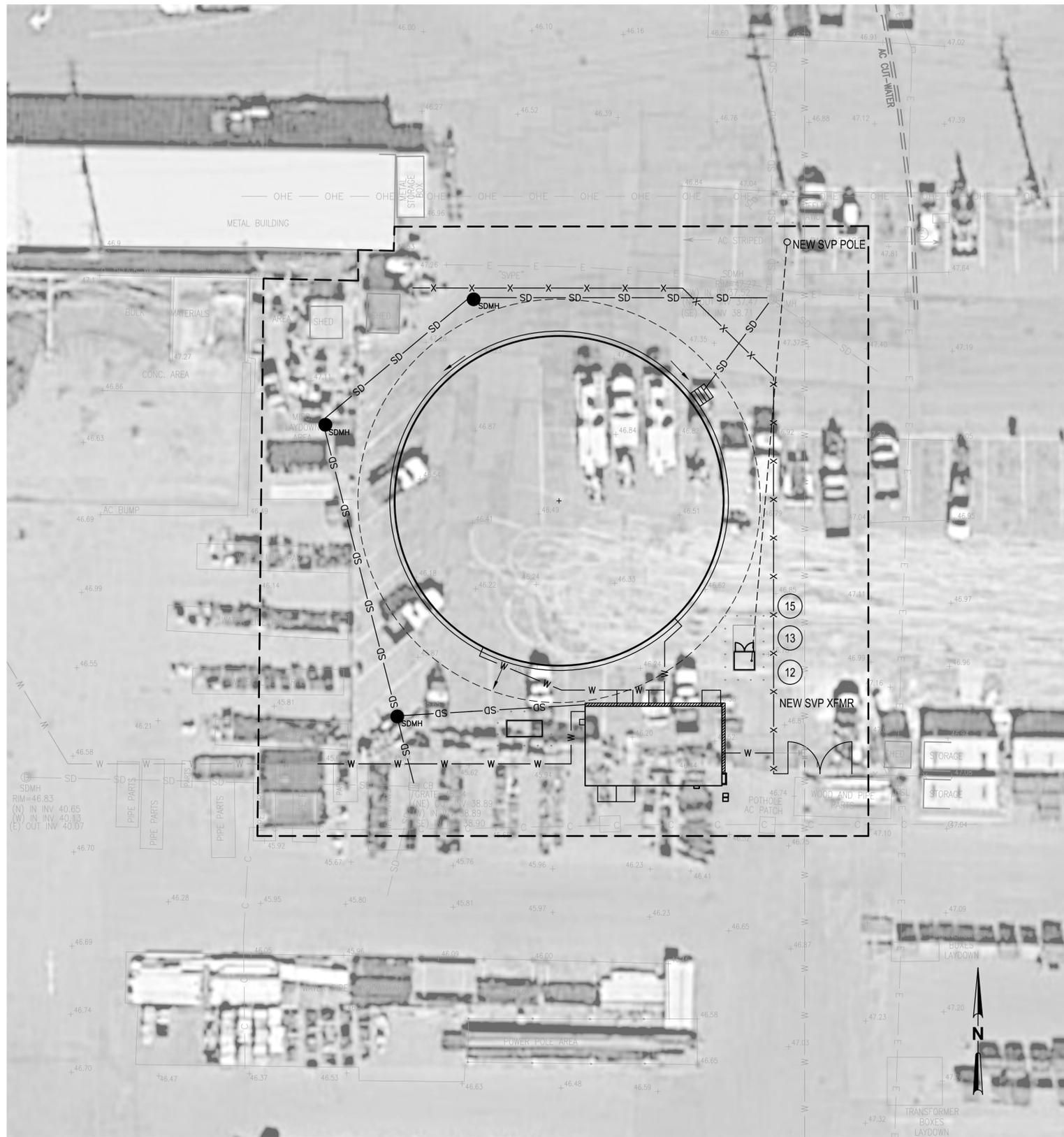


DATE	REVISION	BY

CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
 ELECTRICAL ENERGY COMPLIANCE - 3

APPROVED _____ DATE _____
 DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO. 592-1423-80300-7054-30236	
DESIGNED BY: NW	DRAWN BY: NW
CHECKED BY: SD	YEAR: 2014
DATE: DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO. E-703	SHT. 51 OF 60
HORIZ. NOTED	VERT. -
DWG. NO. W-3200-4	

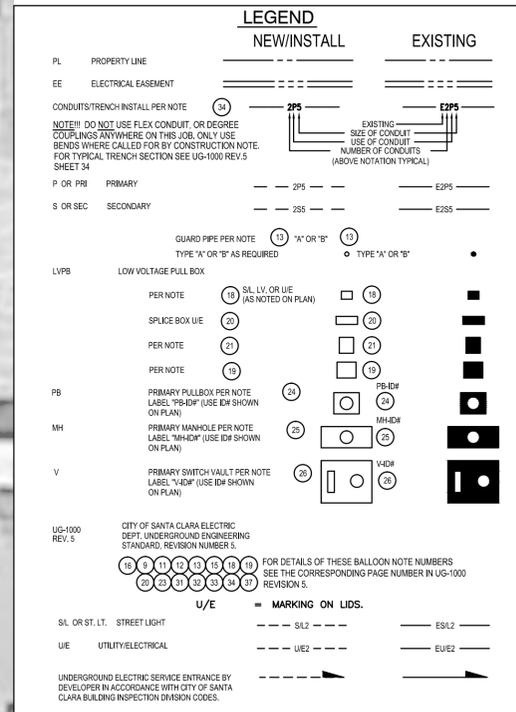


MAIN DETAIL
SCALE: 1" = 20'

GENERAL NOTES:

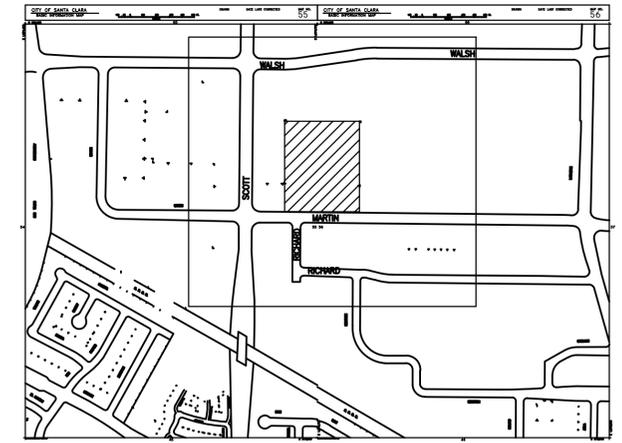
ALL CONDITIONS ON THIS DRAWING MUST BE MET PRIOR TO PERMANENT ELECTRICAL SERVICE.

- X INDICATES NOTE IS REQUIRED FOR THIS JOB.
- X SERVICE VOLTAGE SHALL BE 480/277 V, 3 W 3 Ø.
- X AVAILABLE SHORT CIRCUIT AT THE DISTRIBUTION TRANSFORMER (SECONDARY) IS 11,350 AMPS SYMMETRICAL.
- X ALL METERS (PER BLDG.) MUST BE GROUPED AND ACCESSIBLE TO TENANTS AND THE UTILITY AT ALL TIMES.
- X METER ENCLOSURES SHALL MEET METER CABINET ENCLOSURE CLEARANCES PER CITY OF SANTA CLARA ELECTRIC DEPARTMENT DWG. MS-G6 AND G7, REV. 0.
- X ELECTRIC METER(S) AND MAIN SERVICE DISCONNECT(S) SHALL BE LOCATED OUTSIDE OF BUILDING OR IN A UTILITY ROOM DIRECTLY ACCESSIBLE FROM THE OUTSIDE. THE CITY SHALL HAVE IMMEDIATE AND UNHINDERED ACCESS TO THIS EQUIPMENT AT ALL TIMES WITHOUT NOTICE.
- X SWITCHBOARD MANUFACTURER SHALL SUBMIT SWITCHBOARD DRAWINGS, IN TRIPPLICATE, FOR REVIEW PRIOR TO MANUFACTURE, TO SILICON VALLEY POWER, 1500 WARBURTON AVE., SANTA CLARA, CA 95050.
- X CUSTOMER TO FILL OUT LOAD SURVEY FORM (COPY ATTACHED) WITH COMPLETE LOAD BREAKDOWNS, SERVICE DATE, SIZE AND NUMBER OF SERVICE ENTRANCE CONDUCTORS (PER BLDG.). RETURN TO ELECTRIC DEPARTMENT ADDRESS ABOVE.
- X PROVIDE 1-1/2" CONDUIT FROM UTILITY METER COMPARTMENT TO MPOE PHONE BOARD COORDINATE WITH METER SHOP FOREMAN DAN RYKER AT (408) 615-5626
- X ELECTRICAL PERMITS FOR SERVICE ENTRANCE AND OTHER PRIVATE ELECTRICAL WORK SHALL BE OBTAINED FROM THE CITY PERMIT CENTER PRIOR TO START OF WORK OR PROVIDE LETTER FROM INSPECTING AUTHORITY TO CITY INDICATING ELECTRICAL INSPECTION IS COMPLETE.
- X ELECTRICAL EASEMENTS ARE REQUIRED AND MUST BE SIGNED PRIOR TO CONNECTING PERMANENT SERVICE. DOCUMENTS TO FOLLOW. NO TREES MAY BE PLANTED IN UG EASEMENT AREAS.
- X DEVELOPER SHALL FURNISH AND INSTALL ALL MATERIAL ON-SITE AND OFF-SITE IN ACCORDANCE WITH THIS DRAWING AND SILICON VALLEY POWER STANDARD U.G. 1000, REV. #5.
- X PROVIDE REDWOOD HEADERS OR CONFORM LANDSCAPE MOUNDS TO AVOID COVERING ELECTRICAL PULL BOXES AND VAULTS. TREES SHALL BE A MINIMUM OF 5'-0" FROM CENTER LINE OF TRENCH.
- X FOR OVERHEAD ELECTRIC SERVICE REQUIREMENTS SEE CITY OF SANTA CLARA ELECTRIC DEPARTMENT STANDARD 04-550 REVISION 5.
- X SEE U.G. 1000, REV. #5, SHEETS 3 & 4 FOR WORK REQUIREMENTS. LABEL PHASE AND NEUTRAL ON SERVICE ENTRANCE CONDUCTORS. FOR MULTI-BLDG. SITE, IDENTIFY AS TO BLDG. SERVED. SILICON VALLEY POWER ELECTRIC CREWS WILL MAKE ALL CONNECTIONS TO UTILITY SYSTEM.
- X SEE U.G. 1000, REV. #5, SHEET 9 FOR UTILITY FIELD INSPECTIONS. CALL (408) 615-5600.
- X FOR ALL WORK IN THE PUBLIC RIGHT-OF-WAY OBTAIN REQUIRED STREET OPENING PERMIT FROM THE CITY PERMIT CENTER. TREES SHALL BE A MINIMUM OF 5'-0" FROM CENTERLINE OF TRENCH.
- X PRIOR TO ANY EXCAVATION CALL U.S.A. UNDERGROUND SERVICE ALERT (800) 227-2600
- X COORDINATE WORK WITH LINE MAINTENANCE AND CONSTRUCTION DIVISION (408) 615-5600.
- X CAUTION!!! - ENERGIZED HIGH VOLTAGE CABLE(S).



CONSTRUCTION NOTES:

- 1 CUSTOMER TO CONSTRUCT NEW XMFR PAD.
- 2 ROUTE 2P5 TO BASE OF NEW UTILITY POLE



IN ORDER TO CONSTRUCT WORK SHOWN ON THIS DRAWING YOU MUST HAVE A VALID BUILDING PERMIT AND START CONSTRUCTION WITHIN 6 MONTHS OF DATE OF APPROVAL OF THIS DRAWING. FOR AN EXTENSION OF TIME PLEASE CONTACT S.V.P. AT (408) 261-5292.

PRELIMINARY

FOR REFERENCE ONLY

DEVELOPER'S WORK

REVISION	DATE	APPROVED
DESIGNED BY:	MAV	DRAWN BY: M.VITARELLI
APPROVED BY:		SCALE: 1:20 DATE: 11/14
		MAP # 55 SHT 1 OF 1
		DRAWING NUMBER 33652 REV 0

CITY OF SANTA CLARA

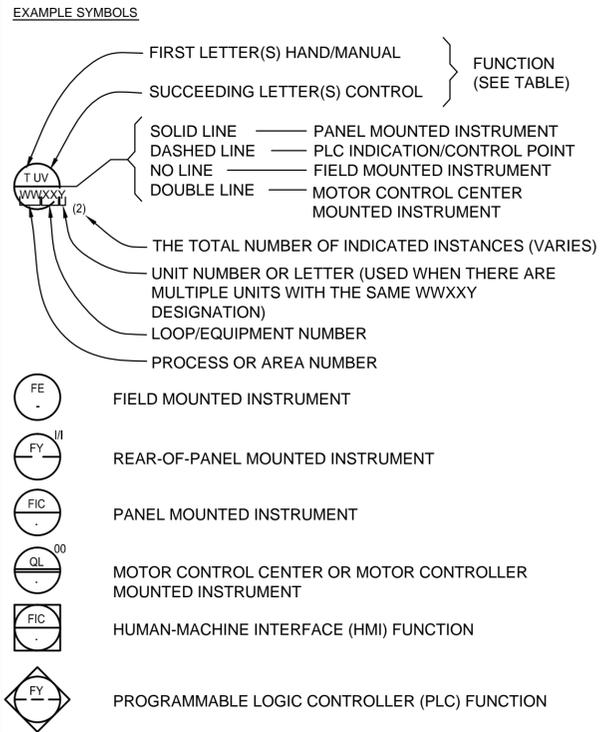
PROJ. NO. 592-1423-80300-7054-30236	DESIGNED BY: NW	DRAWN BY: NW
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION	CHECKED BY: SD	YEAR: 2014
1651 MARTIN AVENUE SVP SITE PLAN	DATE: DEC 2014	BLK. BK. PG. 55 AND 56
APPROVED: _____ DATE: _____	DRAWING NO. E-801	SHT. 54 OF 60
DIRECTOR OF WATER & SEWER UTILITIES	HORIZ. NOTED	VERT. -
	DWG. NO. W-3200-4	

GHD Inc.
1735 North First Street Suite 301 San Jose California 95112 USA
T 1 408 451 9615 F 1 408 451 9665
W www.ghd.com

DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
SVP SITE PLAN

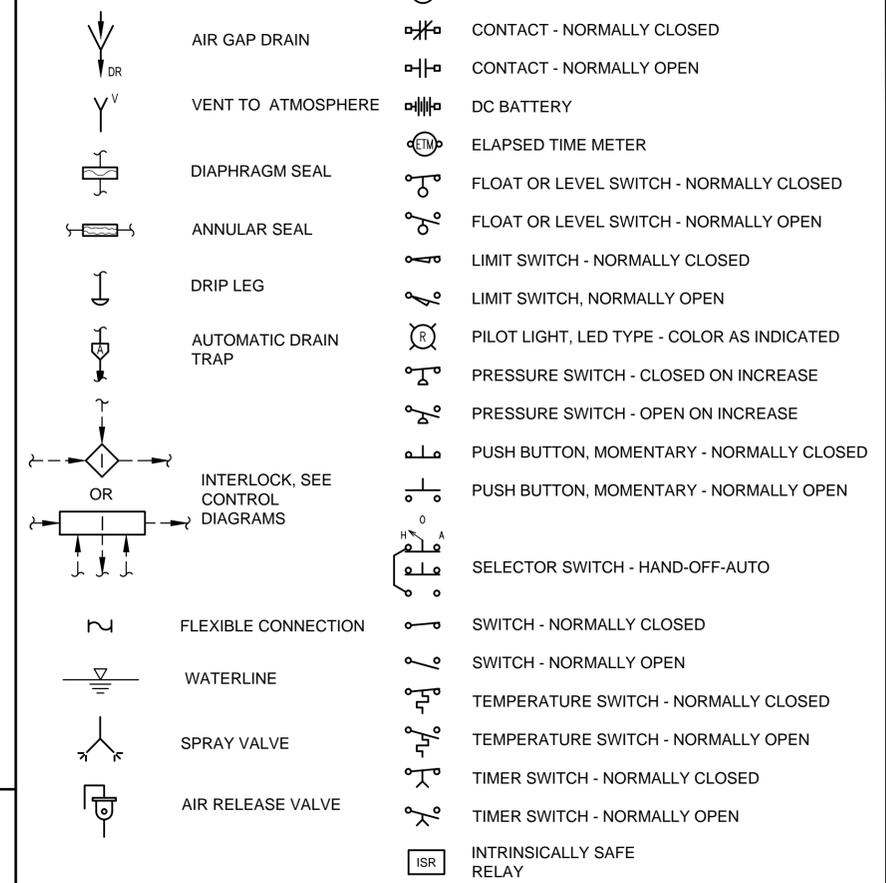
INSTRUMENTATION IDENTIFICATION



INSTRUMENT SOCIETY OF AMERICA TABLE

	FIRST LETTER(S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME		USERS CHOICE(*)	USERS CHOICE(*)	USERS CHOICE(*)
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL		DAMPER	
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	USERS CHOICE(*)		GLASS, GAUGE		
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE	RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE, INTERMEDIATE
N	USERS CHOICE(*)		USERS CHOICE(*)	USERS CHOICE(*)	USERS CHOICE(*)
O	USERS CHOICE(*)		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT(*)	INTEGRATE			
R	RADIATION		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE(*)		MULTIFUNCTION(*)	MULTIFUNCTION(*)	MULTIFUNCTION(*)
V	VIBRATION			VALVE	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED(*)		UNCLASSIFIED(*)	UNCLASSIFIED(*)	UNCLASSIFIED(*)
Y	EVENT, STATE OR PRESENSE			RELAY OR COMPUTE(*)	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

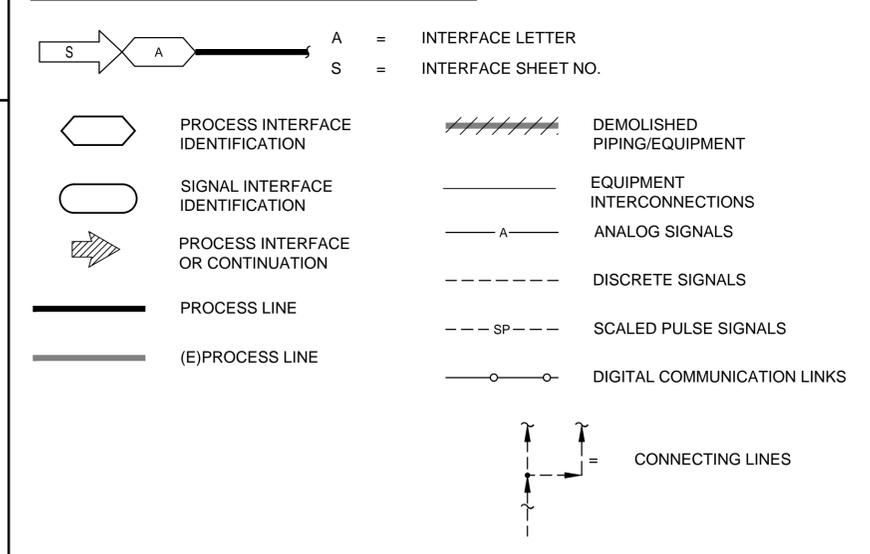
MISCELLANEOUS SYMBOLS



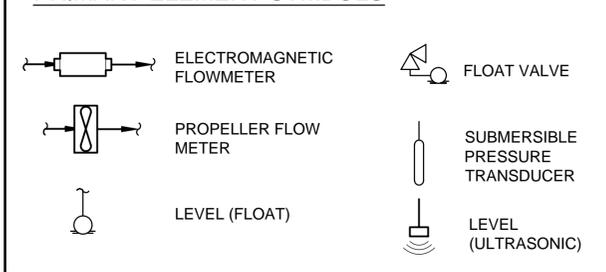
GATE SYMBOLS



INTERFACE SYMBOLS & LINE LEGEND



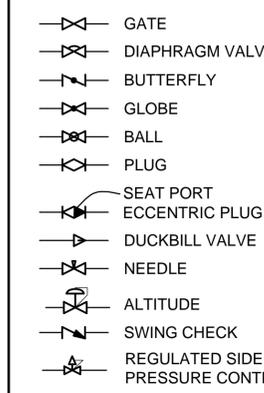
PRIMARY ELEMENT SYMBOLS



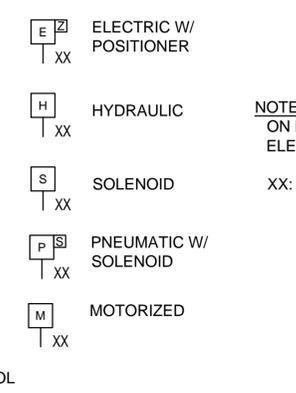
FLOW STREAM IDENTIFICATION

LEGEND	SERVICE
3W	3 WATER
AHHP	AIR HIGH-HIGH PRESSURE
AHP	AIR HIGH PRESSURE
BYP	BYPASS
CL2	SODIUM HYPOCHLORITE
CLWR	COOLING WATER RETURN
CLWS	COOLING WATER SUPPLY
D	DRAIN
FE	FINAL EFFLUENT
FL	FLUSH
FLTE	FILTER EFFLUENT
FLTI	FILTER INFLUENT
INF	PRIMARY INFLUENT
IW	INJECTION WATER
ML	MIXED LIQUOR
OF	OVERFLOW
PA	PROCESS AIR
PT	PROCESS TUBING
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RW	RECYCLED WATER
SA	SAMPLE
SCE	SECONDARY CLARIFIED EFFLUENT
SE	SECONDARY EFFLUENT
SFE	SAMPLE FINAL EFFLUENT
SL	SLUDGE
SHS	SODIUM HYDROCHLORIDE SOLUTION
SPD	SUMP PUMP DISCHARGE
SS	SANITARY SEWER
UW	UTILITY WATER
V	VENT
WAS	WASTE ACTIVATED SLUDGE

VALVE SYMBOLS



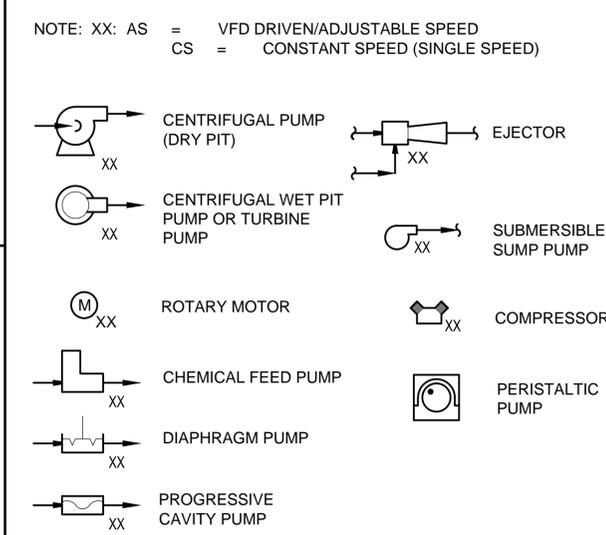
ACTUATOR SYMBOLS



NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC)

XX: FO = FAIL OPEN
FC = FAIL CLOSED
FLP = FAIL TO LAST POSITION

EQUIPMENT SYMBOLS



ABBREVIATIONS

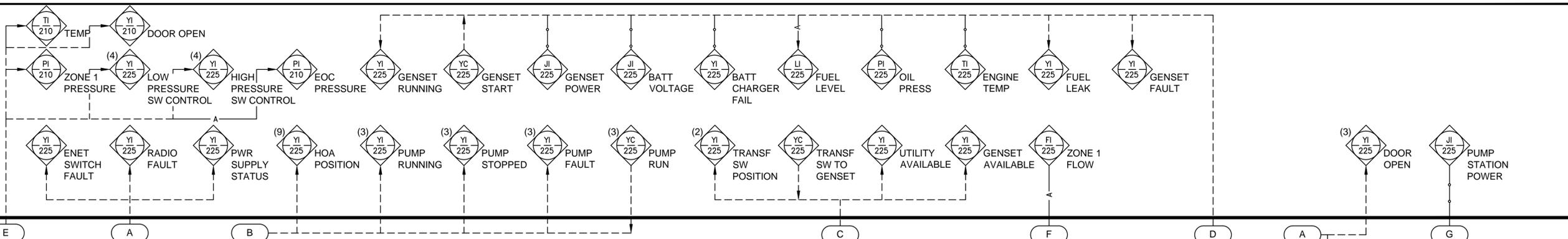
(E)	EXISTING
(N)	NEW
(R)	REMOVE AND REPLACE
ACK	ACKNOWLEDGE
AFD	ADJUSTABLE FREQUENCY DRIVE
CS	CONSTANT SPEED
CP	CONTROL PANEL
CR	CONTROL RELAY
DC	DIRECT CURRENT
EF	EXHAUST FAN
HMI	HUMAN-MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
ISR	INTRINSICALLY SAFE RELAY
LCP	LOCAL CONTROL PANEL
LOR	LOCAL-OFF-REMOTE
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MPU	MOTOR PROTECTION UNIT
OC	OPEN-CLOSE (D)
OCA	OPEN-CLOSE-AUTO
OSC	OPEN-STOP-CLOSE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PRV	PRESSURE RELIEF VALVE
PP	PROCESS PIPING
PT	PROCESS TUBING
PWR	POWER
R	REMOVE/RELOCATE
SS	START-STOP
SSRVS	SOLID STATE REDUCED VOLTAGE STARTER
STA	STATION
TBR	TO BE REMOVED
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
UV	UNDER VOLTAGE
VIB	VIBRATION

**FOR REFERENCE ONLY,
WORK PERFORMED BY
SCADA CONTRACT**

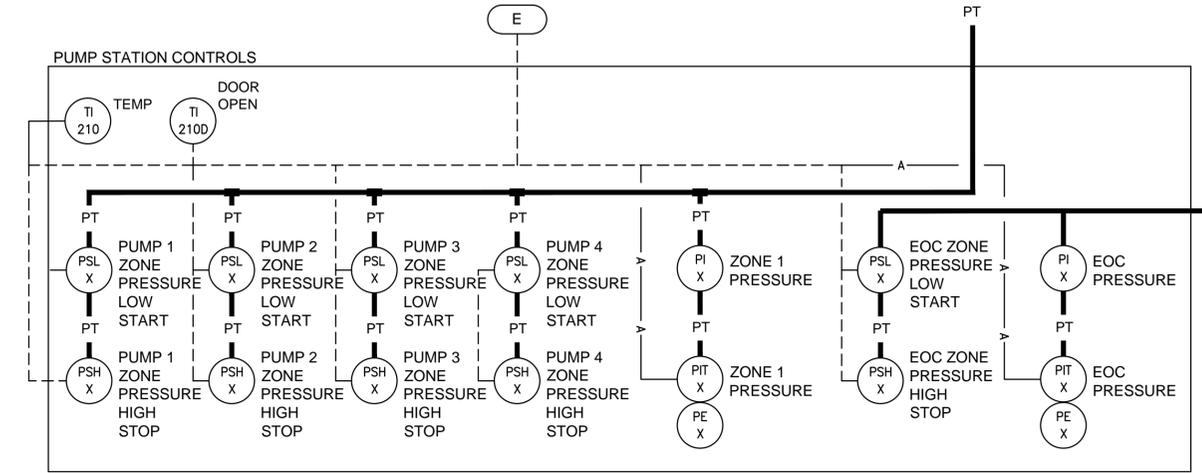
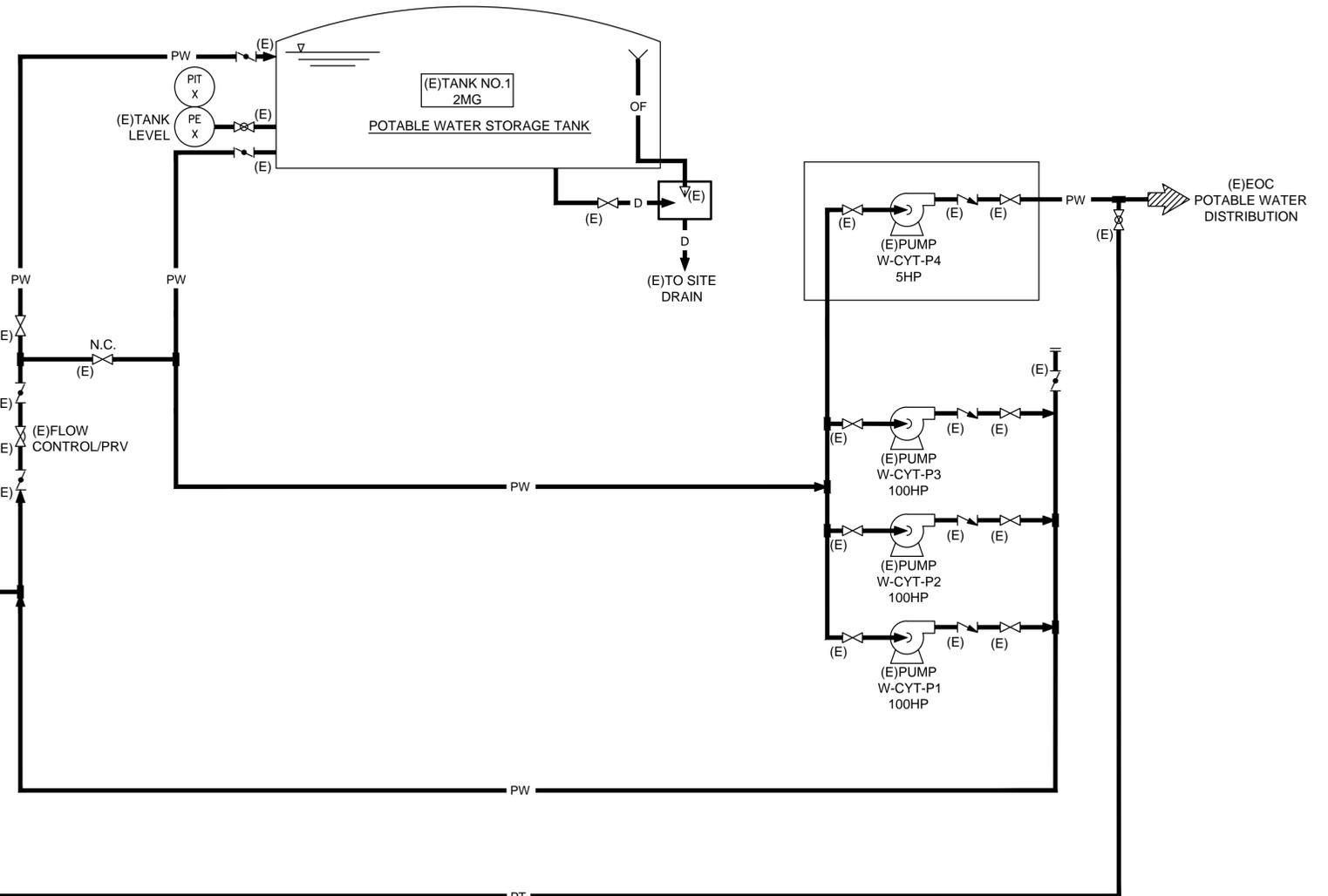
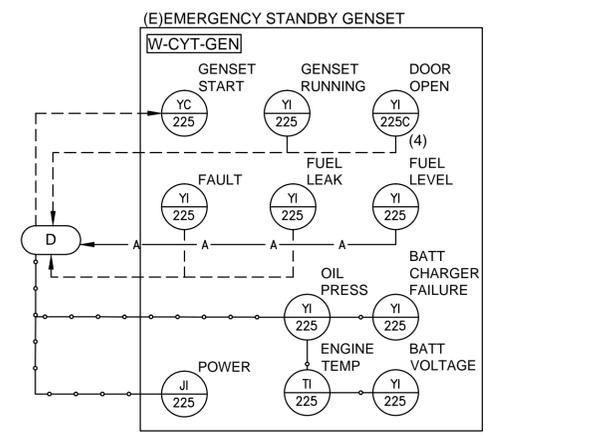
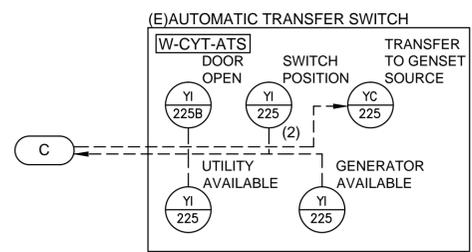
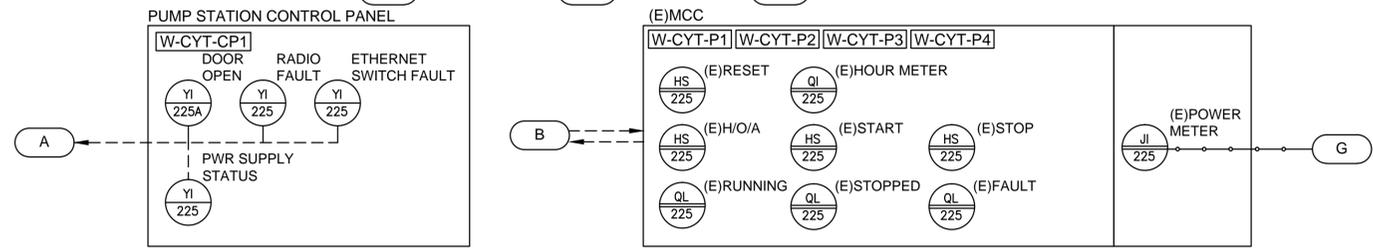


CITY OF SANTA CLARA		WATER & SEWER UTILITIES	
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION			
1651 MARTIN AVENUE			
INSTRUMENTATION LEGEND AND ABBREVIATIONS			
APPROVED	DATE	BY	DIRECTOR OF WATER & SEWER UTILITIES
DESIGNED BY	NW	DRAWN BY	NW
CHECKED BY	SD	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	E-802	SHT.	55 OF 60
HORIZ. NOTED	VERT. -	DWG. NO.	W-3200-4

- HMI DISPLAY REQUIREMENTS:**
1. DISPLAY ALL SITE DISCRETE, ANALOG AND NETWORK VALUES AT ASSOCIATED SITES AND CENTRAL HMI WORKSTATIONS.
 2. PROVIDE FOR SETPOINT ADJUSTMENTS AND CONTROL FROM ASSOCIATED SITES AND CENTRAL HMI LOCATIONS.
 3. ASSOCIATED HMI LOCATIONS:
W-DTT-HMI, W-NST-HMI, W-CYT-HMI.

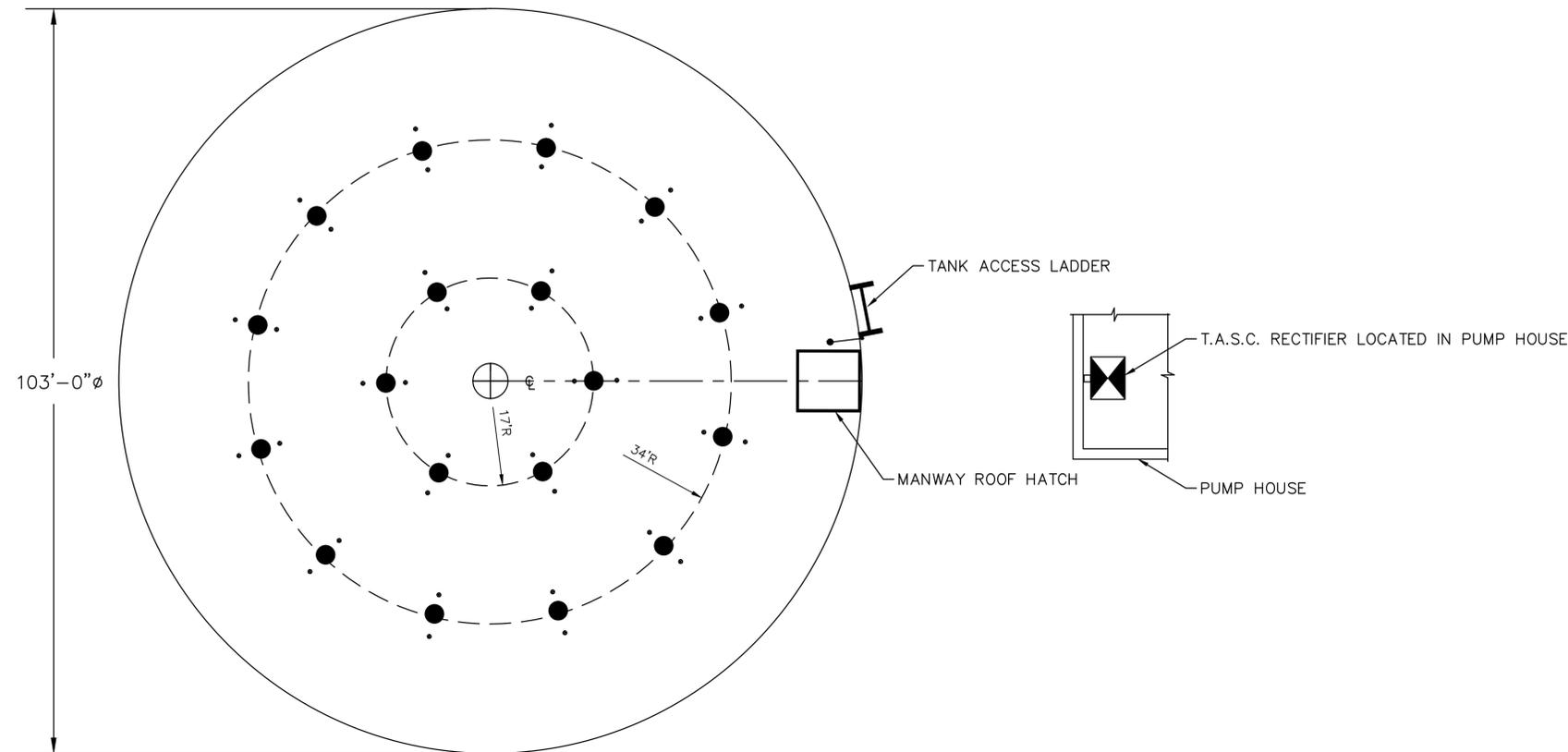


W-CYT-PLC

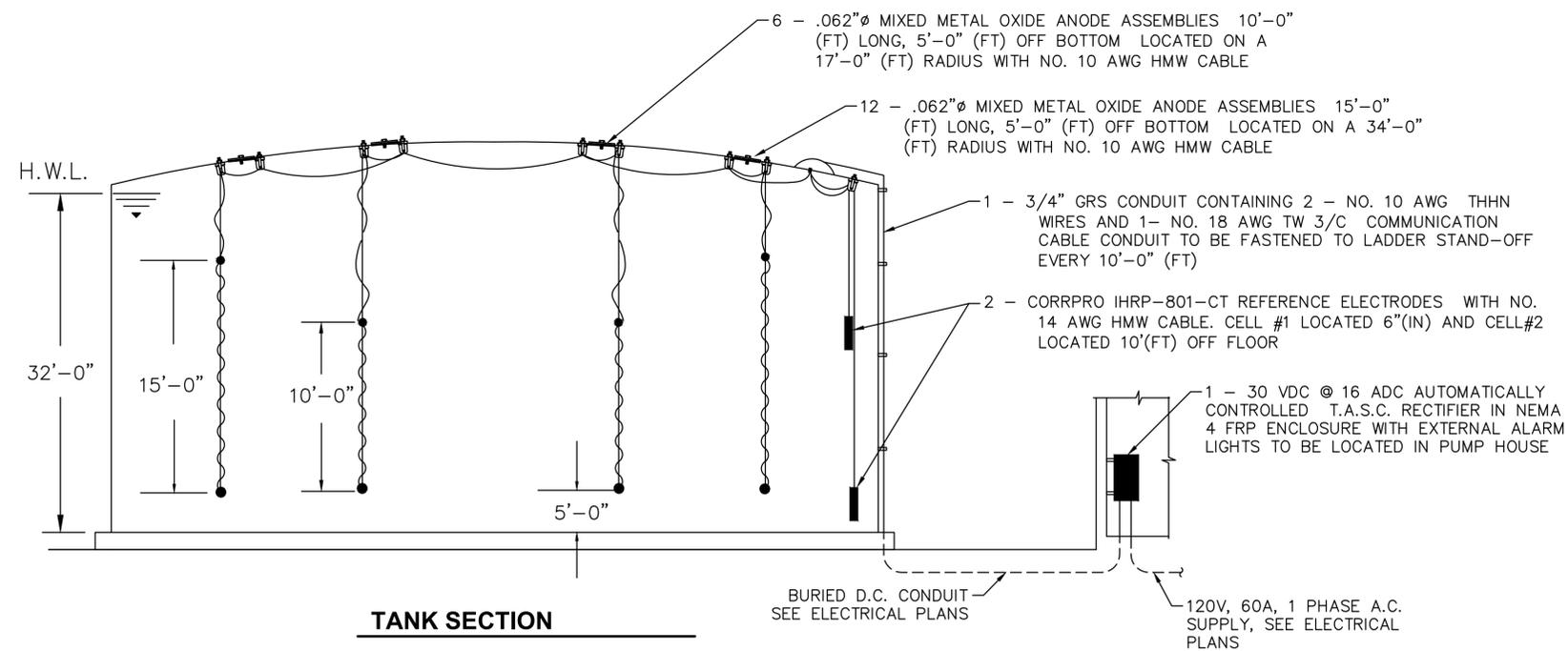


**FOR REFERENCE ONLY,
WORK PERFORMED BY
SCADA CONTRACT**

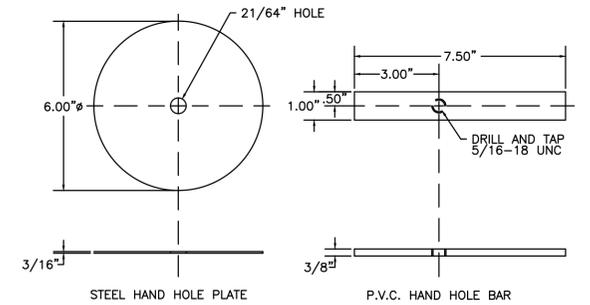
<p>GHD Inc. 1735 North First Street Suite 301 San Jose California 95112 USA T 1 408 451 9615 F 1 408 451 9665 W www.ghd.com</p>	<p>CITY OF SANTA CLARA WATER & SEWER UTILITIES CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE CORP. YARD BOOSTER PUMP STATION & TANK P&ID</p>			<p>PROJ. NO. 592-1423-80300-7054-30236</p>	
	<p>DATE</p>	<p>REVISION</p>	<p>BY</p>	<p>APPROVED</p>	<p>DATE</p>
			<p>DESIGNED BY NW</p>	<p>DRAWN BY NW</p>	
			<p>CHECKED BY SD</p>	<p>YEAR 2014</p>	
			<p>DATE DEC 2014</p>	<p>BLK. BK. PG. 55 AND 56</p>	
			<p>DRAWING NO. E-804</p>	<p>SHT. 57 OF 60</p>	
			<p>HORIZ. NOTED</p>	<p>VERT. -</p>	<p>DWG. NO. W-3200-4</p>



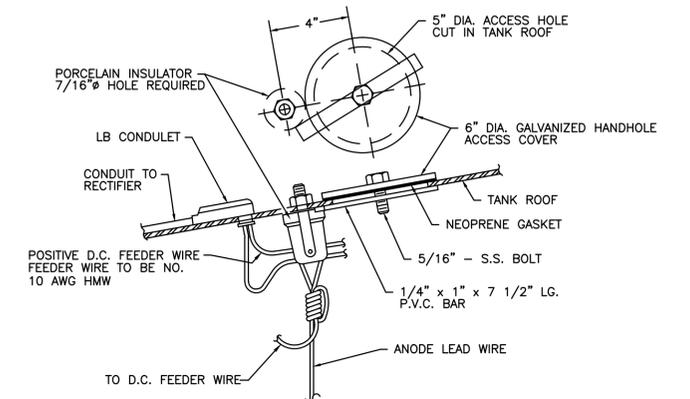
TANK ROOF PLAN



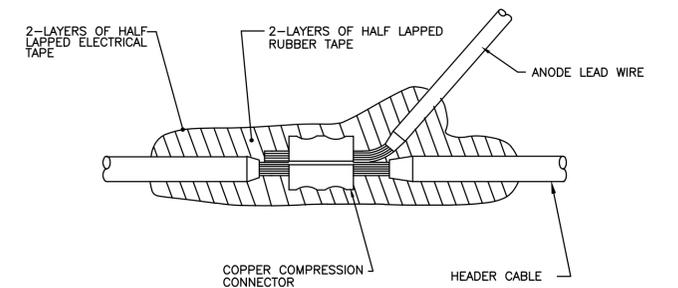
TANK SECTION



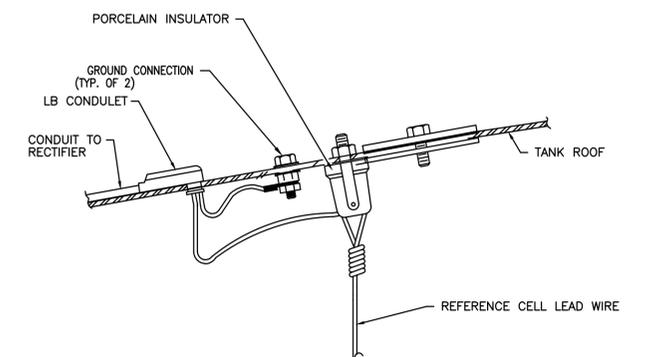
HANDHOLE COVER DETAIL



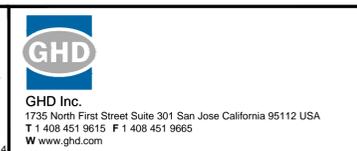
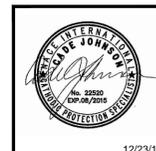
SUSPENSION DETAIL



SPICE DETAIL



GROUNDING DETAIL

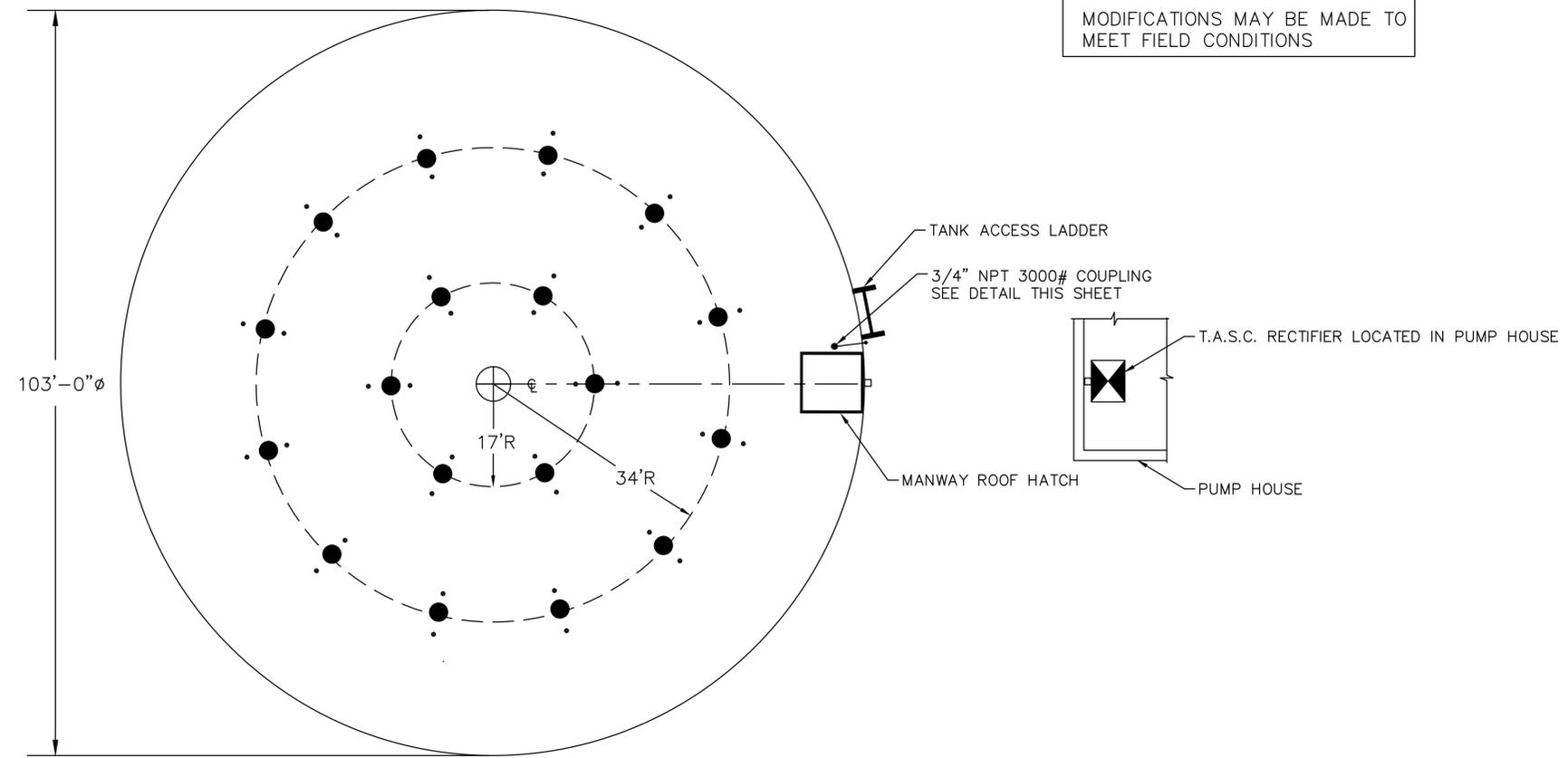


DATE	REVISION	BY

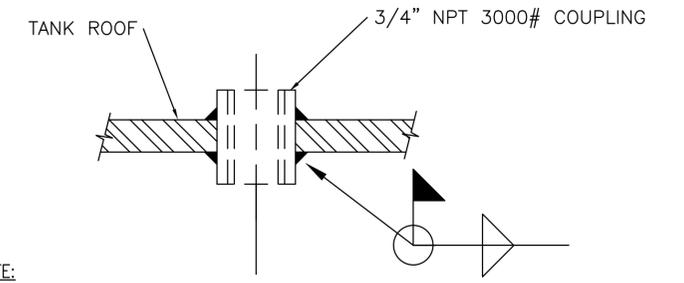
CITY OF SANTA CLARA
 WATER & SEWER UTILITIES
 CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
 1651 MARTIN AVENUE
CATHODIC PROTECTION DETAILS 1

PROJ. NO.	592-1423-80300-7054-30236	
DESIGNED BY	CORRPRO	DRAWN BY CORRPRO
CHECKED BY	CORRPRO	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	CP-501	SHT. 58 OF 60
HORIZ. NO SCALE	VERT. -	DWG. NO. W-3200-4

MODIFICATIONS MAY BE MADE TO MEET FIELD CONDITIONS

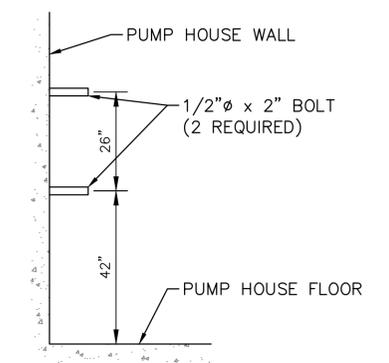


TANK ROOF PLAN



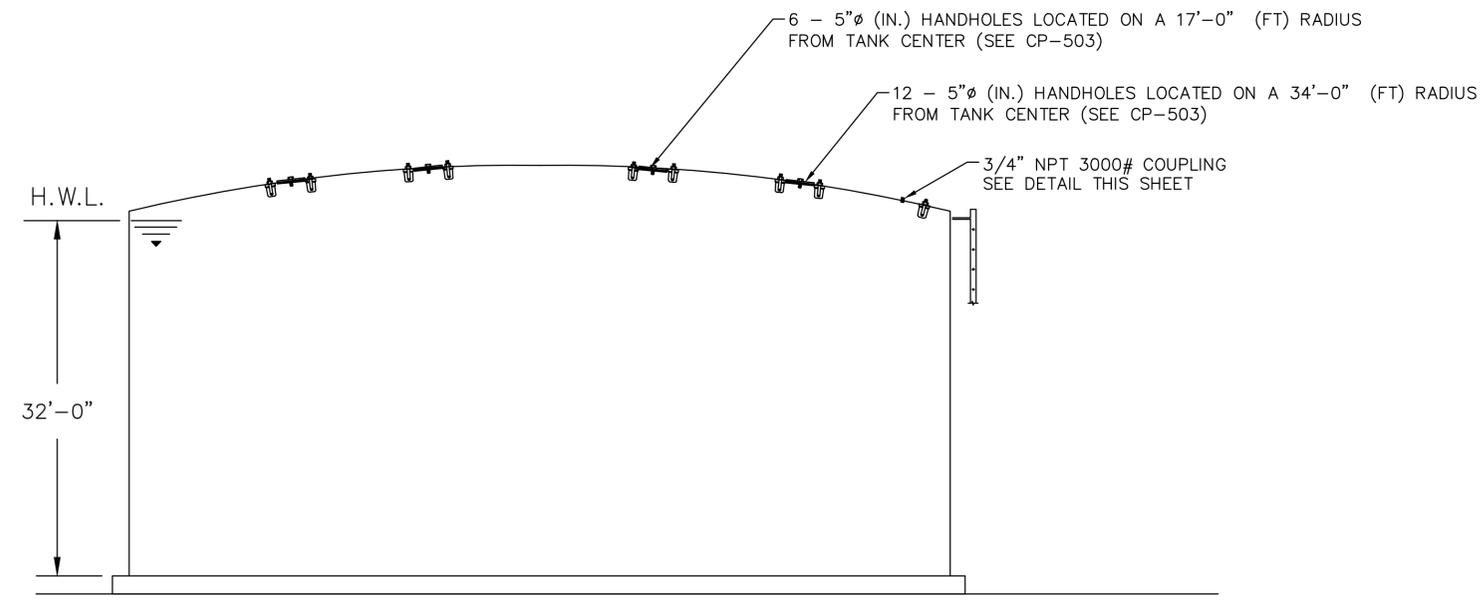
NOTE:
1. COUPLING TO BE LOCATED WITHIN 18"(IN) OF ROOF HATCH AND NEAR KNUCKLE, AND ABOVE HIGH WATER LEVEL.

COUPLING DETAIL

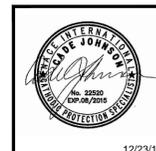


NOTE:
1. RECTIFIER TO BE INSTALLED ON PUMP HOUSE WALL IN LOCATION AS SHOWN ON THE PLANS. ORIENTATION AS REQUIRED FOR INCOMING AC POWER TO THE RECTIFIER UNIT. BOLTS SHALL BE SUITABLE FOR APPLICATION AND SUBSTRATE AND SHALL BE INSTALLED AT HEIGHT SHOWN IN DETAIL AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

RECTIFIER MOUNTING BOLTS DETAIL



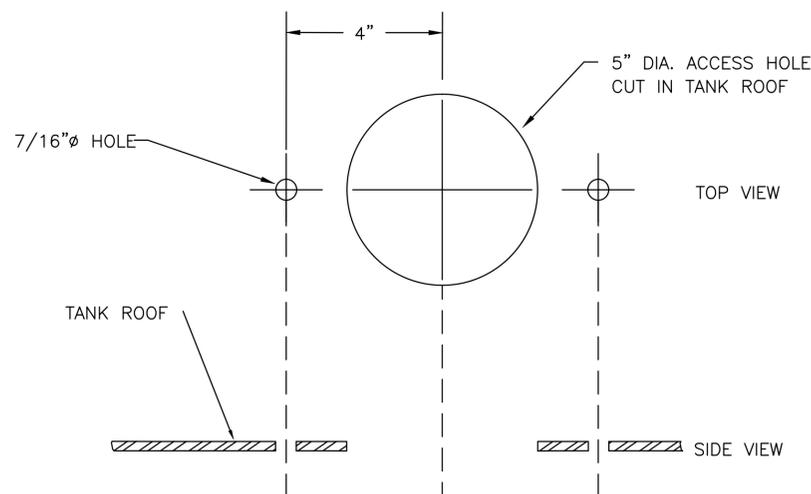
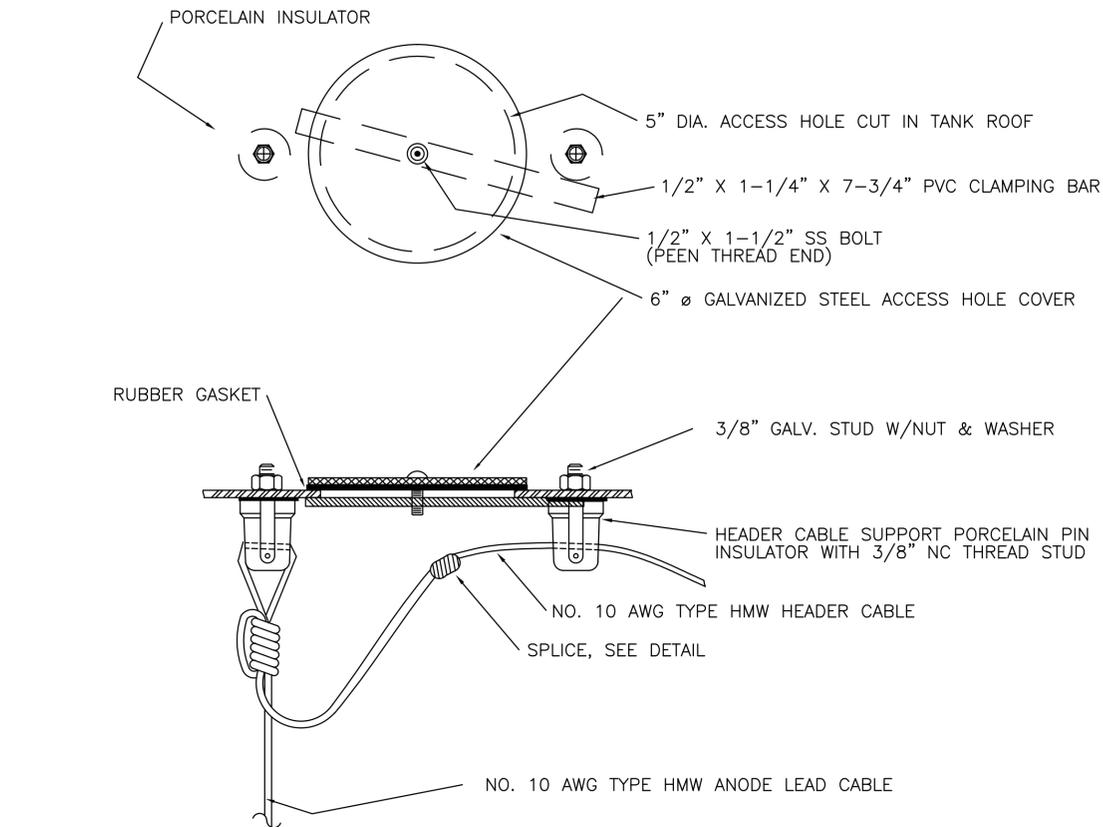
TANK SECTION



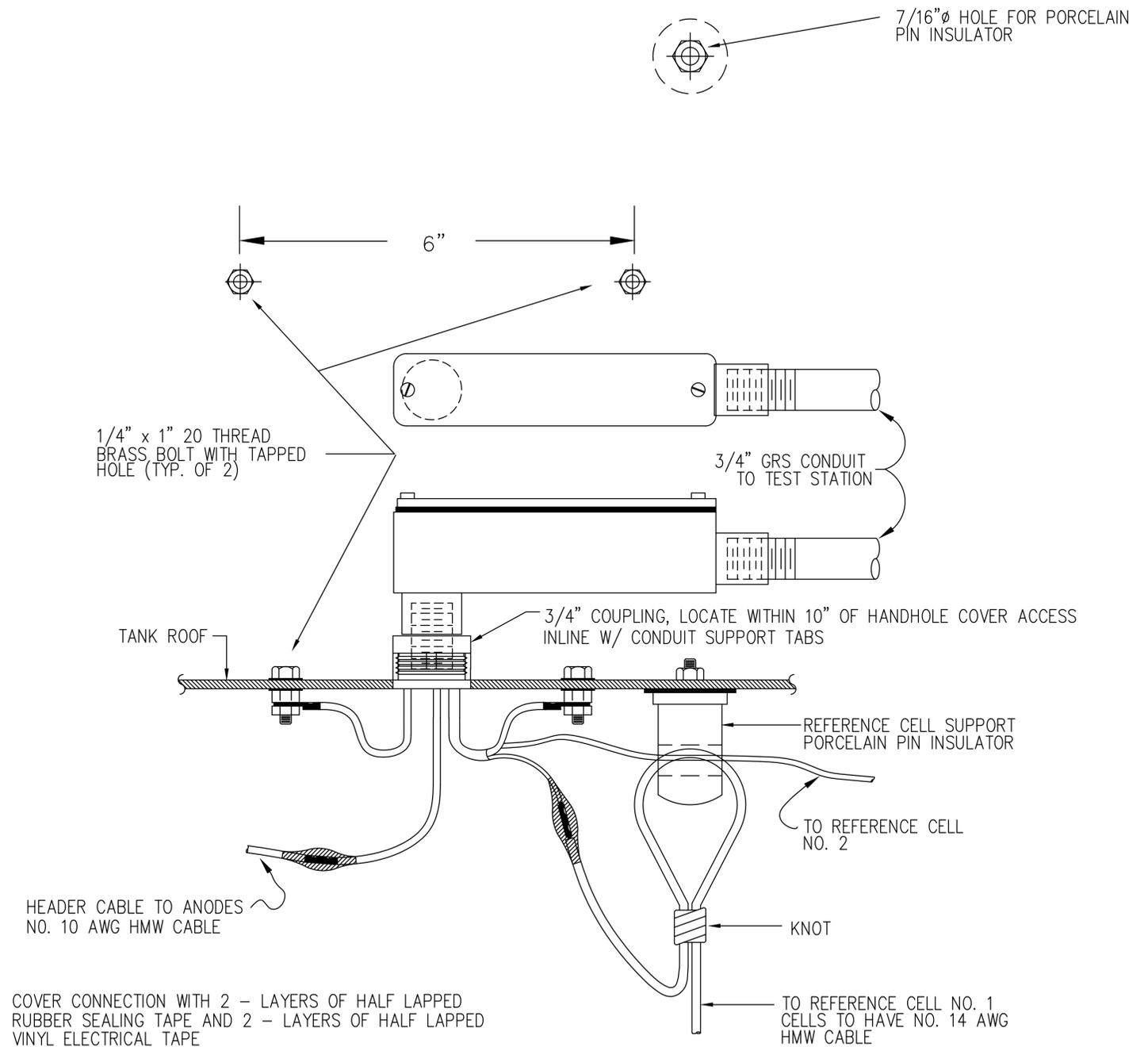
DATE	REVISION	BY

CITY OF SANTA CLARA WATER & SEWER UTILITIES		
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION 1651 MARTIN AVENUE CATHODIC PROTECTION DETAILS 2		
APPROVED	DATE	BY
DIRECTOR OF WATER & SEWER UTILITIES		

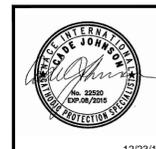
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DESIGNED BY	CORRPRO	DRAWN BY CORRPRO
CHECKED BY	CORRPRO	YEAR 2014
DATE	DEC 2014	BLK. BK. PG. 55 AND 56
DRAWING NO.	CP-502	SHT. 59 OF 60
HORIZ. NO SCALE	VERT. -	DWG. NO. W-3200-4



ANODE HANDHOLE DETAIL



CONDUIT PENETRATION DETAIL



GHD Inc.
1735 North First Street Suite 301 San Jose California 95112 USA
T 1 408 451 9615 F 1 408 451 9665
W www.ghd.com

12/23/14

DATE	REVISION	BY

CITY OF SANTA CLARA
WATER & SEWER UTILITIES
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
1651 MARTIN AVENUE
CATHODIC PROTECTION DETAILS 3

APPROVED _____ DATE _____
DIRECTOR OF WATER & SEWER UTILITIES

PROJ. NO. 592-1423-80300-7054-30236

DESIGNED BY	CORRPRO	DRAWN BY	CORRPRO
CHECKED BY	CORRPRO	YEAR	2014
DATE	DEC 2014	BLK. BK. PG.	55 AND 56
DRAWING NO.	CP-503	SHT.	60 OF 60
HORIZ. NO SCALE	VERT. -	DWG. NO.	W-3200-4

CITY OF SANTA CLARA
WATER AND SEWER UTILITIES



PROJECT MANUAL
FOR
CONSTRUCTION OF
CORPORATION YARD WATER STORAGE TANK AND PUMP
STATION
IN
CITY OF SANTA CLARA, CALIFORNIA

CITY PROJECT NO.	<u>WA 30236</u>
TRACING NO.	<u>W-3200-4</u>
BID OPENING DATE:	<u>March 4, 2015</u>

DOCUMENT 00001

TITLE PAGE

CITY OF SANTA CLARA, CALIFORNIA

**1500 WARBURTON AVENUE
SANTA CLARA, CALIFORNIA 95050**

PROJECT MANUAL

FOR THE

CONSTRUCTION OF

**CORPORATION YARD WATER STORAGE TANK
AND PUMP STATION PROJECT**

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Note: For the purpose of assisting users of the Technical Provisions in making cross-references to the Caltrans Standard Specifications when necessary, the City has maintained a degree of consistency and continuity in the numbering system of the Technical Provisions. The numbering sequence for the Technical Provisions is intended to include the corresponding Caltrans Standard Specifications Section numbers as the last two digits in each respective Section number of the Technical Provisions.

<u>DIVISION</u>	<u>SECTION</u>	<u>TITLE</u>
2		TECHNICAL PROVISIONS
	02005	Trench and Excavation Safety
	02007	Storm Water Pollution Prevention
	02010	Site Conditions and Dust Control
	02016	Clearing and Grubbing
	02019SP	Earthwork
	02020	Landscaping and Irrigation
	02024	Lime Stabilization
	02026	Aggregate Base
	02027	Cement Stabilization
	02037	Bituminous Seals
	02039	Asphaltic Concrete Pavement, Resurfacing, and Berms
	02040	Portland Cement Concrete Pavement
	02050	Demolition
	02051	Contaminated Materials
	02062	Furnishing and Installing Pipe
	02070	Storm and Sanitary Sewer Manholes, Drainage Structures, and Miscellaneous Structures
	02071	Water Mains and Services
	02071SP	Water Mains and Services
	02073	Portland Cement Concrete Curb, Gutter, Sidewalk, Walkway, Curb Ramp, and Driveway
	02083	Redwood Headers and Barricades
	02084	Traffic Stripes, Pavement Marking, and Pavement Markers
	02086	Signals, Lighting, and Electrical Systems
	02100	Site Preparation
	02140	Dewatering
	02620	Water Storage Tank Testing and Disinfection

<u>DIVISION</u>	<u>SECTION</u>	<u>TITLE</u>
		SPECIAL PROVISIONS
3		CONCRETE
	03200	Concrete Reinforcement
	03300	Cast-in-Place Concrete
5		METALS
	05090	Anchorage in Concrete
	05500	Miscellaneous Metals
7		THERMAL AND MOISTURE PROTECTION
	07714	Gutter and Downspouts

<u>DIVISION</u>	<u>SECTION</u>	<u>TITLE</u>
8		OPENINGS
	08333	Overhead Coiling Doors
	08410	Aluminum-Framed Entrances
	08620	Unit Skylights
	08710	Door Hardware
9		FINISHES
	09900	Paints and Coatings
	09910	Tank Painting
10		SPECIALITIES
	10210	Louvers
	10523	Fire Protection Specialties
11		EQUIPMENT
	11300	Vertical Turbine Pumps
	11350	Booster Packaged Pump Station
13		SPECIAL CONSTRUCTION
	13120	Precast Concrete Building
	13210	Welded Steel Tank and Appurtenances
	13400	Process Instrumentation
15		MECHANICAL
	15050	Common Work Results for Plumbing
	15051	Common Work Results for HVAC
	15060	Hangers and Supports for Plumbing Piping
	15080	Plumbing Insulation
	15100	Water Utility Fittings and Appurtenances
	15105	Pipes and Tubes for Plumbing Piping and Equipment
	15410	Plumbing Fixtures
	15480	Electric Domestic Water Heaters
	15800	HVAC Air Distribution
	15950	Testing, Adjusting, and Balancing for HVAC
16		ELECTRICAL
	16050	General Electrical Provisions
	16060	Basic Electrical Materials and Methods
	16075	Electrical Equipment Identification
	16123	600-Volt Rated Wire and Cable
	16130	Raceway and Boxes
	16140	Wiring Devices
	16210	Electric Utility Services
	16235	Engine-Generator Unit
	16265	600 Volt Rated Variable Frequency Drives
	16413	Enclosed Transfer Switch
	16441	Switchboard
	16442	600-Volt Rated Panel Boards and Circuit Breakers

<u>DIVISION</u>	<u>SECTION</u>	<u>TITLE</u>
-----------------	----------------	--------------

16443		Motor Control Center
16461		Dry Type Transformer
16500		Interior and Exterior Lighting
16640		Cathodic Protection System

APPENDIX A		City of Santa Clara Corporation Yard Water Tank Geotechnical Investigation, Project No. 138-6-1, by Cornerstone Earth Group, dated August 1, 2014
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END OF DOCUMENT

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DOCUMENT 00020

PROJECT TEAM

CITY

CITY OF SANTA CLARA

Christopher de Groot, Director of Water & Sewer Utilities

1500 Warburton Avenue
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Rashmi Ramachandra, Project Engineer – Water & Sewer Utilities

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GHD INC

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Email: pcunningham@cornerstoneearth.com

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Terry Wong

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Fax: 1+(707) 527-8679
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GHD INC

Shishir Doctor

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San Jose, CA 95112
Telephone: 1+(408) 451-9615
Fax: 1+(408) 451-9665
Email: Shishir.Doctor@ghd.com

CORROSION ENGINEER

Corrpro

Cade Johnson

6445 Marindustry Drive
San Diego, CA 92121
Telephone: 1+(858) 824-1992
Fax: 1+(858) 824-1998
Email: cjohnson@corrpro.com

END OF DOCUMENT

DOCUMENT 00030

SEALS

CITY OF SANTA CLARA

CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

WA 30236

TRACING NO. W-3200-4

CIVIL ENGINEER

GHD INC



Signature: *Nancy Pao-Hsiang Ku*
Nancy Ku

Date: **December 23, 2014**

CITY OF SANTA CLARA
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
WA 30236
TRACING NO. W-3200-4

STRUCTURAL ENGINEER

GHD INC



A handwritten signature in black ink, appearing to read "James Pan", written over a horizontal line.

Signature: _____
James Pan

Date: December 23, 2014

CITY OF SANTA CLARA
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
WA 30236
TRACING NO. W-3200-4

MECHANICAL ENGINEER

GHD INC



A handwritten signature in black ink, appearing to be "Terry Wong", written over a horizontal line.

Signature: _____

Date: December 23, 2014

CITY OF SANTA CLARA
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
WA 30236
TRACING NO. W-3200-4

ELECTRICAL ENGINEER
GHD INC




Signature: _____

Date: December 23, 2014

CITY OF SANTA CLARA
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
WA 30236
TRACING NO. W-3200-4

GEOTECHNICAL ENGINEER
CORNERSTONE EARTH GROUP



A handwritten signature in blue ink that reads "Paul N. Cunningham".

Signature: _____

Date: December 23, 2014

CITY OF SANTA CLARA
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
WA 30236
TRACING NO. W-3200-4

CORROSION ENGINEER
CORRPRO



Signature: _____

Date: December 23, 2014

END OF DOCUMENT

DOCUMENT 00040

LIST OF DRAWINGS

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DRAWINGS NO. W-3200-4

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SURVEY CONTROL, CONTRACTOR ACCESS AND STAGING PLAN	C-102
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END OF DOCUMENT

DOCUMENT 00100

NOTICE INVITING BIDS

1. **NOTICE.** The City of Santa Clara, California, a chartered California municipal corporation, ("City") hereby gives notice that it will accept bids for construction of the following public work:

**CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
INVITATION NO. WA-30236**

2. **BID SUBMISSION.** City will receive sealed Bids in the Office of the City Clerk, 1500 Warburton Avenue, Santa Clara, California 95050, until **3:00 p.m.**, as determined by the atomic clock above the help window of the City Clerk's Office and the City Clerk, on **Wednesday March 4, 2015**. Bids will be opened shortly thereafter on that same day. The opening will be in accordance with procedures set forth in Document 00250, Bid Contents, Evaluation, Selection, and Award.

3. **CONTACT INFORMATION.** Bidders may obtain further information from:

Project Engineer: Shilpa Mehta
Email: smehta@santaclaraca.gov
Telephone: 1+(408) 615-2011
Fax: 1+(408) 247-0784
Mailing address: City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

4. **STATEMENT OF QUALIFICATIONS.** Each Bidder shall be required to submit a Statement of Qualifications in accordance with Document 00200, Instructions to Bidders, and Document 00450, Statement of Qualifications for Construction Work.
5. **DESCRIPTION OF WORK.** The Work shall consist of 2.0 million gallon welded steel potable water storage tank construction, pre-fabricated precast concrete pump station building, three vertical turbine pumps, packaged booster pump system, emergency generator, cathodic protection, demolition and relocation of existing storm drain piping, installation of new piping and valves, driveway improvements, trench excavation and backfill, grading, paving, fencing, appurtenances, mechanical, and electrical and instrumentation. The Contractor shall submit the required deferred submittals as indicated in the plans and specifications and obtain the Building Permit. The City will waive the permit fee.
6. **CONTRACT TIME.** The Work shall reach Substantial Completion within two hundred seventy (270) Calendar Days from the date when the Contract Time commences to run. The Work shall reach Final Completion within three hundred (300) Calendar Days from the date when the Contract Time commences to run. See Document 00050, References and Definitions, for definitions of Substantial Completion and Final Completion.
7. **REQUIRED CONTRACTOR'S LICENSE(S).** A California **A** contractor's license is required to bid this contract. Joint ventures must secure a joint venture license prior to award of this Contract.
8. **PREVAILING WAGE LAWS.** The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents.

9. **INSTRUCTIONS.** Bidders shall refer to Document 00200, Instructions to Bidders, for required documents and items to be submitted in sealed envelopes for deposit into the Bid box, located at the City Clerk's office, and applicable times for submission.
10. **SUBSTITUTIONS OF SECURITIES.** City will permit the successful Bidder to substitute securities for retention monies withheld to ensure performance of Contract, as set forth in Document 00680, Escrow Agreement for Security Deposits in Lieu of Retention, in accordance with California Public Contract Code, Section 22300. By this reference, Document 00680, Escrow Agreement for Security Deposits in Lieu of Retention, is incorporated in full in this Document 00100, Notice Inviting Bids.
11. **PRE-BID CONFERENCE AND SITE VISIT.** City will conduct a Non-Mandatory Pre-Bid Conference and Site Visit at **10:00 a.m. on Tuesday February 17, 2015, at 1651 Martin Avenue, Santa Clara CA.** Bidders are strongly encouraged to attend the Pre-Bid Conference and Site Visit, which will last approximately 2 hours.
12. **BIDDING DOCUMENTS.** Bidders may examine Bidding Documents at the office of:

Prints Charles Reprographics, 1643 S. Main Street, Milpitas, CA 95035 and at www.printscharlesrepro.com (PLAN VAULT);
City of Santa Clara, Water Department, 1500 Warburton Avenue, Santa Clara, CA 95050;
Asian Inc., 1167 Mission Street, 4th Floor, San Francisco, CA 94103;
Builders Exchange of Alameda County, 3055 Alvarado Street, San Leandro, CA 94577;
Builders Exchange of Santa Clara County, 400 Reed Street, Santa Clara, CA 95050;
Central Coast Builders Association, 20 Quail Run Circle, Ste A, Salinas, CA 93907;
Contra Costa Builders Exchange, 2440 Stanwell Drive, Concord, CA 94520;
iSqFt, 4500 Lake Forest Drive, Cincinnati, OH 45242;
McGraw-Hill Construction Dodge, 4300 Beltway Place, Suite 180, Arlington, TX 76018 and at www.construction.com/projectcenter/;
Peninsula Builders Exchange, 735 Industrial Way, San Carlos, CA 94070;
Placer County Contractors Association, 10656 Industrial Ave., Ste 160, Roseville, CA 95678;
Reed Construction Data, 30 Technology Parkway South, Suite 100, Norcross, GA 30092;
Sacramento Builders Exchange, 1331 "T" Street, Sacramento, CA 95814;
Sacramento Builders Exchange, 151 N. Sunrise Avenue #511, Roseville, CA 95661;
San Francisco Builders Exchange, 850 South Van Ness Avenue, San Francisco, CA 94110;
Stockton Builders Exchange, 7500 Northwest Lane, Stockton, CA 95210.

13. **PROCUREMENT OF BIDDING DOCUMENTS.**

Bidding Documents may be viewed at no cost or purchased for a **NON-REFUNDABLE FEE of one hundred dollars (\$100.00)** via the internet at www.printscharlesrepro.com (PLAN VAULT). Bidding Documents may also be purchased by calling Prints Charles Reprographics at 1+(408) 240-3330. Please make checks payable to Prints Charles Reprographics **not** the City of Santa Clara. Bidders requesting that Bidding Documents be **mailed/shipped** to them will be charged the full costs of shipping. Bidding Documents and Plan Holder lists may also be viewed at the web site noted above.

Addenda, if any, will be provided free of charge to all registered plan holders, and to all Builders Exchanges listed above.

The successful bidder will be provided with up to five (5) complete sets of Plans and Specifications, for construction use, after the award of Contract. The successful bidder will be responsible for all costs for additional sets for its firm and its subcontractors, beyond those provided by the City.

- 14. **BID PREPARATION COST.** Bidders are solely responsible for the cost of preparing their Bids.
- 15. **RESERVATION OF RIGHTS.** City specifically reserves the right, in its sole discretion, to reject any or all Bids, or re-bid, or to waive inconsequential deviations from Bid requirements not involving time, price, or quality of the Work.

City of Santa Clara, Santa Clara, California.

By: _____ Date _____, 201__
ROD DIRIDON, JR.
City Clerk

END OF DOCUMENT

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DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

Bids are requested for a general construction contract, or work described in general, as follows:

**THE CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT
INVITATION NO. WA-30236**

1. **RECEIPT OF BIDS.** The City will only receive sealed Bids from Bidders at the Office of the City Clerk, 1500 Warburton Avenue, Santa Clara, CA 95050, on **Wednesday March 4, 2015**. City will receive Bids in two parts, "Envelope A" and "Envelope B", each containing the items described in Document 00250, Bid Contents, Evaluation, Selection, and Award. Envelope A and Envelope B shall be due by **3:00 p.m.**, as determined by the atomic clock above the help window of the City Clerk's Office and the City Clerk. City will reject all Bids received after the specified time and will return such Bids to Bidders unopened. Bidders must submit Bids in accordance with Document 00250, Bid Contents, Evaluation, Selection, and Award. Only Envelope A will be publicly opened, and the Bid amount read aloud immediately following the closing date and time.

2. **CONTACT INFORMATION.**

Project Engineer: Shilpa Mehta

Email: smehta@santaclaraca.gov

Telephone: 1+(408) 615-2011

Fax: 1+(408) 247-0784

Mailing address: City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

3. **BID SUBMISSION.** Each Bidder shall submit its Bid in two separate opaque sealed 10" x 13" envelopes containing forms listed in Document 00250, Bid Contents, Evaluation, Selection, and Award, and in the manner described in Document 00250. Each Bidder should mark its Bid envelopes as BID FOR THE CITY, CONTRACT NUMBER WA-30236, CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT, Envelope "A" or "Envelope B," as appropriate. Bids shall be deemed to include the written responses of the Bidder to any questions or requests for information of City made as part of Bid evaluation process after submission of Bid. Bidder's failure to submit all required documents strictly as required entitles City to reject the Bid as non-responsive.

4. **REQUIRED BID.** All Bidders must submit Bids on Document 00400, Bid. City may reject as non-responsive any Bid not submitted on the required forms. Bids must be full and complete. Bidders must complete all Bid items and supply all information required by Bidding Documents. City reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Bidders may not modify the Bid or qualify their Bids. Bidders must submit clearly and distinctly written Bids. Bidders must clearly make any changes in their Bids by crossing out original entries, entering new entries, and initialing new entries. City reserves the right to reject any Bid not clearly written.

5. **REQUIRED BID SECURITY.** Bidders must submit with their Bids either cash, a cashier's check, or certified check from a responsible bank in the United States, or corporate surety bond furnished by a surety authorized to do business in the State of California, of not less than ten percent of amount of Bid, payable to City. All Bidders choosing to submit a surety bond must submit it on Document 00411, Bidder's Bond. City will reject as non-responsive any Bid submitted without the necessary Bid security.

The City may retain Bid securities and Bid bonds of other than the Apparent Low Bidder for a period of ninety (90) days after award or full execution of the Contract, whichever first occurs. The City may award the Contract to the next Apparent Low Bidder if the Apparent Low Bidder is determined non-responsive or non-responsible, or fails to execute the Contract and provide the required bonds, guarantees, insurance policy verifications and endorsements and other documents within the required time periods. Upon full execution of the Contract, the City will return to the respective unsuccessful Bidders all Bid securities and Bid bonds.

6. **REQUIRED SUBCONTRACTORS LIST.** All Bidders must submit with their Bids the required information on all Subcontractors in Document 00430, Subcontractors List, for those Subcontractors who will perform any portion of Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent (0.5%) of total Bid. Violation of this requirement may result in Bid being deemed non-responsive and not being considered.
7. **REQUIRED STATEMENT OF QUALIFICATIONS.** In order for a Bidder to be eligible to Bid on this Contract, it must submit a Statement of Qualifications responsive to the requirements identified in Document 00450, Statement of Qualification for Construction Work ("SOQ"), including without limitation qualification information for Subcontractors and schedulers, if any.

Each Bidder shall submit its SOQ as part of Envelope B as provided in Paragraph 1 above and paragraph 6 of Document 00250, Bid Contents, Evaluation, Selection, and Award, containing all information required by Document 00450, Statement of Qualifications for Construction Work, including without limitation qualification information for subcontractors and schedulers.

Except as otherwise provided in Document 00250, Bid Contents, Evaluation, Selection, and Award, City will make final determinations regarding Bidder responsibility based solely upon the SOQ submitted as part of Envelope "B" on Bid day. Information in the SOQ shall be current.

8. **PRE-BID CONFERENCE AND SITE VISIT.** City will conduct a Non-mandatory Pre-Bid Conference and Site Visit at **10:00 am on Tuesday February 17, 2015 at 1651 Martin Avenue, Santa Clara, CA.** Bidders are strongly encouraged to attend the Pre-Bid Conference and Site Visit, which will last approximately 2 hours.

Any Bidder wishing to investigate subsurface conditions at the Site must schedule such a visit with the City in accordance with this Document 00200, Instructions to Bidders, and Document 00700, General Conditions.

City reserves the right to schedule and organize the Site Visit to minimize disruption to existing facilities and congestion. Any Bidder wishing to investigate subsurface conditions or otherwise conduct invasive investigations, explorations, tests, or studies at this Site, shall schedule such examinations with the City by giving the City at least seven (7) days written notice.

Additionally, any such Bidder must deliver an executed Document 00210, Indemnity and Release Agreement, and provide an insurance certificate as described therein by noon of the Day prior to the its examination. Bidders who intend only to observe Site conditions and not

conduct such examinations are not required to provide an executed Document 00210, Indemnity and Release Agreement, or an insurance certificate.

Bidders are encouraged to submit written questions in connection with the Site Visit. City will transmit to all parties recorded as having received Bidding Documents such Addenda as City in its discretion considers necessary in response to written questions. Bidders shall not rely on oral statements. Oral statements will not be binding or legally effective. Other Pre-Bid Site Visits may be scheduled at City's sole discretion, depending on staff availability.

9. **OTHER REQUIREMENTS PRIOR TO BIDDING.** Submission of Bid signifies Bidder's careful examination of Bidding Documents and complete understanding of the nature, extent, and location of Work to be performed. As a condition to Bidding, Bidder must complete tasks listed in Document 00520, Agreement. Submission of Bid shall constitute Bidder's express representation to the City that Bidder has fully completed these tasks.
10. **EXISTING DRAWINGS AND GEOTECHNICAL DATA.** Bidders may examine any available existing conditions information (e.g., record documents, specifications, studies, drawings of previous work) by giving City reasonable advance notice, as well as applicable environmental assessment information regarding the Project. Document 00320, Geotechnical Data and Existing Conditions, applies to all supplied existing conditions information and geotechnical reports and all other information supplied regarding existing conditions either above ground or below ground. City will make copies available for a fee. A Bidder must give two (2) days advanced notice if copies are desired.
11. **ADDENDA.** Bidders must direct all questions about the meaning or intent of Bidding Documents to City (Attention: Project Engineer) in writing. Interpretations or clarifications considered necessary by City in response to such questions will be issued by Addenda mailed, faxed, or delivered to all parties recorded by City as having received Bidding Documents. Addenda will be written and will be issued to each Bidder to the address or fax number supplied to City by Bidder. City may not answer questions received less than ten (10) Days prior to the date for opening Bids. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
 - A. Addenda may also be issued to modify the Bidding Documents as deemed advisable by City.
 - B. No Addenda will be issued within forty-eight (48) hours of the opening of Bids, unless the addenda includes postponing the scheduled Bid opening date.
 - C. Addenda shall be acknowledged by number with signature in Document 00400, Bid, and shall be part of the Contract Documents. A complete listing of Addenda may be secured from City.
12. **SUBSTITUTIONS.** Bidders must base their Bids on products and systems specified in Contract Documents or listed by name in Addenda.
 - A. Except as provided in paragraph 12.C below, City will consider substitution requests only from Bidders for "or equal" items. Bidders wanting to use "or equal" item(s) may submit Document 00660, Substitution Request, no later than fourteen (14) Days prior to the due date for City receiving Bids. After said date, the City will not accept "or equal" substitution requests. To assess "or equal" acceptability of product or system, submittals of substitutions shall contain the information required in Document 00660, Substitution Request, and set forth in Section 01600, Product Requirements. Insufficient information will be grounds for rejection of the "or equal" substitution request. City shall,

within a reasonable period of time after having received a request for substitution, issue in writing its decision as to whether the proposed substitute item is an "or equal" item. City's decision shall be conclusive on all Bidders.

- B. Approved "or equal" substitutions shall be listed in Addenda and become part of the Contract Documents.
- C. Substitutions may be requested after Award of Contract only in accordance with requirements specified in Section 01600, Product Requirements.
- D. As further limitation on Bidder's privilege to substitute items, City has found that certain items are designed as City standards and certain items are designed to match existing items in use on a particular public improvement, either completed or in the course of completion. As to such items, City will not permit substitution. City will not permit substitutions for the following items:

NOT APPLICABLE

- 13. **WAGE RATES – Prevailing Wages Requirements.** The Contractor shall pay prevailing wages to any worker(s) employed by the Contractor or any of its subcontractors under this Contract. The term "worker" is defined under California Labor Code Sections 1723 and 1772. A prevailing wage is the basic hourly rate the majority of workers in a particular craft or classification earn. The prevailing wage also is based on the locality and nearest labor market. The California Department of Industrial Relations annually determines prevailing wage for various crafts, job classifications and job types. The general prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform the Work required under this Contract, as determined by the State of California Department of Industrial Relations (the "DIR"), are available from the Division of Labor Standards, 455 Golden Gate Avenue, San Francisco, CA 94102 (P.O. Box 420603, San Francisco, CA 94142-0603) or on the DIR website at www.dir.ca.gov/dlsr. Also, Contractor shall post the applicable prevailing wage rates at the Site and ensure they are on file in the City Clerk's Office.
- 14. **EQUAL EMPLOYMENT OPPORTUNITY.** Contractor shall comply with all applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical conditions, disability, or any other reason.
- 15. **BID OPENING.** City will open all Bidders' Envelopes "A," on the date and time specified in paragraph 1 above, initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein. City will not open Envelopes "B" publicly. Except for the Apparent Low Bidder's Envelope "B" (or as otherwise provided in this Document 00200), all other Envelopes "B" will remain unopened.
- 16. **DETERMINATION OF APPARENT LOW BIDDER (Envelope "A").** Apparent Low Bid will be based solely on the total amount of all Bid items (including any Alternates and any items subject to revocation). The Bids will be opened and the apparent low bidder announced following the opening of all Bids.
- 17. **EVALUATION OF BIDDER RESPONSIBILITY (Envelope "B").**
 - A. City will open Apparent Low Bidder's Envelope "B" and check its contents for compliance with this paragraph 17. City will notify Apparent Low Bidder in writing of any deviations found and will provide Bidder the opportunity to respond in writing with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.

- B. If any Apparent Low Bidder is determined to be non-responsive or non-responsible, City may open the next Apparent Low Bidder's Envelope "B" pursuant to any procedures determined in its reasonable discretion, and proceed for all purposes as if this Apparent Low Bidder were the original Apparent Low Bidder. City shall use reasonable efforts to make the responsive responsible Apparent Low Bidder's Envelope "B" public on the first (1st) Working Day after the fourth (4th) Day following the opening of the Bidders' Envelope "A"s, subject to paragraph 25 below.
- C. Document 00450, Statement of Qualifications for Construction Work, sets forth certain minimum criteria for a Bidder to be found responsible. Bidder's attention is called to the following minimum requirements for a Bidder to be found responsible to perform the Work:
- 1) Sufficient financial strength, stability and resources as measured by Bidder's equity, debt-to-assets ratio, and capability to finance the Work to be performed.
 - 2) Ability to secure, in accordance with the Contract Documents, the required forms of Construction Performance Bond and Construction Labor and Material Payment Bond. Ability to obtain required insurance with coverage values that meet minimum requirements.
 - 3) Subcontracting Prior Experience. Satisfactory experience on public works, including without limitation no history of default termination, excessively delayed completion or excessive defective work.
 - 4) Projects Public Experience. Evidence that Bidder and its team, including without limitation its Subcontractors (hereafter, including Bidder if Bidder performs such Work itself, "designated Subcontractor(s)"), have the human and physical resources of sufficient quantity and quality to perform the Work under Contract Documents in a timely and Specification-compliant manner, to include:
 - a) Construction and management organizations with sufficient personnel and requisite disciplines, licenses, skills, experience, and equipment for the Project.
 - b) Minimum licensing requirements including evidence of a valid California contractor's license for the Bidder and evidence of requisite licenses for Key Personnel of Bidder or any designated Subcontractor(s).
 - c) Sufficiency of proposed quality assurance plan to meet the requirements of the Contract Documents.
 - d) Bidder's safety record.
 - e) Minimum experience requirements of the prime contractor including the completion of projects specified in Document 00450, Statement of Qualifications for Construction Work.
 - f) A field organization with skills, experience, and equipment sufficient to perform all on-Site work and necessary scheduling.
 - g) Expertise of Key Personnel to accomplish the duties and responsibilities required to perform the Work under Contract Documents. Minimum experience requirements of Key Personnel including the completion of projects of similar nature and complexity and having of experience on projects of similar nature and complexity.
 - h) Bidder shall expressly indicate which, if any, of the foregoing designated Subcontractor(s)' functions it will perform itself.
 - 5) The following are minimum requirements for the designated Subcontractor(s) to be found responsible to perform the Work. (Unless the designated Subcontractor(s) is found responsible, Bidder will be found non-responsible.)

- a) Evidence that Bidder's named Subcontractor has the human and physical resources of sufficient quantity and quality to perform those aspects of the Contract in a timely and Specification-compliant manner, to include:
- b) Construction and management organizations with sufficient personnel and requisite disciplines, licenses, skills, experience, and equipment for the Project.
- c) A field organization with skills, experience, and equipment sufficient to perform all on-Site work and necessary scheduling.
- d) Installation of projects similar in nature and complexity to this Project as specified in Document 00450, Statement of Qualifications for Construction Work.
- e) The installation supervisor shall have worked in a similar capacity on projects similar in nature and complexity to this Project per Document 00450, Statement of Qualifications for Construction Work.

18. **BID EVALUATION.** Bids shall remain open for sixty (60) Days following the opening of Bids. Bids may remain open for a longer period of time, if mutually agreed by the City and the apparent low Bidder. City may reject any or all Bids and waive any informalities or minor irregularities in the Bids. City also reserves the right, in its discretion, to reject any or all Bids and to re-Bid the Project. City reserves the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if City believes that it would not be in the best interest of Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by City. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some work items and enhanced prices for other work items.

- A. In evaluating Bids, City will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, unit prices and other data, as may be requested in Document 00400, Bid, or prior to the Notice of Award.
- B. City may conduct reasonable investigations and reference checks of Bidder, proposed Subcontractors, suppliers and other persons and organizations as City deems necessary to assist in the evaluation of any Bid and to establish Bidder's responsibility, qualifications, financial ability, proposed Subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time. Submission of a Bid constitutes Bidder's consent to the foregoing. City shall have the right to consider information provided by sources other than Bidder. City shall also have the right to communicate directly with Bidder's surety regarding Bidder's bonds.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between written words and figures will be resolved in favor of the words.
- D. Quantities stated in the Bidding Documents are approximate only and are subject to correction upon final measurement of the Work, and are subject further to the rights reserved by the City to increase or diminish the amount of work under any classification as advantages to design or construction needs require.
- E. City may determine whether a Bidder is qualified in its sole discretionary judgment.

19. **AWARD.** If the Contract is to be awarded, it will be awarded to the lowest responsible and responsive Bidder. Following completion of all required City procedures and receipt of all City approvals, City will issue Document 00510, Notice of Award to successful Bidder.
20. **BID PROTEST.** Any Bid protest must be submitted in writing to the City Clerk's Office (Attention: Project Engineer), before 3:30 p.m. on the first (1st) Working Day after the fourth (4th) Day following the opening of Bids.
- A. The initial protest document must contain a complete statement of the basis for the protest.
 - B. The protest must refer to the specific portion of the document that forms the basis for the protest.
 - C. The protest must include the name, address, and telephone number of the person representing the protesting party.
 - D. Only Bidders who the City otherwise determines are responsive and responsible are eligible to protest a Bid; protests from any other Bidder will not be considered. In order to determine whether a protesting Bidder is responsive and responsible, City may open and evaluate information contained in any protesting Bidder's Envelope "B", and conduct the same investigation and evaluation as City is entitled to take regarding an Apparent Low Bidder. Any such opened Envelope "B" shall also be subject to all provisions of paragraph 25.
 - E. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
 - 1) The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.
21. **POST-NOTICE OF AWARD REQUIREMENTS.** After Notice of Award, the successful Bidder must execute and submit the documents indicated in Document 00510, Notice of Award.
- A. City shall have the right to communicate directly with Apparent Low Bidder's proposed performance bond surety, to confirm the performance bond. City may elect to extend the time to receive faithful performance and labor and material payment bonds.
 - B. Successful Bidder's failure to submit the documents required herein, in a proper and timely manner, entitles City to rescind its award, and to cause Bidder's Bid security to be forfeited as provided herein.
22. **FAILURE TO EXECUTE AND DELIVER DOCUMENTS.** If Bidder to whom Contract is awarded shall, within the period described in Document 00510, Notice of Award, fails or neglect to execute and deliver all required Contract Documents and file all required bonds, insurance certificates, and other documents, City may, in its sole discretion, foreclose on Bidder's deposit surety bond, or deposit Bidder's cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to enter into the Contract

Documents. Bidder agrees that calculating the damages City may suffer as a result of Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of City's damages. In addition, upon such failure City may determine the next Apparent Low Bidder and proceed accordingly.

23. **MODIFICATION OF COMMENCEMENT OF WORK.** City expressly reserves the right to modify the date for the Commencement of Work under the Contract and to independently perform and complete work related to the Project. City accepts no responsibility to Contractor for any delays attributed to its need to complete independent work at the Site.
24. **WITHDRAWAL OF BIDS.** Bidders may withdraw their Bids at any time prior to the Bid opening time fixed in this Document 00200, only by written request for the withdrawal of Bid filed with the City at the City's office. Bidder or its duly authorized representative shall execute request to withdraw Bid. The submission of a Bid does not commit the City to award a contract for the Project, to pay costs incurred in the preparation of a Bid, or to procure or contract for any goods or services.
25. **PUBLIC RECORDS ACT REQUESTS.**
 - A. Per the Public Records Act, City will make available to the public Bidder's SOQ (if Bidder's Envelope "B" is opened), all correspondence and written questions submitted during the Bid period, all Bid submissions opened in accordance with the procedures of this Document 00200, and all subsequent Bid evaluation information. All submissions not opened will remain sealed and eventually be returned to the submitter. Except as otherwise required by law, City will not disclose trade secrets or proprietary financial information submitted that has been designated confidential by Bidder (including but not limited to the SOQ). Any such trade secrets or proprietary financial information that a Bidder believes should be exempted from disclosure shall be specifically identified and marked as such. Blanket-type identification by designating whole pages or sections shall not be permitted and shall be invalid. The specific information must be clearly identified as such.
 - B. Upon a request for records regarding this Bid, City will notify Bidder involved within ten (10) Days from receipt of the request of a specific time when the records will be made available for inspection. If the Bidder timely identifies any "proprietary, trade secret, or confidential commercial or financial" information that Bidder determines is not subject to public disclosure, and requests City to refuse to comply with the records request, Bidder shall take all appropriate legal action and defend City's refusal to produce the information in all forums; otherwise, City will make such information available to the extent required by applicable law, without restriction.
 - C. Information disclosed in the SOQ (if Envelope "B" is opened) and the attendant submissions are the property of City unless Bidder makes specific reference to data that is considered proprietary. Subject to the requirements in the Public Records Act, reasonable efforts will be made to prevent the disclosure of information except on a need-to-know basis during the evaluation process.
26. **CONFORMED CONSTRUCTION DOCUMENTS.** Following Award of Contract, City may prepare a conformed set of Contract Documents reflecting Addenda issued during bidding, which will, failing objection, constitute the approved set of Contract Documents.
27. **DEFINITIONS.** All abbreviations and definitions of terms used in this Document 00200 are set forth in Document 00050, References and Definitions.

END OF DOCUMENT

DOCUMENT 00210

INDEMNITY AND RELEASE AGREEMENT

Date _____, 201__

POTENTIAL BIDDER: _____

CITY: THE CITY OF SANTA CLARA, CALIFORNIA

SITE: 1651 Martin Avenue, Santa Clara, California

PROJECT: CORPORATION YARD WATER STORAGE TANK
AND PUMP STATION PROJECT (WA-30236)

In consideration of the City's permitting the undersigned potential bidder ("Bidder") to have access to, and to conduct investigations, tests and/or inspections on, the Site, Bidder hereby agrees as follows:

1. To the greatest extent permitted by law, Bidder hereby releases, and shall defend, indemnify and hold harmless City, and its officers, employees, consultants (including without limitation Consulting Engineer), representatives, and agents, and all other parties having any other interest in the Site, against any claim or liability, including attorney's fees, arising from or relating to any Site-related access, investigation, test, inspection and/or other activity conducted by Bidder or any of Bidder's officers, employees, consultants, representatives, and/or agents, regardless of whether claim or liability is caused in part by the negligence of City or by any released and indemnified party.
2. Bidder hereby waives the provisions of California Civil Code Section 1542 which provides as follows:

A general release does not extend to claims that the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.
3. Bidder shall repair any damage to the Site or adjacent property resulting from activities authorized hereunder, and comply with and be subject to all other requirements and obligations described or referenced in Document 00320, Geotechnical Data and Existing Conditions.
4. Attached hereto (or to be delivered separately before Bidder's visit to the Site) is a certificate for comprehensive general liability insurance satisfying the requirements of Document 00700, General Conditions, and Document 00810, Insurance Requirements.

[Paragraph 5 and Signatures Follow on Next Page]

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5. Although this Indemnity and Release Agreement is not a Contract Document (see Document 00520, Agreement), it shall be fully effective and binding regardless of whether Bidder submits a Bid for the subject Project, is awarded a contract for the Project, or otherwise.

Name of Bidder

By: _____
Signature

By: _____
Signature

Its: _____
Title (If Corporation: Chairman, President
or Vice President)

Its: _____
Title (If Corporation: Secretary,
Assistant Secretary, Chief Financial
Officer or Assistant Treasurer)

END OF DOCUMENT

DOCUMENT 00250

BID CONTENTS, EVALUATION, SELECTION, AND AWARD

1. This Document summarizes the required Bid contents and City's procedures for opening and evaluating Bids and making award for:

**CITY OF SANTA CLARA
CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT**

2. All abbreviations and definitions of terms used herein are defined in Document 00050, References and Definitions.
3. Bidders shall submit Bids in two (2) separate sealed Envelopes marked "Envelope A" and "Envelope B."
4. At the designated time of Bid opening, City will open the Envelope A submitted by each Bidder, initially evaluate it for responsiveness, and determine an Apparent Low Bidder as specified herein. City will not open the Envelope B submitted by each Bidder publicly, and except for the Apparent Low Bidder's Envelope B (or as otherwise provided in this Document 00250), they will remain unopened.

5. CONTENTS OF ENVELOPE A - BID PRICE (Checklist). Envelope A shall include:

- 5.1 Document 00400, Bid.
- 5.2 Document 00411, Bidder's Bond. Bid Security supplied in accordance with Document 00200, Instructions to Bidders.
- 5.3 Document 00420, Bidder Registration and Safety Experience.
- 5.4 Document 00421, Declaration of Contractor's License Status.
- 5.5 Document 00430, Subcontractors List.
- 5.6 Document 00435, Principals Interested in this Bid.
- 5.7 Document 00440, Affidavit of Compliance With Ethical Standards for Contractors.
- 5.8 Document 00460, Schedule of Major Equipment and Material Suppliers.
- 5.9 Document 00481, Non-Collusion Affidavit.
- 5.10 Document 00482, Bidder Certifications.
- 5.11 Document 00654, Worker's Compensation Insurance Statement.

6. CONTENTS OF ENVELOPE B - BIDDER QUALIFICATIONS. (Checklist) Envelope B shall include:

- 6.1 Document 00450, Statement of Qualifications for Construction Work.

7. DETERMINATION OF APPARENT LOW BIDDER. City will determine the Apparent Low Bidder in accordance with the methodology described in Paragraph 18 of Document 00200, Instructions to Bidders.
8. EVALUATION OF BIDDER RESPONSIBILITY (ENVELOPE B)
 - 8.1 City will open Apparent Low Bidder's Envelope B and check its contents for compliance with Paragraph 6 above and this Paragraph 8. City will notify Apparent Low Bidder in writing of any deficiencies found and will provide Bidder the opportunity to respond in writing within 2 business days, with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.
 - 8.2 City will determine Bidder responsibility in accord with Document 00450, Statement of Qualifications for Construction Work.

END OF DOCUMENT

DOCUMENT 00320

GEOTECHNICAL DATA AND EXISTING CONDITIONS

1. SUMMARY

This Document 00320 sets forth the terms and conditions under which Bidder may review, study, use, or rely upon geotechnical data at or contiguous to the Site, and existing conditions information concerning existing conditions at or contiguous to the Site. This Document 00320, the available geotechnical data, and the supplied existing conditions information are not Contract Documents.

2. REPORTS AND INFORMATION

- A. City, its consultants, and prior contractors may have collected documents providing a general description of the Site and conditions of the Work. These documents may consist of geotechnical reports for and around the Site, contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding Underground Facilities. These reports, documents and other information are not part of the Contract Documents.
- B. Bidders may inspect geotechnical reports and information regarding existing conditions available at the City's Office, and may obtain copies at cost of reproduction and handling upon Bidder's payment for the costs. These reports, documents and other information, are not part of the Contract Documents. Nevertheless, by submitting a Bid, Bidder accepts full responsibility for reviewing, knowing and understanding the contents of all of these materials.
- C. Geotechnical reports may be included in the project manual and information regarding existing conditions may also be included in the project manual, but neither shall be considered part of the Contract Documents.

3. USE OF INFORMATION ON EXISTING CONDITIONS

- A. Aboveground Existing Conditions. Under no circumstances shall City be deemed to make a warranty or representation of existing aboveground conditions, as-built conditions, or other aboveground actual conditions verifiable by reasonable independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder must perform prior to bidding and Bidder must not rely on the information supplied by City regarding existing conditions. Bidder represents and agrees that in submitting its Bid, it is not relying on any information regarding existing conditions supplied by City.
- B. Underground Facilities. Information supplied regarding existing Underground Facilities at or contiguous to the Site is based on information furnished to City by others (e.g., the owners or builders of such Underground Facilities or others). Except as expressly set forth in this Document 00320, City does not assume responsibility for the accuracy, completeness or thoroughness of this information, and Bidder is solely responsible for any interpretation or conclusion drawn from this information. Except as expressly set forth in this Document 00320, City will be responsible only for the general accuracy of information regarding Underground Facilities, and only for those Underground Facilities that are owned by City. This express assumption of responsibility applies only if Bidder

has conducted the independent investigation required of it and discrepancies were not apparent.

4. LIMITED RELIANCE PERMITTED ON CERTAIN INFORMATION

- A. Geotechnical Data. Except as expressly set forth in this Document 00320, City does not warrant, and makes no representation regarding, the accuracy or thoroughness of any geotechnical data. Bidder represents and agrees that in submitting its Bid, it is not relying on any geotechnical data supplied by City, except as specifically set forth herein.
- B. Bidder may rely upon the general accuracy of the “technical data” contained in the geotechnical reports and drawings identified above, but only insofar as it relates to subsurface conditions, provided Bidder has conducted the independent investigation required of it and discrepancies were not apparent. The term “technical data” in the referenced reports and drawings shall be limited as follows:
1. The term “technical data” shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment, or structures that were encountered during subsurface exploration.
 2. The term “technical data” does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures.
 3. The term “technical data” shall not include the location of Underground Facilities.
 4. Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder may rely upon the general accuracy of the “technical data” contained in such reports or drawings.
 5. Bidder is solely responsible for any interpretation or conclusion drawn from any “technical data” or any other data, interpretations, opinions, or information contained in supplied geotechnical data.

5. INVESTIGATIONS

- A. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents. Bidders shall advise City in writing during the Bid period of any questions, suppositions, inferences or deductions Bidders may have for City’s review and response.
- B. City has provided time in the period prior to bidding for Bidder to perform these investigations.

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6. ACCESS TO SITE

Subject to reasonable scheduling, City will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of Document 00200 (Instructions to Bidders) and Document 00700 (General Conditions) including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Bidder shall supply all equipment required to perform any investigations, as each Bidder deems necessary. City has the right to limit the number of pieces of machinery operating at one time due to safety concerns.

END OF DOCUMENT

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DOCUMENT 00400

BID

To be submitted as part of Envelope "A" by the time and date specified in Document 00200, Instructions to Bidders, Paragraph 1

CITY OF SANTA CLARA, CALIFORNIA

TO: CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA

THIS BID SUBMITTED BY:

(Firm/Company Name)

RE: CONTRACT NUMBER WA 30236, CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the City of Santa Clara, California, a chartered California municipal corporation, in the form included in the Contract Documents, Document 00520, Agreement, to perform and furnish all Work specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. The Bidder accepts all of the terms and conditions of the Contract Documents, Document 00100, Invitation to Bid, and Document 00200, Instructions to Bidders, including without limitation, those dealing with the length of time this Bid remains open and the disposition of Bid security. The Bidder will sign and submit the Agreement, Insurance, Bonds and other documents required by Document 00200, Instructions to Bidders, by the time and in the manner set forth therein.
3. In submitting this Bid, the Bidder represents that:
 - (a) Bidder has examined all of the Contract Documents and of the following Addenda (receipt of all of which is hereby acknowledged).

Addendum No.	Addendum Date	Signature of Bidder

[Attach additional pages if necessary]

- (b) Bidder has visited the Site and performed all tasks, research, investigation, reviews, examinations, analysis, and given notices, regarding the Project and the Site, as set forth in Document 00520, Agreement.
- (c) Bidder has received and examined copies of the following technical specifications on City-provided, Contractor-installed equipment: NONE

(d) Bidder has given City prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents, record documents and actual conditions; and the written resolution thereof through Addenda issued by City is acceptable to Contractor.

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sum of money listed in the following Bid Schedule:

SCHEDULE OF BID PRICES

All Bid items, including lump sums, unit prices, and Alternates, must be filled in completely. Bid items are described in the Special Provisions. Quote in figures only, unless words are specifically requested.

Base Bid Items

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
1.	Mobilization/Demobilization	1	LS		\$
2.	Site Work	1	LS		\$
3.	Storm Drain Facilities	1	LS		\$
4.	Welded Steel Tank	1	LS		\$
5.	Pump Station Building	1	LS		\$
6.	Vertical Turbine Pumps	3	EA		\$
7.	Booster Packaged Pump System	1	LS		\$
8.	Standby Generator Unit	1	EA		\$
9.	Standby Generator Unit Ancillary Appurtenances	1	LS		\$
10.	Emergency Eye Wash and Shower	1	LS		\$
11.	Tank Inlet and Outlet Piping	1	LS		\$
12.	MCC, ATS, MTS, Electrical Equipment	1	LS		\$
13.	Site Electrical and SCADA	1	LS		\$
14.	Slurry Seal 12" Water Main Trench	670	SY		\$
15.	Slurry Seal 4" Water Main Trench	185	SY		\$
16.	Tank Cleaning, Testing, and Disinfection	1	LS		\$
17.	Martin Avenue Driveway ADA Improvements	3	EA		\$

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
18.	*Tank Dehumidification	30	DAYS		
19.	*Overexcavation	30	CY		
TOTAL BASE BID PRICE					\$

Total Base Bid Price: _____
(in Words)

* Paragraph 1.5.D. of Document 01200, Measurement and Payment, shall not apply to Bid Item No. 18, Tank Dehumidification and Bid Item No. 19, Overexcavation.

5. Subcontractors for work included in all Bid items are listed on the attached Document 00430, Subcontractors List Form.
6. The undersigned Bidder understands that City reserves the right to reject this Bid.
7. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in documents referenced in paragraph 2 of this Document 00400 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00200, Instructions to Bidders, within the times specified therein. These documents include, but are not limited to Document 00520, Agreement, Document 00610, Construction Performance Bond, and Document 00620, Construction Labor and Material Payment Bond.
8. Notice of Award or request for additional information may be addressed to the undersigned at the address set forth below.
9. The undersigned Bidder herewith encloses a certified check or cashier's check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in the amount of ten percent (10%) of Total Bid Price, and made payable to City of Santa Clara.
10. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00700, General Conditions, and to complete all work within the time specified in Document 00520, Agreement. The undersigned Bidder acknowledges that City has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges City has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.
11. The undersigned Bidder agrees that, in accordance with Document 00700, General Conditions, liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00520, Agreement shall be as set forth in Document 00520, Agreement.

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12. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person (including any partner or joint venture of any partnership or joint venture bidder, respectively) is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).

NAME OF BIDDER: _____ licensed in accordance with an act for the registration of Contractors, and with license [_____]:
Expiration: _____

Where incorporated, if applicable

Principals

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

By: _____

Its: _____

(If Corporation: Chairman, President or Vice President)

By: _____

Its: _____

(If Corporation: Secretary, Assistant Secretary, Chief Financial Officer or Assistant Treasurer)

NOTE: If the Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Officers authorized to sign contracts:

Business Address:

Telephone: _____

Fax Number: _____

Date of Bid: _____

END OF DOCUMENT

DOCUMENT 00411

BIDDER'S BOND

KNOW ALL BY THESE PRESENTS:

That the undersigned [_____] as Principal and the undersigned as Surety are held and firmly bound unto the CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California ("City"), as obligee, in the penal sum of [_____] Dollars [(\$ _____)] lawful money of the United States of America being at least ten percent (10%) of the aggregate amount of said Principal [_____]'s base Bid, for the payment of which, well and truly to be made, we bind ourselves, our successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal is submitting a Bid for City Contract Number WA 30236, CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by the said Principal be accepted and the Contract be awarded to said Principal and said Principal shall within the required periods enter into the Contract so awarded and provide the required Construction Performance Bond, Construction Labor and Material Payment Bond, insurance certificates, and all other endorsements, forms, and documents required under Document 00200, Instructions to Bidders, then this obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument this _____ day of _____, 201_.

(Corporate Seal)

By

Principal

Surety

(Corporate Seal)

By

Attorney in Fact

Note: Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

STATE OF CALIFORNIA)
County of _____)

On _____, 201__, before me _____ (here insert name and title of officer) a Notary Public in and for the State of California, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)

Note: Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

STATE OF CALIFORNIA)
County of _____)

On _____, 201__, before me _____ (here insert name and title of officer) a Notary Public in and for the State of California, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)

END OF DOCUMENT

DOCUMENT 00420

BIDDER REGISTRATION AND SAFETY EXPERIENCE

1. INSTRUCTIONS

In order to register to undertake work for the City of Santa Clara, Bidder must submit this completed registration form; do not leave blanks.

INDEPENDENT CONTRACTOR REGISTRATION

Contractor's License # _____

Date: _____ Treasury (Fed Tax I.D.) # _____

Full Corporate Name of Company:

Street Address: _____

Mailing Address: _____

Phone: _____ Fax: _____

Name of Principal Contact: _____

Type of Business: _____ Sole Proprietor _____ Partnership
 _____ Non-Profit 501 C3 _____ Corporation
 _____ Other (please explain: _____)

2. INSURANCE

A. Workers' Compensation:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

B. General Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

C. Automotive Liability:

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

D. Professional Liability (if applicable):

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

E. Environmental Impairment Liability (if applicable):

Carrier: _____

Address: _____

Phone and Fax: _____

Policy Number: _____

Policy Limits: \$ _____

A.M. Best Rating: _____

3. SAFETY EXPERIENCE

A. The following statements as to safety experience of Bidder are submitted with Bid, as part thereof, and Bidder guarantees the truthfulness and accuracy of the information.

1. List Bidder's Interstate Experience Modification Rate for the last three years.

a. 2012: _____

b. 2013: _____

c. 2014: _____

2. Use Bidder's last year's Cal/OSHA 200 log to fill in the following:

a. Number of lost workday cases _____

b. Number of medical treatment cases _____

c. Number of fatalities _____

3. Employee hours worked last year _____

4. State the name of Bidder's safety engineer/manager or Site Safety Officer:

Attach a resume or outline of this individual's safety and health qualifications and experience.

BIDDER CERTIFIES, UNDER PENALTY OF PERJURY, THAT THE FOREGOING INFORMATION IS CURRENT AND ACCURATE AND AUTHORIZES THE CITY OF SANTA CLARA AND ITS AGENTS AND REPRESENTATIVES TO OBTAIN A CREDIT REPORT AND/OR VERIFY ANY OF THE ABOVE INFORMATION.

SIGNATURE

DATE

END OF DOCUMENT

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DOCUMENT 00421

DECLARATION OF CONTRACTOR'S LICENSE STATUS¹

I, _____, declare under penalty of perjury under the laws of the State of California that the following is true and correct:

A. The State Contractor's license number for the signatory Contractor is:
_____.

B. The license expiration date is: _____.

Executed on _____, 201__ at _____, California.

Contractor shall keep Contractor's license current at all times.

CONTRACTOR

[Contractor's Firm Name – Print or Type]

[Signatory's Name – Print or Type]

[Signature]

[Capacity/Title in Contracting Firm – Print or Type]

END OF DOCUMENT

¹ California Business & Professions Code § 7028.15.

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DOCUMENT 00430

SUBCONTRACTORS LIST

Bidder's Name: _____

Bidder submits the following information as to the Subcontractors Bidder intends to employ if awarded the Contract. Include only those Subcontractors proposed to receive more than one half of one percent (0.5%) of the Total Bid Amount.

Full Name of Subcontractor and Business Location: (City and State)	Contractor's License No.	Description of Work: Reference To Bid Items	Percentage of Contract Work

(Bidder to attach additional sheets if necessary)

END OF DOCUMENT

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DOCUMENT 00435

PRINCIPALS INTERESTED IN THIS BID

THE NAMES OF ALL PERSONS WHO HAVE AN INTEREST IN THIS BID AS PRINCIPALS ARE AS FOLLOWS:

(Note: If Bidder is a corporation, list the names of the President, Secretary, Chief Financial Officer, General Manager thereof. If Bidder is a partnership, list the names of all partners comprising the firm. If Bidder is an individual, state first and last name in full.)

Principal's Name:	
Mailing Address:	
Title:	

Principal's Name:	
Mailing Address:	
Title:	

Principal's Name:	
Mailing Address:	
Title:	

Principal's Name:	
Mailing Address:	
Title:	

Note: Additional pages may be created by copying this page and editing the page numbers as necessary.

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DOCUMENT 00440

**AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS FOR CONTRACTORS
CITY OF SANTA CLARA**

I, _____, being first duly sworn, depose and say to the City of Santa Clara ("City") that:

1. I am _____ [insert title or capacity] of _____ [insert entity name] ("Bidder").
2. I hereby state that I have read and understand the attached Document 00441, Ethical Standards for Contractors. I have examined appropriate business records, and I have made inquiry of those individuals potentially included within the definition of "Contractor" contained in Document 00441, Ethical Standards for Contractors. I have authority to make these representations on my own behalf and on behalf of the legal entity herein identified.
3. Neither (a) Bidder nor (b) any individual(s) belonging to a category identified in footnote No. 1 of Document 00441, Ethical Standards for Contractors, has been convicted of any one or more of the crimes identified in Document 00441, Ethical Standards for Contractors, within the past five (5) years.
4. Notwithstanding award of any contract by City or performance thereunder, the City shall have all rights and remedies described in Document 00441, Ethical Standards for Contractors.

The above assertions are true and correct and are made under penalty of perjury under the laws of the State of California.

Corporation, Partnership, etc.

Signature

Title

Note: Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

STATE OF CALIFORNIA)
County of _____)

On _____, 201__, before me _____ (here insert name and title of officer) a Notary Public in and for the State of California, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)

END OF DOCUMENT

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DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

The City of Santa Clara, a chartered municipal corporation of the State of California (hereafter, "City") requires submittals of "Statement of Qualifications" (hereafter, "SOQ") from firms interested in performing the construction work for the CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT in Santa Clara, California.

1. GENERAL INFORMATION

- A. In Document 00100, Notice Inviting Bids, the City of Santa Clara, a chartered municipal corporation of the State of California ("City"), has indicated that it will receive sealed Bids for the Contract for the construction of the Project. The Contract will require Contractor to construct the Project, all in accordance with the scope of Work set forth in the Contract Documents.
1. City will accept Bids only from Bidders duly licensed in accordance with the California Business & Professions Code. Additionally, Bidder must meet the following requirements, at a minimum, in order to be considered by City to be qualified for award of the Contract:
 - a. Three (3) years experience as a continuously operating entity engaged in the performance of similar work.
 - b. Within the past five (5) years completed three (3) construction projects of a similar nature and complexity with a contract dollar amount of at least \$3.5 million each.
 2. Bidder's compliance with the minimum qualification requirements in paragraph 1.A.1 of this Document 00450 will also be measured by the experience of the supervisory personnel who will have responsible charge of the various major components of the Work.
 - a. If Bidder subcontracts portions of the Work, City, in its determination of whether the minimum qualification requirements have been met, will consider the qualifications of the Subcontractor's supervisory personnel.
 - b. The qualifications of the Key Personnel are to be submitted with the SOQ, by providing the information described in this Document 00450.

2. REQUIRED CONTENTS OF SOQ SUBMISSION

- A. Transmittal Letter. The Transmittal Letter shall name the proposed prime contractor, its legal structure (i.e., corporation, partnership, limited partnership, joint venture) and its proposed roles and responsibilities. If a joint venture or partnership is proposed, Bidder shall identify each partner and/or member of the joint venture and their roles and responsibilities.
- B. Financial Capacity. Include audited or reviewed financial statements for the three (3) most recently completed fiscal years for Bidder and each member of any proposed joint venture. Also include audited or reviewed financial statements for the three (3) most

recently completed fiscal years for any parent company(ies) of Bidder and each member of any proposed joint venture.

- C. Capability to Provide Required Performance and Payment Bonds. Bidder shall include a letter from a surety duly licensed to do business in the State of California, having a financial rating from A. M. Best Company of **A-VI** or better that the surety has agreed to provide Bidder with the required performance and payment bonds in accordance with the requirements set forth in Documents 00610 (Construction Performance Bond) and 00620 (Construction Labor and Material Payment Bond). Such performance and payment bonds shall be in the minimum penal sums provided therein. Bidder shall include authorization that gives the City the right to verify with the surety that the surety, based upon the Bid prices, will issue the required bonds under the conditions stated.
- D. Capability to Provide the Required Insurance. Bidder shall provide a letter from an insurance underwriter(s), having a financial rating from A. M. Best Company of **A-VI** or better, confirming that the insurer will provide Bidder the required coverages and amounts specified in Document 00820, Insurance Requirements.
- E. Human and Physical Resources. Bidder shall identify, describe, and quantify for itself the following technical resources for the construction work:
1. Description and location of manufacturing facilities, naming products and quantifying production capacity and current demand;
 2. Description of field organization(s), naming skills and equipment;
 3. Description of safety program, quality control procedures, and safety experience; and
 4. Evidence of a valid California A contractor's license and required licenses of all licensees of persons who are Key Personnel of the Bidder or any designated Subcontractor(s).
- F. Completed Questionnaire. Bidder shall include a completed "Statement of Qualification Questionnaire" in the form attached to this Document 00450 as Attachment "A." Bidder shall make sure its answers to the Questionnaire describe for itself, its Key Personnel proposed, and its designated Subcontractor(s), their public works construction projects of a value of at least \$250,000 each. Add supplementary information if necessary.
- G. Resumes of Proposed Key Personnel. Bidder shall provide a resume for each named Key Personnel of Bidder (including, but not limited to, the Project Manager, Site Superintendent, and scheduler), and Bidder's designated Subcontractor(s) performing the work specified in Part D: Experience of Designated Subcontractor(s) of this Document 00450, to include the following:
1. Name and proposed assignment
 2. Years of experience;
 3. Education - degrees, schools and years obtained;
 4. Professional registration(s);
 5. Fluency in English (Yes/No);

- 6. Experience directly related to above proposed assignment;
 - 7. At least two client references, including contact names, addresses and telephone numbers; and
 - 8. Description of projects of a similar nature worked on in the past five years.
- H. Litigation History. Description of litigation history for the past ten (10) years, including names of involved parties, nature of dispute, and disposition.

3. GENERAL CONDITIONS

- A. General Conditions for Content. The SOQ shall be clear and concise to enable management-oriented personnel to make a thorough evaluation and arrive at a sound determination as to whether the SOQ meets City's requirements. To this end, the SOQ should be so specific, detailed and complete as to demonstrate clearly and fully that the Bidder has a thorough understanding of and has demonstrated knowledge of the requirements to perform the Work (or applicable portion thereof).
- B. Explanations to SOQ. Any explanation requested by a Bidder regarding the meaning or interpretation of this Document 00450 must be requested in writing and with sufficient time allowed for a reply to reach Bidder before the submission of its SOQ. Oral explanations or instructions will not be binding. Any information provided to any prospective Bidder concerning this Document 00450 will be furnished to all prospective Bidders as an Addendum to the Bidding Documents.
- C. Definitions. Except as set forth herein, all abbreviations and definitions of terms used in this Document 00450 are as set forth in Document 00700 (General Conditions) or Section 00050 (References and Definitions).

[STATEMENT OF QUALIFICATION QUESTIONNAIRE FOLLOWS ON NEXT PAGE

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ATTACHMENT "A" -- STATEMENT OF QUALIFICATION QUESTIONNAIRE

Bidders shall complete the entire Statement of Qualification Questionnaire and submit it in accordance with Document 00200, Instructions to Bidders, and Document 00450, Statement of Qualifications. Failure to complete the questionnaire or inclusion of any false statement(s) shall be grounds for immediate disqualification.

CONTACT INFORMATION

Company Name: _____

Owner of Company: _____

Contact Person: _____

Address: _____

Phone: _____ Fax: _____

PART A: GENERAL INFORMATION

Complete Part A before proceeding to Part B.

1. Does Bidder possess a valid and current California Contractor's license for the work proposed? Yes _____ No _____
2. Does Bidder have a minimum of \$5,000,000 liability insurance coverage? Yes _____ No _____
3. Has Bidder's license been revoked at any time in the last five (5) years? Yes _____ No _____
4. Has Bidder been "default terminated" by an owner (other than for convenience), or has a Surety completed a contract for Bidder within the last five (5) years? Yes _____ No _____
5. Has Bidder been cited more than twice for failure to pay prevailing wages in the last five (5) years? Yes _____ No _____
6. Has Bidder attached copies of its reviewed or audited financial statements and accompanying notes for the latest three (3) years? Yes _____ No _____

**Bidder will be immediately disqualified if any answer to questions 1, 2 or 6 is No.
Bidder will be immediately disqualified if any answer to questions 3, 4 or 5 is Yes.**

PART B: SAFETY, PREVAILING WAGE, DISPUTES AND BONDS

(Safety)

1. Has Cal/OSHA, Federal OSHA, the EPA or any Air Quality Management District cited Bidder in the past five (5) years?

Yes _____ No _____ If yes, attach description of each citation.

2. How often does Bidder require documented safety meetings be held for:

Field Supervisor Weekly _____ Bi-weekly _____ Monthly _____ Less than monthly _____

Employees Weekly _____ Bi-weekly _____ Monthly _____ Less than monthly _____

New Hires Weekly _____ Bi-weekly _____ Monthly _____ Less than monthly _____

Subcontractors Weekly _____ Bi-weekly _____ Monthly _____ Less than monthly _____

3. How often does Bidder conduct documented safety inspections?

Quarterly _____ Semi-annually _____ Annually _____ Other _____

4. Does Bidder have home office safety representatives who visit/audit the job site?

Quarterly _____ Semi-annually _____ Annually _____ Other _____

5. What is Bidder's Interstate Experience Modification Rate? _____. (A rating in excess of 1 will constitute grounds for disqualification as non-responsible.)

(Prevailing Wage Provisions)

6. Has Bidder been fined, penalized or otherwise found to have violated any prevailing wage or labor code provision? If yes, attach description of each occurrence.

Yes _____ No _____

(License Provisions)

7. Has Bidder changed names or license numbers in the past ten (10) years? If so, please state reason for change.

Yes _____ No _____ Reason: _____

(Disputes)

8. Has Bidder had any claims, litigation, or disputes ending in mediation or arbitration, or termination for cause associated with any project in the past ten (10) years? If yes, attach description of each such instance including details of total claim amount, settlement amount, and owner's name and phone number. Yes _____ No _____

(Bonding)

9. Bonding Capacity - Provide documentation from Bidder's surety identifying the following:

Name of bonding company/surety: _____

Name of Surety Agent: _____

Surety Agent address: _____

Surety Agent phone number: _____

Is surety a California-admitted surety? Yes _____ No _____

Is surety listed in the current edition of the California Department of the Treasury's Listing of approved sureties? Yes _____ No _____

List surety's A.M. Best Rating: _____

What is Bidder's total bonding capacity? _____

What percentage rate does Bidder pay for bonds? _____

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PART C: EXPERIENCE OF PRIME CONTRACTOR

The unique nature of this Project requires prior similar experience of the firm and the Key Personnel assigned. Summarize similar project experience below and provide the detailed project information requested:

Prime Contractor. List three (3) projects with a construction cost of at least \$2,000,000 each completed in the past five (5) years and indicate who were the superintendent and scheduler.

Project name	Construction Cost (\$)	Year completed	Name of Project Manager	Name of Project Site Superintendent

List Key Personnel that will be assigned to the Work:

Project Manager: _____

Project Site Superintendent: _____

Recent Projects.

Bidder shall provide information about three (3) of its most recently completed projects. Names and references must be current and verifiable. If a separate sheet is used, it must contain all of the following information:

1. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Total Construction Cost: _____

Total Change Order Amount: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

2. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone number): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Total Construction Cost: _____
Total Change Order Amount: _____
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of Days): _____
Actual Date of Completion: _____
Number of Stop Notices filed by subcontractors or suppliers: _____

3. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone number): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Total Construction Cost: _____
Total Change Order Amount: _____
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of Days): _____
Actual Date of Completion: _____
Number of Stop Notices filed by subcontractors or suppliers: _____

PART D: EXPERIENCE OF DESIGNATED SUBCONTRACTOR(S)

The unique nature of this Project requires prior similar project experience of the designated Subcontractor(s) and the Key Personnel assigned. Summarize similar project experience below and provide the detailed project information requested for each of the designated Subcontractor(s). Also expressly indicate which, if any, of the designated Subcontractor(s)' functions Bidder will perform itself:

Speciality Subcontractor: List three (3) similar typed projects completed in the past five (5) years and indicate who were the superintendent and scheduler.

Project Name	Construction Cost (\$)	Year Completed	Name of Project Manager	Name of Project Site Superintendent

List Key Personnel that will be assigned to the Work:

Project Manager: _____

Project Site Superintendent: _____

Recent Projects.

Provide information about three (3) most recently completed projects for each of the designated Subcontractor(s). Names and references must be current and verifiable. Use additional sheets if necessary. If separate sheets are used, they must contain all of the following information for each of the designated Subcontractor(s):

1. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

2. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone number): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Prime Contractor: _____
Prime Contractor Contact (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____
Value of Change Orders: _____
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of Days): _____
Actual Date of Completion: _____
Number of Stop Notices filed by subcontractors or suppliers: _____

3. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone number): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Prime Contractor: _____
Prime Contractor Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____
Value of Change Orders: _____
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of Days): _____
Actual Date of Completion: _____
Number of Stop Notices filed by subcontractors or suppliers: _____

PART E: FINANCIAL INFORMATION

1. Has Bidder ever reorganized under the protection of the bankruptcy laws?

Yes ____ No ____ If yes, please state when _____

2. If Bidder has had the general liability carrier identified in Document 00420, Bidder Registration and Safety Experience Form, for less than five (5) years, please provide additional information below for balance of the past five (5) years

Agency Name: _____

Contact Name: _____

Phone Number: _____

Carrier: _____ A.M. Best Rating _____

Carrier: _____ A.M. Best Rating _____

Carrier: _____ A.M. Best Rating _____

3. Has Bidder ever had insurance terminated by a carrier? Yes ____ No ____

If yes, explain on separate signed sheet marked with correlating cross-reference to this paragraph of the questionnaire.

Bidder hereby declares under penalty of perjury that all the information provided in this questionnaire is true and correct.

SIGNATURE

TITLE

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DOCUMENT 00460

SCHEDULE OF MAJOR EQUIPMENT AND MATERIAL SUPPLIERS

The undersigned Bidder represents that, if awarded the Contract, the items of major equipment and materials specified below will be supplied by the manufacturers or suppliers specified below. By so indicating, bidder warrants that the equipment and materials manufacturer and/or supplied by the named manufacturer or supplier will be provided on the Project unless review of submittal information or performance under tests reveals that the equipment or material does not meet Contract requirements. Failure to indicate a manufacturer or supplier listed in the following schedule may render the Bid non-responsive and may be the basis for rejection of the Bid.¹

<u>Item</u>	<u>Manufacturer or Supplier</u>
1. Paint System for Tank Interior	_____
2. Paint System for Tank Exterior	_____
3. Interior Ladders	_____
4. Exterior Ladders	_____
5. Water Level Indicator	_____
6. Manways	_____
7. Gate Valves	_____
8. Butterfly Valves	_____
9. Flexible Expansion Joints	_____
10. Flexible Sleeve Couplings	_____
11. Vertical Turbine Pump	_____
12. Booster Packaged Pump Station	_____
13. Precast Concrete Building	_____
14. Magnetic Flowmeter	_____

¹ Bidder's attention is directed to the Special Provisions for other requirements regarding these matters.
Rev. 06/23/11 00460 - 1 Schedule of Major Equipment and Material Suppliers

Item

Manufacturer or Supplier

15. Engine Generator Unit

16. Main Distribution Switchboard

17. Variable Frequency Drives

18. Motor Control Center

Bidder: _____

SIGNATURE

_____, 201__
DATE

END OF DOCUMENT

DOCUMENT 00481

**NON-COLLUSION AFFIDAVIT
PUBLIC CONTRACT CODE §7106**

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

(Name of Bidder)

(Signature of Principal)

(If Bidder is a partnership or a joint venture, this affidavit must be signed and sworn to by every member of the partnership or venture.)

(If Bidder [including any partner or venturer of a partnership or joint venture] is a corporation, this affidavit must be signed by the Chairman, President, or Vice President and by the Secretary, Assistant Secretary, Chief Financial Officer, or Assistant Treasurer.)

(If Bidder's affidavit on this form is made outside the State of California, the official position of the person taking such affidavit shall be certified according to law.)

[Notarization Follows on Next Page]

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STATE OF CALIFORNIA)
County of _____)

On _____, 201____, before me _____ (here insert name and title of officer) a Notary Public in and for the State of California, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)

END OF DOCUMENT

DOCUMENT 00482

BIDDER CERTIFICATIONS

TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID

The undersigned Bidder certifies to the City of Santa Clara, a chartered California municipal corporation, acting by and through its City Council, as set forth in sections 1 through 5 below.

1. CERTIFICATE OF NON-DISCRIMINATION

By my signature hereunder, on behalf of the Bidder making this Bid, the undersigned certifies that there will be no discrimination in employment with regard to race, color, religion, gender, sexual orientation, or national origin; that all federal, state, and local directives and executive orders regarding non-discrimination in employment will be complied with; and that the principle of equal opportunity in employment will be demonstrated positively and aggressively.

2. STATEMENT OF CONVICTIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that no more than one (1) final, unappealable finding of contempt of court by a Federal Court has been issued against Bidder within the past two (2) years because of failure to comply with an order of a Federal Court or to comply with an order of the National Labor Relations Board.

3. PREVIOUS DISQUALIFICATIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that the below indicated Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, has never been disqualified, removed or otherwise prevented from bidding on, or completing a Federal, State, or local government project because of a violation of law or a safety regulation except as indicated on the separate sheet attached hereto entitled "Previous Disqualifications." If such exceptions are attached, please explain the circumstances.

4. CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract.

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5. CERTIFICATION OF PREVAILING WAGE RATES AND RECORDS

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Section 1773 of the Labor Code, which requires the payment of prevailing wage on public projects. Also, that the Contractor and any subcontractors under the Contractor shall comply with Section 1776, regarding wage records, and with Section 1777.5, regarding the employment and training of apprentices, of the Labor Code. It is the Contractor's responsibility to ensure compliance by any and all subcontractors performing work under this Contract.

Bidder: _____

Type of Entity: _____

By: _____

(Authorized signature on behalf of Contractor)

Name: _____

Title: _____

Local Address: _____

Telephone () _____

Fax: () _____

NOTE: If the Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership. All signer(s) represent and warrant that they are authorized to sign this Bid on behalf of Bidder.

END OF DOCUMENT

DOCUMENT 00490

**ADDENDA
(Sample)**

**City of Santa Clara
Water and Sewer Utilities Department**

Addendum Number: []

Project: CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

Invitation Number: CE WA 30236
Date: _____, 201__
Bid Date: March 4, 2015
Bid Opening: 3:00 P.M.

TO ALL BIDDERS:

The following changes, deletions, additions, and/or clarifications shall be made to the drawings and specifications for the work of the above Project:

SPECIFICATIONS:

DRAWINGS:

This addendum is part of the Contract Documents and in case of conflict among drawings, specifications, and this addendum, the addendum shall govern.

Bidders shall acknowledge receipt of this addendum by inserting the addendum number and date and signing where indicated on DOCUMENT 00400, BID. Failure to do so may subject bidder to disqualification based upon a non-responsive bid.

Issued by the City of Santa Clara

**Shilpa B. Mehta, P.E.
Principal Engineer – Water and Sewer**

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DOCUMENT 00510

NOTICE OF AWARD

_____, 201__

DELIVERY VIA:

- Regular U.S. Mail
- Express U.S. Mail
- Overnight Carriers, (FedEx, UPS, DHL etc.)
- Facsimile @ Fax No. (____)____-____ and/or
- Electronic Mail

BIDDER'S NAME:

BIDDER'S ADDRESS:

ATTENTION:

CONTRACT REFERENCE: City of Santa Clara Contract No. WA 30236

PROJECT REFERENCE: CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

Congratulations, the intent of this letter is to inform you that the bid you submitted to the City of Santa Clara on _____, 201__ for the above referenced public works contract ("Contract"), has been received and reviewed by City staff and your firm has been determined to be the lowest responsible and responsive bidder. Based on your bid and City staff recommendation, the Santa Clara City Council awarded the Contract to your firm on _____, 201__ for the construction of the [_____] PROJECT (the "Project"). The Total Contract Price for this Contract is _____ thousand, _____ hundred, _____ dollars and _____ cents (\$_____.00).

However, before the City can execute this Contract and issue a Notice to Proceed to you to begin work on the Project, you must deliver the following documents to the Office of the City Clerk at 1500 Warburton Avenue, Santa Clara, CA 95050, within the next fifteen (15) days (on or before 5:00 p.m. on _____, 201__):

1. One (1) complete original of Contract Document 00520, Agreement, having original signature(s) of authorized representatives of your firm on the signature page.
2. One (1) complete original of Contract Document 00610, Construction Performance Bond, indicating that the required bond has been purchased in an amount equal to the Contract price. The bond must be fully executed by both authorized representatives of your firm and your surety. The signature of the surety must be notarized and the notary form attached to Document 00610.
3. One (1) complete original of Contract Document 00620, Construction Labor and Materials Payment Bond, indicating that the required bond has been purchased in amount equal to the Contract price. The bond must be fully executed by both authorized representatives of your firm and your surety. The signature of the surety must be notarized and the notary form attached to Document 00620.
4. One (1) completed original of Contract Document 00630, Guaranty, with original signature(s) of authorized representatives of your firm.

5. One (1) complete copy of all documentary information received or generated by Contractor in preparation of Bid prices for the Contract Documents as set forth in Contract Document 00670, Escrow Bid Documents.
6. Deliver to the City's insurance compliance contractor, Ebix BPO, all of the required Certificate(s) of Insurance showing proof that all of the required insurance policies, as well as all of the required policy endorsements, have been purchased and properly completed. Also, please provide a written indication that the required insurance company ratings have been met, as set forth in Contract Document 00820, Insurance Requirements. Please forward all insurance compliance information to:

City of Santa Clara Engineering Department
c/o Ebix BPO - Insurance Compliance
P.O. 12010-S2
Hemet, CA 92546-8010
Telephone: (951) 766-2280
Fax: (770) 325-0409

(or for courier delivery):
151 North Lyon Avenue
Hemet, CA 92543-3831

NOTE: Please **do not** send the insurance compliance documents to the City offices. Doing so will only delay the necessary review and the issuance of the Notice to Proceed.

IMPORTANT: Please note that failure to comply with any of the above referenced conditions within the time period specified above will entitle City, at its sole discretion, to: 1) consider your Bid abandoned; 2) annul this Notice of Award; and/or 3) declare your Bid security forfeited. Even if the City does not choose to exercise any of these options, any delay in providing said documentation beyond the deadline indicated above will not extend the Contract Time allowed for performing the Work as set forth in the Contract Documents. Any time delay caused by failure to comply with the required documentation set forth in this Notice of Award will be subtracted from the time allowed to perform the Work as specified in Document 00520, Agreement, of the Contract Documents.

After a Notice to Proceed has been issued and upon commencement of the Work under this Contract, your firm, and each of your subcontractors, must certify and make available for inspection, payroll records on forms provided by the Division of Labor Standards Enforcement, in accordance with Section 1776 of the California Labor Code.

After you have complied with the conditions of this Document 00510, Notice of Award, the City will provide one fully signed copy of Contract Document 00520, Agreement, to you for your records.

Once again, congratulations on being awarded this Contract. We look forward to working with your firm on this Project. If you have any questions regarding this Notice of Award, please contact Rashmi Ramachandra, in the City Water and Sewer Utilities Department at 1+(408) 615-2017.

Sincerely,

Rod Diridon, Jr., City Clerk
City of Santa Clara, California,
a chartered California municipal corporation

END OF DOCUMENT

DOCUMENT 00520

AGREEMENT

City of Santa Clara Contract Number WA 30236
Project Title: CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

PREAMBLE

This Agreement ("Agreement") is made and entered into on this _____ day of _____, 201____, (the "Effective Date") by and between _____, a _____ corporation, with its primary business address located at _____ ("Contractor"), and the City of Santa Clara, California, a chartered California municipal corporation, with its primary business address at 1500 Warburton Avenue, Santa Clara, California 95050 ("City"). City and Contractor may be referred to herein individually as a "Party" or collectively as the "Parties" or the "Parties to this Agreement."

The Parties agree as follows:

AGREEMENT PROVISIONS

Article 1. Work

- 1.1 Contractor shall complete all Work specified in the Contract Documents, in accordance with the Specifications, Drawings, and all other terms and conditions included in the Contract Documents.

Article 2. Agency and Notices to City

- 2.1 City has designated the Principal Engineer – Water and Sewer or his/her designee to act as City's Representative(s), who will represent City in performing City's duties and responsibilities and exercising City's rights and authorities in Contract Documents. City may change the individual(s) acting as City's Representative(s), or delegate one or more specific functions to one or more specific City's Representatives, including without limitation engineering, architectural, inspection and general administrative functions, at any time with notice and without liability to Contractor. Each City Representative is the beneficiary of all Contractor obligations to City, including without limitation, all releases and indemnities.
- 2.2 City has designated the Principal Engineer – Water and Sewer or his/her designee to act as Construction Manager. City may assign all or part of the City Representative's rights, responsibilities and duties to Construction Manager. City may change the identity of the Construction Manager at any time with notice and without liability to Contractor.
- 2.3 City has designated GHD Inc. to act as Consulting Engineers. City may change the identity of the Consulting Engineer(s) at any time with notice and without liability to Contractor.
- 2.4 All notices or demands to City under the Contract Documents shall be delivered to the City's Representative at 1500 Warburton Avenue, Santa Clara, California 95050, or to such other person(s) and address(es) as City shall provide to Contractor.

Article 3. Contract Time and Liquidated Damages

3.1 Contractor shall commence Work at the Site on the date established in Document 00550, Notice to Proceed. The City reserves the right to modify or alter the Commencement Date of the Work due to the need to complete other City provided work at the Site. Contractor shall complete the Work within the following Schedule reflecting the date the Contract Time commences to run as set forth in Document 00550, Notice to Proceed and Document 00700, General Conditions:

3.1.1 The Work shall reach Substantial Completion within two hundred seventy (270) Calendar Days from the date when the Contract Time commences to run.

3.1.2 The Work shall reach Final Completion within three hundred (300) Calendar Days from the date when the Contract Time commences to run.

3.2 Liquidated Damages.

City and Contractor recognize that time is of the essence of this Agreement and that City will suffer financial loss in the form of lost revenues, contract administration expenses (including project management and consultants' expenses), delay and loss of public use, if all or any part of the Work is not completed within the time specified in paragraph 3.1 above plus any extensions thereof allowed in accordance with the Contract Documents. Consistent with Article 15 of Document 00700, General Conditions, Contractor and City agree that because of the nature of the Project, it would be impractical or extremely difficult to fix the amount of actual damages incurred by City because of a delay in completion of all or any part of the Work.

Accordingly, City and Contractor agree that as liquidated damages for delay, Contractor shall pay City:

3.2.1 \$1,500 for each Day that expires after the time specified herein for Contractor to achieve Substantial Completion, until the Work reaches Substantial Completion.

3.2.2 \$2,000 for each Day that expires after the time specified herein for Contractor to achieve Final Completion, until the Work reaches Final Completion.

These measures of liquidated damages shall apply cumulatively and shall be presumed to be, except as provided herein, the damages suffered by City resulting from the delay in completion of the Work.

3.3 Liquidated damages for delay shall only cover administrative, overhead, interest on bonds, and general loss of public use damages suffered by City as a result of delay. Liquidated damages shall not cover the cost of completion of the Work, damages resulting from defective work, lost revenues or costs of substitute facilities, or damages suffered by others who then seek to recover their damages from City (for example, delay claims of other contractors, subcontractors, tenants, or other third-parties), and defense costs thereof.

Article 4. Total Contract Price

4.1 City shall pay Contractor the Contract Sum for completion of Work in accordance with Contract Documents as shown on the Contractor's Bid, Document 00400, incorporated by this reference.

///

- 4.2 The Contract Sum is all inclusive and includes all Work; all federal, state, and local taxes on materials and equipment, and labor furnished by Contractor, its subcontractors, subconsultants, architects, engineers, and vendors or otherwise arising out of Contractor's performance of the Work, including any increases in any such taxes during the term of this Agreement; and any duties, fees, and royalties imposed with respect to any materials and equipment, labor or services. The taxes covered hereby include (but are not limited to) occupational, sales, use, excise, unemployment, FICA, and income taxes, customs, duties, and any and all other taxes on any item or service that is part of the Work, whether such taxes are normally included in the price of such item or service or are normally stated separately. Notwithstanding the foregoing, each party shall bear such state or local inventory, real property, personal property or fixtures taxes as may be properly assessed against it by applicable taxing authorities.

Article 5. Contractor's Representations and Warranties

In order to induce City to enter into this Agreement, Contractor makes the following representations and warranties:

- 5.1 Contractor has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions and federal, state and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the design and the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.
- 5.2 Contractor has examined thoroughly and understood all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, product specifications or reports, available for Bidding purposes, of physical conditions, including Underground Facilities, which are identified in Document 00320, Geotechnical Data and Existing Conditions, which may be apparent at the Site, or which may appear in the Drawings and accepts the determination set forth in these documents and Document 00700, General Conditions of the limited extent of the information contained in these documents and materials upon which the Contractor may be entitled to rely. Contractor agrees that except for the information so identified, Contractor does not and shall not rely on any other information contained in these documents, reports and drawings.
- 5.3 Contractor has conducted or obtained and has understood all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Section 5.2 of this Document 00520) that pertain to the subsurface conditions, as-built conditions, Underground Facilities and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance or furnishing of Work, as Contractor considers necessary for the performance or furnishing of Work at the Contract Sum, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Document 00700, General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.
- 5.4 Contractor has correlated its knowledge and the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 5.5 Contractor has given City prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by City is acceptable to Contractor.

- 5.6 Contractor is duly organized, existing and in good standing under applicable state law, and is duly qualified to conduct business in the State of California.
- 5.7 Contractor has duly authorized the execution, delivery and performance of this Agreement, the other Contract Documents and the Work to be performed herein. The Contract Documents do not violate or create a default under any instrument, agreement, order or decree binding on Contractor.

Article 6. Contract Documents

- 6.1 Contract Documents, which comprise the entire agreement between the City and Contractor concerning the Work, consist of the following documents, including all changes, Addenda and Modifications thereto:

CONTRACT DOCUMENTS

Division 0 - GENERAL PROVISIONS.
Division 1 - GENERAL REQUIREMENTS.
Division 2 - TECHNICAL PROVISIONS.
Division 3 and above - SPECIAL PROVISIONS.
Plans

- 6.2 There are no Contract Documents other than those listed above in this Article 6. The information supplied under Document 00320, Geotechnical Data and Existing Conditions, is not part of the Contract Documents. The Contract Documents may only be amended, modified or supplemented as provided in Document 00700, General Conditions.

Article 7. Miscellaneous

- 7.1 Terms used in this Agreement are defined in Document 00700, General Conditions and Section 00050, References and Definitions, and will have the meaning indicated therein.
- 7.2 It is understood and agreed that in no instance is any person, signing this Agreement for or on behalf of City or acting as an employee, agent or representative of City, liable on this Agreement or any of the Contract Documents, or upon any warranty of authority, or otherwise, and it is further understood and agreed that liability of the City is limited and confined to such liability as authorized or imposed by the Contract Documents or applicable law.
- 7.3 Contractor shall not assign any portion of the Contract Documents, and may subcontract portions of the Contract Documents only in compliance with the Subcontractor Listing Law, California Public Contracting Code §4100 et seq.
- 7.4 The Contract Sum includes all allowances (if any).
- 7.5 In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. §15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time City tenders final payment to Contractor, without further acknowledgment by the parties.

7.8 This Agreement and the Contract Documents shall be deemed to have been entered into in the County of Santa Clara, State of California, and governed in all respects by California law (excluding choice of law rules). The exclusive venue for all disputes or litigation hereunder shall be in Santa Clara County. Both parties hereby waive their rights under California Code of Civil Procedure Section 394 to file a motion to transfer any action or proceeding arising out of the Contract Documents to another venue. Contractor accepts the Claims Procedure in Document 00700, Article 12, established under the California Government Code, Title 1, Division 3.6, Part 3, Chapter 5.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day first mentioned above.

CITY OF SANTA CLARA, CALIFORNIA,
a chartered California municipal corporation

Approved as to form:

RICHARD E. NOSKY, JR.
City Attorney

JULIO J. FUENTES
City Manager

Attest:

1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: 1+(408) 615-2210
Fax: 1+(408) 241-0347

ROD DIRIDON, JR.
City Clerk

“City”

***[NAME OF BUSINESS/COMPANY],**
a _____ (Corp/Partnership/Trust, Etc)

By: _____
(Signature of Person executing the Agreement on behalf of Contractor)

(Please Print or Type Name)

Title: _____

Local Address: _____

Telephone: () -
Fax: () -

“Contractor”

END OF DOCUMENT

DOCUMENT 00550

NOTICE TO PROCEED

Date: _____, 201__

Name
Company
Address
City, State Zip

Re: NOTICE TO PROCEED – CORPORATION YARD WATER STORAGE TANK AND
PUMP STATION PROJECT WA 30236

Dear _____:

In accordance with Paragraph 3 of Document 00700, General Conditions, this letter is your NOTICE TO PROCEED with the Work for the referenced Project.

Time will be charged on the Project beginning _____, 201__. Document 00520 provides ____ Days to achieve Substantial Completion and ____ Days to achieve Final Completion. The calculated date of Substantial Completion is _____, 201__ and the calculated date of Final Completion is _____, 201__. Should the Work not be completed on time, liquidated damages are to be charged at the rate of \$_____ per Day up to Substantial Completion and \$_____ per Day up to Final Completion.

The City is interested in having a good working relationship with you and delivering a successful Project. If you need any assistance, please call me at 1+(408) 615-3061.

Sincerely,

Christopher L. de Groot
Director of Water and Sewer Utilities

Shilpa B. Mehta, P.E.
Principal Engineer – Water and Sewer

CdG:SM:RR

END OF DOCUMENT

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DOCUMENT 00610

CONSTRUCTION PERFORMANCE BOND

This Construction Performance Bond ("Bond"), dated _____, 201__, is issued in the amount of _____ Dollars, (\$_____), (the "Penal Sum ") which is equal to one hundred percent of the Contract Price, and is entered into by and between the Contractor and the Surety to ensure the faithful performance of the Construction Contract defined below. This Bond consists of this page and the Bond Terms and Conditions, Paragraphs 1 through 13, attached and incorporated by this reference. The Contractor and Surety are the parties to this Bond, which has been issued for the benefit of the City of Santa Clara, California, a chartered California municipal corporation ("City") and in compliance with the terms of the Construction Contract. Any singular reference to the Contractor, Surety, City or other party shall be considered plural where applicable.

The City of Santa Clara Construction Contract to which this Bond applies is:

CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

City Contract Number: WA 30236

In the Amount of \$ _____ (Referred to as the "Total Contract Price")

The Contractor and Surety each acknowledge and accept the terms and conditions of this Bond as evidenced by the following signatures of their representatives. The Contractor and Surety each specifically represent that the individual representatives who have signed below are duly authorized to execute this Bond on its behalf. It is the intent of the Parties that this Bond shall become operative on the date first set forth above.

CONTRACTOR AS PRINCIPAL:

SURETY:

Name: _____

Name: _____

Principal Place of Business:

Principal Place of Business:

Address: _____

Address: _____

City/State/Zip _____

City/State/Zip _____

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

(Please Note: Surety signature must be notarized)

(Please Apply Corporate Seal Here)

(Please Apply Corporate Seal Here)

Approved as to Form:

City Attorney

Date: _____, 201__

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to City for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.
2. If Contractor completely and properly performs all of its obligations under the Construction Contract, Surety and Contractor shall have no obligation under this Bond.
3. If there is no City Default, Surety's obligation under this Bond shall arise after:
 - 3.1 City has declared a Contractor Default under the Construction Contract pursuant to the terms of the Construction Contract; and
 - 3.2 City has agreed to pay the Balance of the Contract Price:
 - 3.2.1 To Surety in accordance with the terms of this Bond and the Construction Contract; or
 - 3.2.2 To a contractor selected to perform the Construction Contract in accordance with the terms of this Bond and the Construction Contract.
4. When City has satisfied the conditions of paragraph 3, Surety shall promptly (within 30 days) and at Surety's expense elect to take one of the following actions:
 - 4.1 Arrange for Contractor, with consent of City, to perform and complete the Construction Contract (but City may withhold consent, in which case the Surety must elect an option described in paragraphs 4.2, 4.3 or 4.4, below); or
 - 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; provided, that Surety may not select Contractor as its agent or independent contractor without City's consent; or
 - 4.3 Undertake to perform and complete the Construction Contract by obtaining bids from qualified contractors acceptable to City for a contract for performance and completion of the Construction Contract, and, upon determination by City of the lowest responsible bidder, arrange for a contract to be prepared for execution by City and the contractor selected with City's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract; and, if Surety's obligations defined in paragraph 6, below, exceed the Balance of the Contract Price, then Surety shall pay to City the amount of such excess; or
 - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances, and, after investigation and consultation with City, determine in good faith its monetary obligation to City under paragraph 6, below, for the performance and completion of the Construction Contract and, as soon as practicable after the amount is determined, tender payment therefore to City with full explanation of the payment's calculation. If City accepts Surety's tender under this paragraph 4.4, City may still hold Surety liable for future damages then unknown or unliquidated resulting from the Contractor Default. If City disputes the amount of Surety's tender under this paragraph 4.4, City may exercise all remedies available to it at law to enforce Surety's liability under paragraph 6, below.

5. If Surety does not proceed as provided in paragraph 4, above, then Surety shall be deemed to be in default on this Bond ten days after receipt of an additional written notice from City to Surety demanding that Surety perform its obligations under this Bond. At all times City shall be entitled to enforce any remedy available to City at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform work, protect work, mitigate damages, advance critical work to mitigate schedule delay, or coordinate work with other consultants or contractors.
6. Surety's monetary obligation under this Bond is limited by the Amount of this Bond identified herein as the Penal Sum. This monetary obligation shall augment the Balance of the Contract Price. Subject to these limits, Surety's obligations under this Bond are commensurate with the obligations of Contractor under the Construction Contract. Surety's obligations shall include, but are not limited to:
 - 6.1 The responsibilities of Contractor under the Construction Contract for completion of the Construction Contract and correction of defective work;
 - 6.2 The responsibilities of Contractor under the Construction Contract to pay liquidated damages, and for damages for which no liquidated damages are specified in the Construction Contract, actual damages caused by non-performance of the Construction Contract including, but not limited to, all valid and proper backcharges, offsets, payments, indemnities, or other damages;
 - 6.3 Additional legal, design professional and delay costs resulting from Contractor Default or resulting from the actions or failure to act of the Surety under paragraph 4, above (but excluding attorney's fees incurred to enforce this Bond).
7. No right of action shall accrue on this Bond to any person or entity other than City or its successors or assigns.
8. Surety hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. Surety consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required thereunder, shall release or exonerate Surety on this Bond or in any way affect the obligations of Surety on this Bond.
9. Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction where a proceeding is pending between City and Contractor regarding the Construction Contract, or in the courts of the County of Santa Clara, or in a court of competent jurisdiction in the location in which the work is located. Communications from City to Surety under paragraph 3.1 of this Bond shall be deemed to include the necessary agreements under paragraph 3.2 of this Bond unless expressly stated otherwise.
10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in Document 00520, Agreement. Actual receipt of notice by Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.
11. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein.

12. Definitions.
- 12.1 Balance of the Contract Price: The total amount payable by City to Contractor pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved modifications to the Construction Contract.
 - 12.2 Construction Contract: The agreement between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.
 - 12.3 Contractor Default: Material failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract including, but not limited to, "default" or any other condition allowing a termination for cause as provided in Document 00700, General Conditions.
 - 12.4 City Default: Material failure of City, which has neither been remedied nor waived, to pay Contractor progress payments due under the Construction Contract or to perform other material terms of the Construction Contract, if such failure is the cause of the asserted Contractor Default and is sufficient to justify Contractor termination of the Construction Contract.
13. Surety shall submit following documents along with this Construction Performance Bond:
- 13.1 Verification that Surety is admitted to transact surety business the State of California; and
 - 13.2 Copy of Surety's Certificate of authority issued by the insurance Commissioner of the State of California along with a statement that said Certificate has not been surrendered, revoked, cancelled, annulled or suspended.

END OF DOCUMENT

DOCUMENT 00620

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

This Construction Labor And Material Payment Bond ("Bond") dated _____, 201__, is issued in the amount of _____ Dollars (\$ _____), (the "Penal Sum ") which is equal to one hundred percent of the Contract Price, and is entered into by and between the Contractor and the Surety to ensure the payment of claimants under the Construction Contract defined below. This Bond consists of this page and the Bond Terms and Conditions, Paragraphs 1 through 14, attached and incorporated by this reference. The Contractor and Surety are the parties to this Bond, which has been issued for the benefit of the City of Santa Clara, California, a chartered California municipal corporation ("City") in compliance with the terms of the Construction Contract. Any singular reference to the Contractor, Surety, City or other party shall be considered plural where applicable.

The City of Santa Clara Construction Contract to which this Bond applies is:

THE CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

City Contract Number: WA 30236

In the Amount of \$ _____ (Referred to as the "Contract Price")

The Contractor and Surety each acknowledge and accept the terms and conditions of this Bond as evidenced by the following signatures of their representatives. The Contractor and Surety each specifically represent that the individual representatives who have signed below are duly authorized to execute this Bond on its behalf. It is the intent of the Parties that this Bond shall become operative on the date first set forth above.

CONTRACTOR AS PRINCIPAL:

SURETY:

Name: _____

Name: _____

Principal Place of Business:

Principal Place of Business:

Address: _____

Address: _____

City/State/Zip _____

City/State/Zip _____

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

(Please Note: Surety signature must be notarized)

(Please Apply Corporate Seal Here)

(Please Apply Corporate Seal Here)

Approved as to Form:

City Attorney

Date: _____

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to City and to Claimants, to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to City, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and
 - 2.2 Defends, indemnifies and holds harmless City from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided City has promptly notified Contractor and Surety (at the address set forth on the signature page of this Bond) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to Contractor and Surety, and provided there is no City Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly through its Subcontractors, for all sums due Claimants. If Contractor or its Subcontractors, however, fail to pay any of the persons named in Section 3181 of the California Civil Code, or amounts due under the Unemployment Insurance Code with respect to Work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Contractor or Subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such Work and labor, then Surety shall pay for the same, and also, in case suit is brought upon this Bond, a reasonable attorney's fee, to be fixed by the court.
4. Consistent with the California Mechanic's Lien Law, Civil Code §3082, *et seq.*, Surety shall have no obligation to Claimants under this Bond unless the Claimant has satisfied all applicable notice requirements.
5. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety under this Bond.
6. Amounts due Contractor under the Construction Contract shall be applied first to satisfy claims, if any, under any Construction Performance Bond and second, to satisfy obligations of Contractor and Surety under this Bond.
7. City shall not be liable for payment of any costs, expenses, or attorney's fees of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
8. Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations. Surety further hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Construction Contract, or to the Work to be performed thereunder, or materials or equipment to be furnished thereunder or the Specifications accompanying the same, shall in any way affect its obligations under this Bond, and it does hereby waive any requirement of notice or any such change, extension of time, alteration or addition to the terms of the Construction Contract or to the Work or to the Specifications or any other changes.

9. Suit against Surety on this Bond may be brought by any Claimant, or its assigns, at any time after the Claimant has furnished the last of the labor or materials, or both, but, per Civil Code §3249, must be commenced before the expiration of six months after the period in which stop notices may be filed as provided in Civil Code §3184.
10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in Document 00520 (Agreement). Actual receipt of notice by Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.
11. This Bond has been furnished to comply with the California Mechanic's Lien Law including, but not limited to, Civil Code §§3247, 3248, *et seq.* Any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirements shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
13. Definitions.
 - 13.1 Claimant: An individual or entity having a direct contract with Contractor or with a Subcontractor of Contractor to furnish labor, materials or equipment for use in the performance of the Contract, as further defined in California Civil Code §3181. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a stop notice might be asserted. The term Claimant shall also include the Unemployment Development Department as referred to in Civil Code §3248(b).
 - 13.2 Construction Contract: The agreement between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.
 - 13.3 City Default: Material failure of City, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract, provided that failure is the cause of the failure of Contractor to pay the Claimants and is sufficient to justify termination of the Construction Contract.
14. Surety shall submit following documents along with this Construction Labor and Material Payment Bond:
 - 14.1 Verification that Surety is admitted to transact surety business the State of California; and
 - 14.2 Copy of Surety's Certificate of authority issued by the insurance Commissioner of the State of California along with a statement that said Certificate has not been surrendered, revoked, cancelled, annulled or suspended.

END OF DOCUMENT

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DOCUMENT 00630

GUARANTY

TO THE CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California ("City"),
for construction of:

CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT

SANTA CLARA, CALIFORNIA

1. The undersigned guarantees all construction performed on this Project and also guarantees all material and equipment incorporated therein.
2. Contractor hereby grants to City for a period of one (1) year following the date of Final Completion, or such longer period specified in the Contract Documents, its unconditional warranty of the quality and adequacy of all of the Work including, without limitation, all labor, materials and equipment provided by Contractor and its Subcontractors of all tiers in connection with the Work.
3. Neither final payment nor use or occupancy of the Work performed by the Contractor shall constitute an acceptance of Work not done in accordance with this Guaranty or relieve Contractor of liability in respect to any express warranties or responsibilities for faulty materials or workmanship. Contractor shall remedy any defects in the Work and pay for any damage resulting therefrom, which shall appear within one (1) year, or longer if specified in the Contract Documents, from the date of Final Completion.
4. If within one (1) year after the date of Final Completion, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to City and in accordance with City's written instructions, correct such defective Work. Contractor shall remove any defective Work rejected by City and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, City may have the defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct defective Work, or defects are discovered outside the correction period, City shall have all rights and remedies granted by law.
5. Inspection of the Work shall not relieve Contractor of any of its obligations under the Contract Documents. Even though equipment, materials, or Work required to be provided under the Contract Documents have been inspected, accepted, and estimated for payment, Contractor shall, at its own expense, replace or repair any such equipment, material, or Work found to be defective or otherwise not to comply with the requirements of the Contract Documents up to the end of the guaranty period.
6. All abbreviations and definitions of terms used in this Agreement shall have the meanings set forth in the Contract Documents, including, without means of limitation, Section 00050, References and Definitions.

7. The foregoing Guaranty is in addition to any other warranties of Contractor contained in the Contract Documents, and not in lieu of, any and all other liability imposed on Contractor under the Contract Documents and at law with respect to Contractor's duties, obligations, and performance under the Contract Documents. In the event of any conflict or inconsistency between the terms of this Guaranty and any warranty or obligation of the Contractor under the Contract Documents or at law, such inconsistency or conflict shall be resolved in favor of the higher level of obligation of the Contractor.

***[NAME OF BUSINESS/COMPANY],**
a _____ (Corp/Partnership/Trust, Etc)

By: _____ Date _____
(Signature of Person authorized to sign on behalf of Contractor)

(Please Print or Type Name)

Title

Local Address: _____

Telephone: (____) ____ - _____

Fax: (____) ____ - _____

END OF DOCUMENT

DOCUMENT 00650

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THIS AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS ("Agreement and Release"), is made and entered into on this _____ day of _____, 201__, (the "Effective Date"), by and between the City of Santa Clara, California, a chartered California municipal corporation, whose primary place of business is located at 1500 Warburton Avenue, Santa Clara, CA 95050 ("City"), and *[insert Consultant's name], a *[choose one: corporation/partnership/individual], whose primary place of business is located at *[insert Consultant's address] ("Contractor"). City and Contractor may be referred to in this Agreement and Release individually as a "Party" or collectively as the "Parties" or the "Parties to this Agreement and Release."

RECITALS

- A. City and Contractor entered into Contract Number WA 30236 (the "Contract").
- B. The Work under the Contract has been completed.

Now, therefore, it is mutually agreed between City and Contractor as follows:

AGREEMENT

- 1. Contractor will not be assessed liquidated damages except as detailed below:

Original Contract Sum	\$ _____
Modified Contract Sum	\$ _____
Payment to Date	\$ _____
Liquidated Damages	\$ _____
Payment Due Contractor	\$ _____

- 2. Subject to the provisions of this Agreement and Release, City will forthwith pay to Contractor the sum of \$ _____ Dollars and _____ Cents (\$ _____) under the Contract, less any amounts withheld under the Contract or represented by any Notice to Withhold Funds on file with City as of the date of such payment.
- 3. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against City arising from the Contract, except for the claims described in paragraph 4 of this Document 00650. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against City, and all of its agents, employees, consultants (including without limitation Consulting Engineer), inspectors, representatives, assignees and transferees except for the Disputed Claims set forth in paragraph 4 of this Document 00650. Nothing in this Agreement and Release shall limit or modify Contractor's continuing obligations described in paragraph 6 of this Document 00650.

4. The following claims are disputed (hereinafter, the "Disputed Claims") and are specifically excluded from the operation of this Agreement and Release:

<u>Claim No.</u>	<u>Date Submitted</u>	<u>Description of Claim</u>	<u>Amount of Claim</u>
------------------	-----------------------	-----------------------------	------------------------

[Insert information, including attachment if necessary]

5. Consistent with California Public Contract Code Section 7100, Contractor hereby agrees that, in consideration of the payment set forth in paragraph 2 of this Document 00650, Contractor hereby releases and forever discharges City, and all of its agents, employees, consultants, inspectors, assignees and transferees from any and all liability, claims, demands, actions or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract.
6. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.
7. Contractor shall immediately defend, indemnify and hold harmless the City and all City Representatives, Engineers, agents, employees, consultants, inspectors, assignees and transferees from any and all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities that may be asserted against them by any of Contractor's suppliers and/or Subcontractors of any tier and/or any suppliers to them for any and all labor, materials, supplies and equipment used, or contemplated to be used in the performance of the Contract, except for the Disputed Claims set forth in paragraph 4 of this Document 00650.
8. Contractor hereby waives the provisions of California Civil Code Section 1542, which provides as follows:
- A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.
9. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable, and if any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal or other law, ruling, or regulation, then such provision, or part thereof shall remain in force and effect only to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.
10. Contractor represents and warrants that it is the true and lawful owner of all claims and other matters released pursuant to this Agreement and Release, and that it has full right, title and authority to enter into this instrument. Each party represents and warrants that it has been represented by counsel of its own choosing in connection with this Agreement and Release.
11. All rights of City shall survive completion of the Work or termination of the Contract, and execution of this Agreement and Release.

***** CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING *****

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date.

“Contractor”

By: _____

Name: _____

Its: _____

By: _____

Name: _____

Its: _____

Local Address: _____

Telephone: () _____ - _____
Fax: () _____ - _____

“City”

CITY OF SANTA CLARA, CALIFORNIA,
a chartered California municipal corporation

Approved as to form:

RICHARD E. NOSKY, JR.
City Attorney

JULIO J. FUENTES
City Manager

Attest:

1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: 1+(408) 615-2210
Fax: 1+(408) 241-0347

ROD DIRIDON, JR.
City Clerk

Date: _____, 201__

END OF DOCUMENT

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DOCUMENT 00654

WORKERS' COMPENSATION INSURANCE STATEMENT

TO: The City of Santa Clara, California, 1500 Warburton Avenue, Santa Clara, CA 95050

Contractor hereby states the following:

1. California Labor Code Section 1861
Certification by Contractor regarding Workers' Compensation Insurance Requirements

I am aware of the provisions of Section 3700 of the Labor Code of the State of California, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the Work under this Contract.

2. California Labor Code Section 3800
Declaration verifying Workers' Compensation Insurance Coverage

In the event the Contractor is determined to be the lowest responsible and responsive bidder and is awarded this Contract by the City, Contractor shall verify under penalty of perjury, and provide evidence or confirmation of the existence and status of its Workers' Compensation Insurance Policy. Such information shall be provided by the Contractor in a form acceptable to the City Attorney or the City's insurance compliance representatives within the time period specified in Document 00510, Notice of Award, and shall include, but not be limited to, evidence or confirmation of the following:

- a. The Contractor has purchased and is maintaining a valid Workers' Compensation Insurance Policy in a form approved by the California Insurance Commissioner, and that said Workers' Compensation Insurance Policy is in full force and effect on behalf of the Contractor;
- b. The full deposit premium on the policy has been paid;
- c. The coverage afforded to the Contractor under its Workers' Compensation Insurance Policy is in accordance with the Workers' Compensation Law of California and complies with California statutory limits;
- d. Verification of the expiration date of the Contractor's Workers' Compensation Insurance Policy;
- e. Advance written notice shall be given to the City in the event of cancellation of the policy. The undersigned shall provide such notice to the City of Santa Clara, within the time period specified in Document 00820, Insurance Requirements; and

///
///
///
///
///

- f. The policy includes a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

Contractor: _____
Contractor's Signature
Note: Signature of the Contractor must be notarized

By: _____
Print/Type Name of Signatory

Its: _____
Title of Signatory

Signed this _____ day of _____, 201__.

END OF DOCUMENT

DOCUMENT 00660

SUBSTITUTION REQUEST

To: The City of Santa Clara,
A chartered Municipal Corporation of the State of California ("City")

Project: **CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT**

Bidder/Contractor: _____
[note applicable]

Subcontractor/Supplier: _____

Drawing Sheet Reference/Detail No: _____

The undersigned Bidder submits for consideration the following item(s) instead of the specified item for the above project:

<u>Section</u>	<u>Paragraph</u>	<u>Specified Item</u>
_____	_____	_____
_____	_____	_____

Proposed Substitution: _____

The undersigned encloses the information required herein. If this Document 00660 is being submitted by a Bidder wishing to use "or equal" item(s) as provided in Document 00200, Instructions to Bidders, the undersigned Bidder must also enclose the technical information (other than cost) otherwise required for a post-Award of Contract Request for Substitution ("RFS") under Section 01600, Product Requirements. However, If this Document 00660 is being submitted under provisions of Contract Documents after Award of Contract, the undersigned Contractor must include all information required under Section 1600, Product Requirements.

The undersigned has (a) attached manufacturer's literature, including complete technical data and laboratory test results, if applicable, (b) attached an explanation of why proposed substitution is a true equivalent to specified item, (c) included complete information on changes to Drawings and Specifications that the proposed substitution will require for its proper installation, and (d) filled in the blanks below:

A. Does the substitution affect dimensions shown on Drawings?

B. Are the manufacturer's guarantees and warranties on the proposed substitution items identical to those on the specified items? If there are differences, please specify each and every difference in detail.

C. What effect does the substitution have on other contractors, trades, or suppliers?

D. What are the differences between the proposed substitution and the specified item? If proposed substitution has a color or pattern, provide a color board showing proposed substitution in relation to the other adjacent colors and patterns.

E. Will granting the requested substitution cause any schedule delay? (If yes, please explain)

The undersigned Bidder certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item.

Submitted by:

Bidder/Contractor
[note applicable]

For Use by City or Design Consultant:

____ Accepted ____ Accepted as Noted

Signature

____ Not Accepted ____ Received Too Late

Name

By: _____

Address

Date: _____

City/State/Zip

Remarks: _____

Telephone: _____

Date: _____, 201____

END OF DOCUMENT

DOCUMENT 00680

**ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION
P.C.C. §22300**

THIS ESCROW AGREEMENT ("Escrow Agreement") is made and entered into on this ____ day of _____, 201__, by and between the CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California (hereinafter "City"), whose address is 1500 Warburton Avenue, Santa Clara, California 95050; _____ ("Contractor"), whose place of business is located at _____; and [City, as escrow agent ...OR... _____], a state or federally chartered bank in the State of California, whose place of business is located at _____] ("Escrow Agent").

For the consideration hereinafter set forth, City, Contractor and Escrow Agent agree as follows:

1. Pursuant to Section 22300 of Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by City pursuant to Contract Number WA 30236 entered into between City and Contractor for CORPORATION YARD WATER STORAGE TANK AND PUMP STATION PROJECT in the amount of [_____] dated [_____, 201__] (the "Contract"). Alternatively, on written request of Contractor, City shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify City within ten Days of the deposit. The market value of the securities at the time of substitution shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between City and Contractor. Securities shall be held in name of _____, and shall designate Contractor as the beneficial owner.
2. City shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified in paragraph 1 of this Document 00680.
3. When City makes payment(s) of retention earned directly to Escrow Agent, Escrow Agent shall hold said payment(s) for the benefit of Contractor until the time that the escrow created under this Escrow Agreement is terminated. Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when City pays Escrow Agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of City. Such expenses and payment terms shall be determined by City, Contractor, and Escrow Agent.
5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to City.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from City to Escrow Agent that City consents to withdrawal of amount sought to be withdrawn by Contractor.

7. City shall have the right to draw upon the securities in event of default by Contractor. Upon seven Days written notice to Escrow Agent from City of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by City.
8. Upon receipt of written notification from City certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.
9. Escrow Agent shall rely on written notifications from City and Contractor pursuant to paragraphs 5 through 8, inclusive, of this Document 00680 and City and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth.
10. Names of persons who are authorized to give written notice or to receive written notice on behalf of City and on behalf of Contractor in connection with the foregoing, and exemplars of their respective are as follows:

ON BEHALF OF CITY:

Title

Name

Signature

Address

City/State/Zip

ON BEHALF OF CONTRACTOR:

Title

Name

Signature

Address

City/State/Zip

ON BEHALF OF ESCROW AGENT:

Title

Name

Signature

Address

City/State/Zip

At the time the Escrow Account is opened, City and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Document 00680.

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

CITY:

CONTRACTOR:

Title

Title

Name

Name

Signature

Signature

ESCROW AGENT:

Title

Name

Signature

REVIEWED AS TO FORM:

City Attorney

Date

_____, 201__

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DOCUMENT 00690

PUBLIC WORKS CONTRACT CHANGE ORDER (Sample)

PUBLIC WORKS CONTRACT CHANGE ORDER NO.
(Per City of Santa Clara Public Works Agreement)

This Change Order is issued after the Effective Date of the Agreement and modifies the terms of the Agreement. It is signed by Contractor, Engineer and Owner and authorizes the addition(s), deletion(s) or revision(s) in the Work described in the Agreement and/or provides for an adjustment in the Contract Price and/or the Contract Times included in the Agreement.

PROJECT NAME: CORPORATION YARD WATER STORAGE TANK AND PUMP STATION
CITY CONTRACT NO. WA 30236

OWNER: CITY OF SANTA CLARA, CALIFORNIA
ENGINEER:
CONTRACTOR:

Contractor agrees to make the following changes in the Contract Work and/or Contract Times:

Description of Change(s) to be Made:

CHANGE IN CONTRACT PRICE:

Net Change This Change Order:
\$

CHANGE IN CONTRACT TIMES:

Net Change in Contract Time Per This Change Order:

The Parties to this negotiated Contract modification ("Change Order") acknowledge and agree that this Change Order amends the Contract between the City and Contractor and changes the Contract Documents to adjust the Contract Price, Contract Time, or both. A significant element of the consideration between the Parties which formed the basis for this Change Order is that it includes all of the costs related to the changes in the Scope of Work to be performed by the Contractor. As an integral part of the consideration for this Change Order, any Work performed or to be performed as a result of this Change Order and any direct or indirect costs related to such Work (including, but not limited to, any and all home office overhead, special overhead, delay costs, costs incurred due to lost efficiency or contract delays of any kind) have been included in the Description of Changes to be made, above. The Parties agree that all other terms and conditions included in the Contract Documents and all previous Change Orders which have not been addressed in this Change Order shall remain unchanged and continue in full force and effect. By signing below, Contractor affirms under penalty of perjury under the laws of the State of California that this Change Order is a true and correct claim for necessary additional work, and is not a false claim under Government Code § 12650 et seq.

ENGINEER Recommended:

By: _____
Engineer
(Authorized Signature)

Date: _____

DEPARTMENT HEAD Recommended:

By: _____

Date: _____

CONTRACTOR Accepted and Agreed:

By: _____
Contractor
(Authorized Signature)

Date: _____

CITY OF SANTA CLARA Approved:

By: _____
Interim City Manager

Attest: _____
City Clerk

Approved as to Form:

City Attorney

Date: _____
The Effective Date of this Change Order

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DOCUMENT 00820

INSURANCE REQUIREMENTS

INSURANCE REQUIREMENTS

Without limiting the Contractor's indemnification of the City, and prior to commencing any of the Services required under this Agreement, the Contractor shall purchase and maintain in full force and effect, at its sole cost and expense, the following insurance policies with at least the indicated coverages, provisions and endorsements:

COMMERCIAL GENERAL LIABILITY INSURANCE

Commercial General Liability Insurance policy which provides coverage at least as broad as Insurance Services Office form CG 00 01. Policy limits are subject to review, but shall in no event be less than, the following:

- \$5,000,000 Each occurrence
- \$5,000,000 General Aggregate
- \$5,000,000 Products/Completed Operations Aggregate
- \$5,000,000 Personal Injury
- \$5,000,000 Project Aggregate

Exact structure and layering of the coverage shall be left to the discretion of Contractor; however, any excess or umbrella policies used to meet the required limits shall be at least as broad as the underlying coverage and shall otherwise follow form.

The following provisions shall apply to the Commercial Liability policy as well as any umbrella policy maintained by the Contractor to comply with the insurance requirements of this Agreement:

- a. Coverage shall be on a "pay on behalf" basis with defense costs payable in addition to policy limits;
- b. There shall be no cross liability exclusion which precludes coverage for claims or suits by one insured against another; and
- c. Coverage shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of liability.

BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business automobile liability insurance policy which provides coverage at least as broad as ISO form CA 00 01 with policy limits a minimum limit of not less than five million dollars (\$5,000,000) each accident using, or providing coverage at least as broad as, Insurance Services Office form CA 00 01. Liability coverage shall apply to all owned, non-owned and hired autos.

In the event that the Work being performed under this Agreement involves transporting of hazardous or regulated substances, hazardous or regulated wastes and/or hazardous or regulated

materials, Contractor and/or its subcontractors involved in such activities shall provide coverage with a limit of five million dollars (\$5,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage Policy of Environmental Impairment Endorsement MCS90 or Insurance Services Office endorsement form CA 99 48, which amends the pollution exclusion in the standard Business Automobile Policy to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto.

WORKERS' COMPENSATION

Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars (\$1,000,000) policy limit Bodily Injury by disease, one million dollars (\$1,000,000) each accident/Bodily Injury and one million dollars (\$1,000,000) each employee Bodily Injury by disease.

The indemnification and hold harmless obligations of Contractor included in this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any subcontractor under any Workers' Compensation Act(s), Disability Benefits Act(s) or other employee benefits act(s).

This policy must include a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

POLLUTION LIABILITY

In the event that this contract involves hazardous or regulated wastes and/or hazardous or regulated materials, Contractor and/or its subcontractors shall provide a Contractor's Pollution Liability Insurance policy with coverage limits not less than five million dollars (\$5,000,000) each claim in connection with the Work performed under this Contract. All activities contemplated in this agreement shall be specifically scheduled on the policy as "covered operations." Any deductible must be declared to and approved by City. Such policy shall cover, at a minimum, liability for bodily injury, damage to and loss of use of property, and clean-up costs arising from sudden, accidental and gradual pollution and remediation in connection with the Work under this Agreement. Contractor will use its best efforts to have the City, Council, officers, employees and volunteers added as additional insureds under this policy. The following provisions shall apply:

The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites.

Products/completed operations coverage shall extend a minimum of 3 years after project completion.

Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors.

If the insured is using subcontractors the Policy must include work performed "by or on behalf" of the insured.

Policy shall contain no language that would invalidate or remove the insurer's duty to defend or indemnify for claims or suits expressly excluded from coverage. Policy shall specifically provide for a duty to defend on the part of the insurer.

COMPLIANCE WITH REQUIREMENTS

All of the following clauses and/or endorsements, or similar provisions, must be part of each commercial general liability policy, and each umbrella or excess policy.

Additional Insureds. City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents are hereby added as additional insureds in respect to liability arising out of Contractor's work for City, using Insurance Services Office (ISO) Endorsement CG 20 10 11 85 or the combination of CG 20 10 03 97 and CG 20 37 10 01, or its equivalent.

Primary and non-contributing. Each insurance policy provided by Contractor shall contain language or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance which the indemnities may possess, including any self-insurance or self-insured retention they may have. Any other insurance indemnities may possess shall be considered excess insurance only and shall not be called upon to contribute with Contractor's insurance.

General Aggregate. The general aggregate limits shall apply separately to Contractor's work under this Agreement providing coverage at least as broad as Insurance Services Office (ISO) Endorsement CG 2503, 1985 Edition, or insurer's equivalent (CGL);

Cancellation.

- d. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided due to non-payment of premiums shall be effective until written notice has been given to City at least ten (10) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least ten (10) days prior to the effective date of non-renewal.
- e. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided for any cause save and except non-payment of premiums shall be effective until written notice has been given to City at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.

Other Endorsements. Other endorsements may be required for policies other than the commercial general liability policy if specified in the description of required insurance set forth in Sections A through E of this Document 00820.

ADDITIONAL INSURANCE RELATED PROVISIONS

Contractor and City agree as follows:

Requirements of specific insurance coverage features described in this Agreement shall not be construed to be a limitation of liability on the part of Contractor or any of its subcontractors, nor to relieve any of them of any liability or responsibility under the Contract Documents, as a matter of law or otherwise. Such requirements are not intended by any Party to be limited to providing coverage for the vicarious liability of the City or to the supervisory role, if any, of City. All insurance coverage provided pursuant to this Agreement in any way relating to City is intended to apply to the full extent of the policies involved.

Contractor shall maintain all required insurance policies in full force and effect during entire period of performance of the Services under this Agreement of Contract Documents. Contractor shall also keep such insurance in force during warranty and guarantee periods. At time of making application for extension of time, Contractor shall submit evidence that insurance policies will be in effect during requested additional period of time.

City reserves the right, at any time during the term of this Agreement to change the amounts and types of insurance required by giving the Contractor thirty (30) days advance written notice of such change. If such change results in substantial additional cost to the Contractor, the City will negotiate in good faith additional compensation proportional to the increased benefit to City.

Any type of insurance or any increase of limits of liability not described in this Exhibit which Contractor requires for its own protection or in compliance with applicable statutes or regulations, shall be Contractors' responsibility and at its own expense.

No liability insurance coverage provided by Contractor to comply with the terms of this Agreement shall prohibit Contractor, or Contractor's employees, or agents, from waiving the right of subrogation prior to a loss. Contractor waives its right of subrogation against Indemnitees. Any property insurance policies affected by Contractor shall be endorsed to delete the subrogation condition as to indemnitees or shall specifically allow Contractor to waive subrogation prior to a loss. Contractor hereby waives any right of recovery against the indemnitees and agrees to require any subcontractor to do so.

Contractor agrees to ensure that subcontractors, and any other party involved with the Services who is brought onto or involved in the performance of the Services by Contractor, provide the same minimum insurance coverage required of Contractor, except as with respect to limits. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this Agreement. Contractor agrees that upon request by City, all agreements with, and insurance compliance documents provided by, such subcontractors and others engaged in the project will be submitted to City for review.

Contractor shall cooperate fully with City and Contractor's insurance companies in any safety and accident prevention program and claims handling procedures as established for the performance of Services under this Agreement.

All coverage types and limits required under this Agreement are subject to approval, modification and additional requirements by the City, as the need arises. Contractor shall not make any reductions in scope of coverage which may affect City's protection without City's prior written consent.

For purposes of applying insurance coverage only, all contracts pertaining to the performance of services will be deemed to be executed when finalized and any activity commences in furtherance of performance under this agreement.

Contractor acknowledges and agrees that any actual or alleged failure on the part of City to inform Contractor of non-compliance with any of the insurance requirements set forth in this Agreement in no way imposes any additional obligations on City nor does it waive any of the City's rights under this Agreement or any other regard.

Any provision in this Agreement dealing with the insurance coverage provided pursuant to these requirements, is subordinate to and superseded by the requirements contained herein. These insurance requirements are intended to be separate and distinct from any other provision in this Agreement and are intended by the Parties here to be interpreted as such.

Contractor agrees to be responsible for ensuring that no contract used by any party involved in any way with the project reserves the right to charge City or Contractor for the cost of additional insurance coverage required by this Agreement. Any such provisions are to be deleted with reference to City. It is not the intent of City to reimburse any third party for the cost of complying with these requirements. There shall be no recourse against City for payment of premiums or other amounts with respect thereto.

Contractor agrees to obtain and provide to City evidence of Professional Liability insurance for Architects or Engineers if engaged by Contractor to perform any of the Services required under this Agreement. City shall determine the minimum coverage and policy limits required, after consultation with Contractor.

The City acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. The Contractor's insurance obligations under this Agreement under may be satisfied in whole or in part by adequately funded self-insurance retention, but only after approval from the City Attorney's Office upon satisfactory evidence of financial capacity.

The City reserves the right to withhold payments from the Contractor in the event of material noncompliance with the insurance requirements set forth in this Agreement.

EVIDENCE OF COVERAGE

Prior to commencement of any Services under this Agreement, Contractor, and each and every subcontractor (of every tier) shall, at its sole cost and expense, purchase and maintain not less than the minimum insurance coverage with the endorsements and deductibles indicated in this Agreement. Such insurance coverage shall be maintained with insurers, and under forms of policies, satisfactory to City and as described in this Agreement. Contractor shall file with the City all certificates and endorsements for the required insurance policies for City's approval as to adequacy of the insurance protection.

EVIDENCE OF COMPLIANCE

Contractor or its insurance broker shall provide the required proof of insurance compliance, consisting of Insurance Services Office (ISO) endorsement forms or their equivalent and the ACORD form 25-S certificate of insurance (or its equivalent), evidencing all required coverage

SECTION 01100SP

SUMMARY OF WORK

Contractor shall replace the City Standard Specification for Section 01100 with the following Section 01100SP.

PART 1 GENERAL

1.1 SUMMARY

- A. This section includes Summary of Work including:
1. Work Covered By Contract Documents
 2. Bid Items, Allowances, and Alternates
 3. Work Under Other Contracts
 4. Future Work
 5. Work Sequence
 6. Work Days and Hours
 7. Cooperation of Contractor and Coordination with Other Work
 8. Maintenance, Product Handling, and Protection
 9. Partial Occupancy/Utilization Requirements
 10. Contractor Use of Premises
 11. Lines and Grades
 12. Protection of Existing Structures and Utilities
 13. Damage to Existing Property
 14. Dust Control
 15. Parking
 16. Laydown/Staging Area
 17. Permits
 18. Punch List Verification
 19. Actual Damages for Violations
 20. Unfavorable Construction Conditions
 21. Construction Site Access
 22. Specification Data Sheets and Schedules
 23. Site Administration
 24. Circularizing Business and Residences

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Reference Document 00100, Notice Inviting Bids, for a brief description of the Work.
- B. Furnish all labor, materials, equipment, services, permits, temporary controls and construction facilities, and all general conditions, seismic requirements, general requirements and incidentals required to complete the Work in its entirety as described in the Contract Documents.
- C. The Work of this Contract includes work covered by unit prices and/or lump sum.
- D. The Work of this Contract comprises construction of all the Work indicated, described, and shown in the Contract Documents.
- E. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work.

- F. Contractor's use of the premises for Work and storage is limited to the area indicated on the plans.
- G. Contractor shall be solely responsible for all utilities (including without limitation electric, cable TV, water, gas, telephone, storm drain, sanitary sewer, etc.) at the Site.
- H. Connections to Existing Facilities. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from City or the owning utility prior to undertaking connections.
- I. Existing materials and equipment removed and not reused as a part of the Work shall be returned to the City. Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged and reused or to remain the property of City. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work. Salvaged items not to be reused in the Work, but to remain City's property shall be delivered by Contractor in good condition to City at:

City of Santa Clara
Water and Sewer Utilities Corporation Yard
1705 Martin Avenue
Santa Clara, CA 95050
- J. Any items specified or indicated to be salvaged which are damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by Contractor in kind or with new items. Contractor may furnish and install new items instead of those specified or indicated to be salvaged and reused, in which case such removed items will become Contractor's property. Existing materials and equipment removed by Contractor shall not be reused in the Work, except where so specified or indicated.

1.3 BID ITEMS, ALLOWANCES, AND ALTERNATES

- A. Any Bid Item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract without compensation in any form or adjustment of other Bid Items or prices therefore. Should such deletions occur, it shall not impact the basis of award, as publicly announced immediately prior to bid opening.
- B. Payment of all items is subject to provisions of Contract Documents, including without limitation Section 01200, Measurement and Payment.
- C. For all Bid Items, furnish and install all work indicated and described in Specifications and all other Contract Documents, including connections to existing systems. Work and requirements applicable to each individual Bid Item, or unit of Work, shall be deemed incorporated into the description of each Bid Item (whether Lump Sum, or Unit Price).
- D. Bid Items are not intended to be exclusive descriptions of work categories and Bidder shall determine and include in its pricing all materials, labor, and equipment necessary to complete each Bid Item as shown and specified. Reference the Special Provisions for description of Bid Items.

E. Allowances:

1. Allowance work shall be done as change order work and as specified in Section 01250, Modification Procedures. Contractor shall identify Allowance Items (See Document 00400, Bid) work on the Progress Schedules and on Requests for Payment.
2. The Amount given on Document 00400, Bid Form, under each Allowance Item is the sum of money set aside for each Allowance. These amounts shall be included in the Contract Price on the Bid Form.
3. If the cost of work done under any Allowance Item is less than the amount given on the Bid Form under that Allowance Item, the Contract Sum shall be reduced by the difference between the amount given in the Bid Form and the cost of work actually done.

F. Alternates

1. Per Section 01130, Alternates, the lump sum or unit price paid for Alternate items shall be full payment for full Alternate scope; including: cleaning and testing, submittals, and all other Contract Document requirements.
2. Notwithstanding any inclusion of any of the Alternate items in the Award of Contract or the Contract Documents, Contractor shall not proceed with Alternate item work without receiving a written notice to proceed from the City.

1.4 WORK UNDER OTHER CONTRACTS

A. Work may be performed concurrently near or within the project vicinity including, but not limited to:

1. Installation of water piping by City forces
2. Installation of electrical power pole and transformer by Silicon Valley Power
3. Construction of SCADA Support Building and related utilities
4. Installation of SCADA cabinets within the pump station, connection of conduits and wires, and programming as part of the SCADA Master Plan Project. The SCADA Master Plan Project Contractor will test and commission the pump station automatic controls. The Corporation Yard Water Storage Tank and Pump Station Project Contractor shall test and commission the pump station in manual mode and coordinate with the SCADA Master Plan Project Contractor as required.

1.5 FUTURE WORK

NOT USED.

1.6 WORK SEQUENCE

- A. Construct Work in stages as outlined in the Contract Documents; coordinate construction schedule and operations with City.

- B. Contractor shall schedule Work accordingly.
- C. Contractor acknowledges that shoring may be required to maintain a safe excavation and protect facilities or pipelines, including both existing and recently constructed under this Contract. All expenses for shoring of excavations for construction of required improvements shall be included in the appropriate bid items.

1.7 WORK DAYS AND HOURS

- A. Reference Subsection 16.1, Hours of Work, of Document 00700, General Conditions, (page 00700-45).
- B. Work at the Site on weekends or holidays may be permitted. Contractor shall submit requests to City in writing at least 48 hours in advance and City approves at its sole discretion. In the case of Work by Contractor after normal working hours, Contractor shall be responsible for any additional inspection costs incurred by the City. Such costs may be withheld from any succeeding monthly progress payment.

1.8 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK

- A. Coordinate with City and any City forces, or other contractors and forces, as required by Document 00700, General Conditions, paragraph 6.
- B. Employ a full time coordinator to constantly review Contract Documents, submittals, changes, and prepare overlay drawings as necessary to avoid conflicts, errors, omissions and untimely construction.

1.9 MAINTENANCE, PRODUCT HANDLING, AND PROTECTION

- A. Transport, deliver, handle, and store materials and equipment at the Site in such a manner as to prevent the breakage, damage or intrusions of foreign matter or moisture, and otherwise to prevent damage.
- B. Hazardous substance compliance: Provide City with copies of the OSHA Material Safety Data Sheets (MSDS) for all products containing a hazardous substance, examples: Adhesives, paints, sealants, and the like.
- C. Packaging: Provide packaged material in manufacturer's original containers with seals unbroken and labels intact until incorporated into the Work.
- D. Remove all damaged or otherwise unsuitable material and equipment promptly from the Site.
- E. Protection: Protect all finished surfaces.
- F. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices bid and no direct or additional payment will be made therefore.

1.10 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. Contractor shall allow City to take possession of and use any completed or partially completed portion of the Project during the progress of the Work as soon as is possible without interference to the Work.

- B. Possession, use of Project or work, and placing and installation of equipment by City shall not in any way signify the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from City occupancy.
- D. Use and occupancy by City prior to acceptance of the Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.
- E. Prior to date of Final Acceptance of the Work by City, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in Document 00700, General Conditions.
- F. Use by City of Work or part thereof as contemplated by this section shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by City of any of the conditions thereof.
- G. City may specify in the Contract Documents that portions of the Work shall be substantially completed on milestone dates prior to substantial completion of all of the Work. Contractor shall notify City and City's Construction Manager in writing when Contractor considers any such part of the Work ready for its intended use and substantially complete and request City to issue a Certificate of Substantial Completion for that part of the Work.

1.11 CONTRACTOR USE OF PREMISES

- A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws.
- B. Do not unreasonably encumber Project Site with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of products stored on premises.
- D. Move any stored products that interfere with operations of City or other contractor.
- E. Parking, storage, staging, and work areas shall be coordinated with the City, and comply with all other Contract Documents requirements.

1.12 LINES AND GRADES

- A. Contractor shall be responsible for the accuracy of the Work. All Work shall be done to the lines, grades, and elevations indicated on the Plans. Contractor shall verify the levels shown on the Plans with existing levels and notify the City of any discrepancies before proceeding with the Work.
- B. City shall provide basic horizontal and vertical control points, as shown on the plans, to be used as datums for the Work. All additional survey, layout, and measurement work shall be performed by Contractor.

- C. Contractor shall provide at its cost a licensed Civil Engineer or Land Surveyor, competent assistants, and such instruments, tools, stakes and other materials required to complete and maintain the survey, layout, and measurement work. In addition, Contractor shall furnish at its cost said competent persons and such tools, stakes, and other materials as City (and/or the Engineer) may require in establishing or designating control points, or in checking survey, layout, and measurement work performed by Contractor.
- D. Contractor shall keep City informed, a reasonable time in advance, of the times and places at which it wishes to do Work, so that any checking deemed necessary by City may be done with minimum inconvenience to City and minimum delay to Contractor.
- E. Contractor shall remove and reconstruct Work which is improperly located.
- F. No direct payment will be made for Contractor's cost of any Work or delay occasioned by establishing, maintaining, or checking lines and grades or making other measurements, or by inspection, and no extension of time will be allowed for such delays.

1.13 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Plans may indicate existing above- and below-grade structures, drainage lines, storm drains, sanitary sewers, water, gas, electric, hot water, and other similar items and utilities that are known to City. Contractor shall protect facilities against damage and deleterious substances.
- B. Contractor shall locate these known existing installations before proceeding with trenching or other operations which may cause damage, shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum.
- C. Additional utilities whose locations are unknown to City are suspected to exist. Contractor must be alert to their existence. If additional utilities are encountered, Contractor must immediately report to City for disposition.
- D. In addition to reporting, if a utility is damaged, Contractor must take appropriate action as provided in Document 00700, General Conditions.
- E. Additional compensation or extension of time on account of utilities not indicated or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in Document 00700, General Conditions.

1.14 DAMAGE TO EXISTING PROPERTY

- A. Contractor will be responsible for any damage to existing structures, Work, materials, or equipment because of its operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to the City.
- B. Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection.
- C. Contractor shall be responsible for all damage to streets, roads, curbs, gutters, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public

or private property, which may be caused by transporting equipment, materials, or workers to or from the Work. Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.

1.15 DUST CONTROL

- A. Contractor shall take reasonable measures to prevent unnecessary dust. The following items shall be specifically implemented to control dust:
1. All construction locations with active excavation shall be watered at least twice daily.
 2. Cover all trucks hauling soil, sand, and other loose materials.
 3. Pave, apply water daily, or apply non-toxic soil stabilizers on all un-paved access roads, parking areas, and staging areas at construction site.
 4. Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites during earthwork activities.
 5. Cover all stockpiles.
 6. Limit the speed of all construction vehicles to 5 miles per hour while on un-paved roads at the Site.
- B. Buildings or operating facilities which may be affected adversely by dust shall be adequately protected from dust. Existing and new machinery, motors, instrument panels, or similar equipment shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens.

1.16 PARKING

Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, City's operations, or construction activities.

1.17 LAYDOWN/STAGING AREA

Refer to Contract Plans for laydown/staging area.

1.18 PERMITS

- A. Applicable permits: Permits, agreements, or written authorizations that are known by the City to apply to this project are listed in the Special Provisions.
1. Cal/OSHA Permit. The Contractor shall obtain, as applicable, a permit as required by Cal/OSHA for each of the following:
 - a. Construction of trenches or excavations that are five feet or more in depth and into which a person is required to descend.
 - b. Construction or demolition of any building, structure, or scaffolding for falsework more than three stories high, or the equivalent height (36 feet).

- c. Erection or dismantling of vertical shoring systems more than three stories high, or the equivalent height (36 feet).
- B. For Traffic Signal Projects, Contractor shall obtain a no-cost electrical permit from the Building Inspection Division prior to the start of Work and shall comply with all inspection requirements of said permit. Contractor shall be responsible for scheduling any required electrical inspections and shall notify the Public Works Inspector of the time of such inspections. The Building Inspection Division Electrical Inspector shall inspect all work from the Tesco Panel to the point of connection to the City power supply for Code compliance.
- C. Permits that may be required, such as electrical, mechanical, fire prevention, irrigation, grading, slope protection, tree cutting, etc., have not been applied for and shall be obtained by Contractor. Applicable City permit fees will be paid by the City to the extent specified in Document 00700, General Conditions.

1.19 PUNCH LIST VERIFICATION

A punch list examination will be performed upon Substantial Completion of Work. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, Contractor shall reimburse City for these visits.

1.20 ACTUAL DAMAGES FOR VIOLATIONS

- A. In addition to damages which are impracticable or extremely difficult to determine, for which liquidated damages will be assessed as described in paragraph 15.5 of Document 00700, General Conditions, City may incur actual damages resulting from loss of use of any permit described in this Section 01100, or from use in violation of legal or regulatory requirements where the violations result from Contractor's activities. Violations or threatened violations may subject the City to fines and/or other costs or civil liabilities.
- B. Contractor shall be liable for and shall pay City the amount of any actual losses in addition to liquidated damages or other remedies provided by the Contract Documents.
- C. The amount of liquidated damages provided in paragraph 15.5 of Document 00700, General Conditions, is not intended to include, nor does the amount include, any damages incurred by City for reasons other those listed in that paragraph. Any money due or to become due to Contractor may be retained by City to cover both the liquidated and the actual damages described above and, should such money not be sufficient to cover such damages, City shall have the right to recover the balance from Contractor or its sureties.

1.21 UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to Work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

1.22 CONSTRUCTION SITE ACCESS

Contractor shall at all times limit access to the Site to necessary personnel only. All personnel associated with construction of the Project shall enter the site through Contractor's access gate,

at the location indicated on the Drawings. Access for construction personnel shall be limited to 7:00 a.m. to 5:00 p.m. local time. All mail and deliveries (Federal Express, equipment, etc.) shall be sent to a separate address (at Contractor's gate), specifically arranged by Contractor for the Project. Contractor is responsible for providing adequate signage to alert delivery persons to the new address.

1.23 SPECIFICATION DATA SHEETS AND SCHEDULES

- A. Specifications may have data sheets and schedules as part of specific specification sections. Locations for data entries on the data sheets and schedules may be left blank intentionally. Each line where data may be entered on the data sheet has a selection box in the column "Chk". When the box for a line is checked and no data is entered in the respective line, this indicates that no data is required for that line of the data sheet.
- B. Other standard codes which apply to the Work are designated in the Specifications.

1.24 SITE ADMINISTRATION

Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to City or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site (except City's employees) to observe the same regulations, as Contractor requires of its employees.

1.25 CIRCULARIZING BUSINESS AND RESIDENCES

Prior to any work, the Contractor shall notify, by circular, all businesses and residents with street frontage or property affected by the proposed construction. Notification shall be done forty-eight (48) hours in advance of starting the work affecting businesses and residents. The circular shall state the name, address and telephone of the Contractor, starting time and date, nature and extent of the proposed work, and the approximate date upon which the Contractor expects to complete the pertinent construction activity. The circular must be approved by the Engineer or Inspector prior to distribution. Submit circular for approval at least two (2) full working days prior to date of intended distribution.

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SECTION 01200SP

MEASUREMENT AND PAYMENT

Contractor shall replace the City Standard Specification for Section 01200 with the following Section 01200SP.

PART 1 GENERAL

1.1 SUMMARY

Section includes description of requirements and procedures for determining amount of Work performed and for obtaining payment for Work performed.

1.2 REFERENCES

- A. California Public Contract Code
- B. California Code of Civil Procedure
- C. California Government Code

1.3 SCOPE OF WORK

Work under Contract Documents, or under any Bid Item, allowance, or alternate, shall include all labor, materials, taxes, transport, handling, storage, supervision, administration, and all other items necessary for the satisfactory completion of Work, whether or not expressly specified or indicated.

The work includes a 2.0 million gallon welded steel tank construction, pre-fabricated precast concrete pump station building, vertical turbine pumps, booster packaged pump system, generator, cathodic protection, demolition and relocation of existing storm drain piping, installation of new piping and valves, driveway improvements, trench excavation and backfill, grading, paving, fencing, appurtenances, mechanical, and electrical and instrumentation. The Contractor shall submit the required deferred submittals as indicated in the plans and specifications and obtain the Building Permit. The City will waive the permit fee.

1.4 DETERMINATION OF QUANTITIES

Quantity of work to be paid for under any item for which a unit price is fixed in Contract Documents shall be number, as determined by City, of units of work satisfactorily completed in accordance with Contract Documents or as directed by City. Unless otherwise provided, determination of number of units of work so completed will be based, so far as practicable, on actual measurement or count within prescribed or ordered limits, and no payment will be made for work done outside of limits. Measurements and computations will be made by methods set forth in Contract Documents, including without limitation this Section 01200. If methods are not so set forth, measurements shall be made in any manner which City considers appropriate for class of Work measured (e.g., pre-assigned values, percentage completion, units completed or incremental milestones). Contractor must immediately inform City of any disputes regarding quantity measurements and shall immediately supply City with any documentation supporting the disputed measurements.

1.5 SCOPE OF PAYMENT

- A. Except as otherwise expressly stated in Section 01100, Summary of Work, payment to Contractor at the unit price or other price fixed in Contract Documents for performing Work required under any item, or (if the Contract is on a single lump sum price basis) at the lump sum price fixed in the Contract Documents for performing all Work required under Contract Documents, and as either may be adjusted pursuant to any approved Change Order or Construction Change Directive, shall be full compensation for completing, in accordance with Contract Documents, all Work required under the item or under Contract Documents, and for all expense incurred by Contractor for any purpose in connection with the performance and completion of said Work, including all incidental work necessary for completion of the Work.
- B. The Contract Sum, whether lump sum, unit price or otherwise, shall be deemed to include all costs necessary to complete required Work, all costs (if any) for loss or damage arising from nature of Work or prosecution of the Work, and from action of elements. Unless Contract Documents expressly provide otherwise, the Contract Sum shall be deemed to include:
1. Any and all costs arising from any unforeseen difficulties which may be encountered during, and all risks of any description connected with, prosecution of Work or prosecution of Bid Item (whether lump sum or unit price) until acceptance by City;
 2. All expenses incurred due to suspension, or discontinuance of Work or discontinuance of Bid Item (whether lump sum or unit price) as provided in Contract Documents;
 3. Escalation to allow for cost increases between time of Contract Award and completion of Work or completion of Bid Item (whether lump sum or unit price).
 4. All incidentals including, but not limited to, required bonds, insurance, traffic controls, and permits.
- C. Whenever it is specified herein that Contractor is to do work or furnish materials of any class for which no price is fixed in Contract Documents, it shall be understood that Contractor is to do such work or furnish such materials without extra charge or allowance or direct payment of any sort, and that cost of doing work or furnishing materials is to be included in price Bid, unless it is expressly specified herein, in particular cases, that work or material is to be paid for as extra work.
- D. Unit Prices shall apply to work by unit prices if at least one of the following conditions applies:
1. The actual quantities performed on the Project are not less than 75 percent or greater than 125 percent of the estimated quantities contained in Document 00400, Bid.
 2. The actual total dollar amount, using the Bid unit price, for work performed on the Project does not vary by more than \$10,000 above or below the total Bid item amount contained in Document 00400, Bid.

If actual quantities or amounts exceed these parameters, then the unit price may be adjusted by an amount to reflect the Contractor's incremental cost differential resulting from increased or decreased economies of scale.

Should the City and Contractor be unable to agree on an incremental unit price cost differential, the adjusted cost shall be determined per Section 4-1.03B of the Standard Specifications, with the following exceptions:

1. In the event of increases above the limits described in this Section, the adjusted unit price shall not exceed the Bid unit price, and
 2. In the event of decreases below the limits described in this Section, the effected Bid item's revised total Bid item amount shall not exceed the original total Bid item amount.
- E. No payment shall be made for materials or equipment not yet incorporated into the Work, except as specified in Section 01100, Summary of Work.
- F. The City may, in its discretion, where Contractor requests payment on the basis of materials and equipment not incorporated in the Work, Contractor must satisfy the following conditions:
1. The materials and/or equipment shall be delivered and suitably stored at the Site or at another local location agreed to in writing, for example, a mutually acceptable warehouse;
 2. Full title to the materials and/or equipment shall vest in City at the time of delivery to the Site, warehouse or other storage location;
 3. Obtain a negotiable warehouse receipt, endorsed over to City for materials and/or equipment stored in an off-site warehouse. No payment will be made until such endorsed receipts are delivered to City;
 4. Stockpiled materials and/or equipment shall be available for City inspection, but City shall have no obligation to inspect them and its inspection or failure to inspect shall not relieve Contractor of any obligations under the Contract Documents. Materials and/or equipment shall be segregated and labeled or tagged to identify these specific Contract Documents;
 5. After delivery of materials and/or equipment, if any inherent or acquired defects are discovered, defective materials and/or equipment shall be removed and replaced with suitable materials and/or equipment at Contractor's expense;
 6. At Contractor's expense, ensure the materials and/or equipment against theft, fire, flood, vandalism, and malicious mischief, as well as any other coverage required under the Contract Documents;
 7. Contractor's Application for Payment shall be accompanied by a bill of sale, invoice or other documentation warranting that City has received the materials and equipment free and clear of all liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect City's interest therein, all of which must be satisfactory to City. This documentation shall include, but not be limited to, conditional releases of mechanics' liens and stop notices from all those providing materials

and equipment as to which the Application for Payment relates, as well as unconditional releases of the same from the same as to the previous Application for Payment for which they have not already been provided.

- G. Amounts previously paid for materials and equipment prior to incorporation into the Work shall be deducted from amounts otherwise due Contractor as they are incorporated.

1.6 BASIS OF PAYMENT

- A. **Unit Price Quantities:** When estimated quantity for specific portions of Work is listed in the Bid, quantity of Work to be paid for shall be actual number of units satisfactorily completed, as determined by City and agreed to by Contractor, in accordance with Contract Documents.
- B. **Lump Sum:** When estimated quantity for specific portion of Work is not indicated and unit is designated as lump sum, payment will be on a lump sum basis for Work satisfactorily completed in accordance with Contract Documents.
- C. **Allowances:** Allowance items (if any) will be paid for as provided in Section 01100, Summary of Work. Funds authorized for Allowance work will not be released for Contract payments unless City has authorized Allowance work in writing.
- D. City does not expressly, or by implication, agree, warrant, or represent in any manner, that actual amount of Work will correspond with amount shown or estimated and reserves right to increase or decrease amount of any class or portion of Work, to leave out entire Bid Item or Items, or to add work not originally included in Bid or Contract Documents, when in its judgment such change is in best interest of City. No change in Work shall be considered a waiver of any other condition of Contract Documents. No claim shall be made for anticipated profit, for loss of profit, for damages, or for extra payment whatever, except as otherwise expressly provided for in Contract Documents, because of any differences between amount of work actually done and estimated amount as set forth herein, or for elimination of Bid Item.

1.7 PROGRESS PAYMENTS

- A. If requested by Contractor, progress payments will be made monthly.
- B. **Schedule of Values:**
 - 1. Within ten (10) Days from issuance of Notice of Award and prior to the Contractor's first Application for Payment, submit a detailed breakdown of its Bid by scheduled Work items and/or activities, including coordination responsibilities and Project Record Documents responsibilities. Where more than one Subcontractor comprises the work of a Work item or activity, the Schedule of Values shall show a separate line item for each subcontract. Furnish such breakdown of the total Contract Sum by assigning dollar values (cost estimates) to each applicable Progress Schedule network activity, which cumulative sum equals the total Contract Sum. The format and detail of the breakdown shall be as directed by City to facilitate and clarify future progress payments to Contractor for direct Work under Contract Documents. This breakdown shall be referred to as the Schedule of Values.
 - 2. Contractor's overhead, profit, insurance, cost of bonds (except to the extent expressly identified in a Bid Item) and/or other financing, as well as "general

conditions costs,” (e.g., Site cleanup and maintenance, temporary roads and access, off-Site access roads, temporary power and lighting, security, and the like), shall be prorated through all activities so that the sum of all the Schedule of Values line items equals Contractor’s total Contract Sum, less any allowances designated by City. Scheduling, record documents and quality assurance control shall be separate line items.

3. City will review the breakdown in conjunction with the Progress Schedule to ensure that the dollar amounts of this Schedule of Values are, in fact, fair market cost allocations for the Work items listed. Upon favorable review by City, City will accept this Schedule of Values for use. City shall be the sole judge of fair market cost allocations.
 4. City will reject any attempt to increase the cost of early activities, i.e., “front loading,” resulting in a complete reallocation of moneys until such “front loading” is corrected. Repeated attempts at “front loading” may result in suspension or termination of the Work for default, or refusal to process progress payments until such time as the Schedule of Values is acceptable to City.
- C. Applications for Payment: Contractor shall establish and maintain records of cost of the Work in accordance with generally accepted accounting practices. In addition:
1. On or before the 20th Day of each month, but after receipt of City’s approval of the updated Schedule as required by Section 01320, Progress Schedules and Reports, Contractor shall submit to City two (2) copies of an Application for Payment for the cost of the Work put in place during the period from the 15th Day of the previous month to the 15th Day of the current month. Such Applications for Payment shall be for the total value of activities completed or partially completed, including approved activity costs, based upon Schedule of Values prices (or Bid item prices if unit price) of all labor and materials incorporated in the Work up until midnight of the last Day of that one month period, less the aggregate of previous payments. Accumulated retainage shall be shown as separate item in payment summary. Contractor shall submit in a form acceptable to City an itemized cost breakdown of Contractor’s record of Cost of the Work together with supporting data and any certification required by City. If Contractor is late submitting its Application for Payment, that Application may be processed at any time during the succeeding one-month period, resulting in processing of Contractor’s Application for Payment being delayed for more than a Day for Day basis.
 2. Applications for Payment may include, but are not necessarily limited to the following:
 - a. Material, equipment, and labor incorporated into the Work, less any previous payments for the same;
 - b. Up to 75 percent of the cost of equipment identified in paragraph 1.5F of this Section 01200 (if any), if purchased and delivered to the Site or stored off Site, as may be approved by City.
 - c. Up to 50 percent of the cost of materials identified in paragraph 1.5F of this Section 01200 (if any), specifically fabricated for the Project that are not yet incorporated into the Work.

3. At the time any Application for Payment is submitted, certify in writing the accuracy of the Application and that Contractor has fulfilled all scheduling requirements of Document 00700, General Conditions, and Section 01320, Progress Schedules and Reports, including updates and revisions. A responsible officer of Contractor shall execute the certification.
4. No progress payment will be processed prior to City receiving all requested, acceptable schedule update information. Failure to submit a schedule update complying with Section 01320, Progress Schedules and Reports, justifies denying the entire Application for Payment.
5. Each Application for Payment shall list each Change Order and Construction Change Directive ("CCD") executed prior to date of submission, including the Change Order/CCD Number, and a description of the work activities, consistent with the descriptions of original work activities. Submit a monthly Change Order/CCD status log to City.
6. If City requires substantiating data, submit information requested by City, with cover letter identifying Project, Application for Payment number and date, and detailed list of enclosures. Submit one copy of substantiating data and cover letter for each copy of Application for Payment submitted.
7. If Contractor fails or refuses to participate in work reconciliations or other construction progress evaluation with City, Contractor shall not receive current payment until Contractor has participated fully in providing construction progress information and schedule update information to City.

D. Progress Payments:

1. City will not process payment requests prior to the Contractor presenting the City with evidence that the Project Record Documents have been updated to show all changes up to and including the month for which the payment request is being made (See Section 01780, Project Record Documents).
2. City will review Contractor's Application for Payment following receipt. If adjustments need to be made to percent of completion of each activity, City will make appropriate notations and return to Contractor. Contractor shall revise and resubmit. All parties shall update percentage of completion values in the same manner, i.e., express value of an accumulated percentage of completion to date.
3. Each Application for Payment may be reviewed by City and/or inspectors to determine whether the Application for Payment is proper, and shall be rejected, revised, or approved by City pursuant to the Schedule of Values prepared in accordance with paragraph 1.7B of this Section 01200.
4. If it is determined that the Application for Payment is not proper and suitable for payment, City will return it to the Contractor as soon as practicable, but no later than seven Days after receipt, together with a document setting forth in writing the reasons why the Application for Payment is not proper. If City determines that portions of the Application for Payment are not proper or not due under the Contract Documents, then City may approve the other portions of the Application for Payment, and in the case of disputed items or defective Work not remedied, may withhold up to 150 percent of the disputed amount from the progress payment.

5. Pursuant to Public Contract Code Section 20104.50, if City fails to make any progress payment within 30 Days after receipt of an undisputed and properly submitted Application for Payment from Contractor, City shall pay interest to the Contractor equivalent to the legal rates set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure. The 30-Day period shall be reduced by the number of Days by which City exceeds the seven-Day return requirement set forth herein.
6. As soon as practicable after approval of each Application for Payment for progress payments, City will pay to Contractor in manner provided by law, an amount equal to 95 percent of the amounts otherwise due as provided in the Contract Documents (City will retain the remaining 5 percent as retention), or a lesser amount if so provided in the Contract Documents, provided that payments may at any time be withheld if, in judgment of City, Work is not proceeding in accordance with Contract, or Contractor is not complying with requirements of Contract, or to comply with stop notices or to offset liquidated damages accruing or expected.
7. Before any progress payment or final payment is due or made, Contractor shall submit satisfactory evidence that Contractor is not delinquent in payments to employees, Subcontractors, suppliers, or creditors for labor and materials incorporated into Work. This specifically includes, without limitation, conditional lien release forms for the current progress payment and unconditional release forms for past progress payments. City also may elect in its sole discretion to pay progress payments by joint check to Contractor and each Subcontractor having an interest in that progress payment in such amount.
8. City reserves and shall have the right to withhold payment for any equipment and/or specifically fabricated materials that, in the sole judgment of City, are not adequately and properly protected against weather and/or damage prior to or following incorporation into the Work.
9. Granting of progress payment or payments by City, or receipt thereof by Contractor, shall not be understood as constituting in any sense acceptance of Work or of any portion thereof, and shall in no way lessen liability of Contractor to replace unsatisfactory work or material, though unsatisfactory character of work or material may have been apparent or detected at time payment was made.
10. When City shall charge sum of money against Contractor under any provision of Contract Documents, amount of charge shall be deducted and retained by City from amount of next succeeding progress payment or from any other moneys due or that may become due Contractor under Contract. If, on completion or termination of Contract, such moneys due Contractor are found insufficient to cover City's charges against it, City shall have right to recover balance from Contractor or Sureties.
11. The City will not contemplate reducing the retention until the City issues the Certificate of Substantial Completion in accordance with Paragraph 1.3 of Section 01770, Contract Closeout. The City reserves the right to maintain the full retention after the Certificate of Substantial Completion is issued if the Contractor is not complying with the requirements of the Contract, to comply with stop notices, to offset liquidated damages accruing or expected, or for any other reason.

1.8 SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION

- A. In accordance with the provisions of Public Contract Code Section 22300, substitution of securities for any moneys withheld under Contract Documents to ensure performance is permitted under following conditions:
1. At request and expense of Contractor, securities listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and City which are equivalent to the amount withheld under retention provisions of Contract shall be deposited with Controller or with a state or federally chartered bank in California, as the escrow agent, who shall then pay such moneys to Contractor. Upon satisfactory completion of Contract, securities shall be returned to Contractor.
 2. Alternatively, Contractor may request and City shall make payment of retentions earned directly to the escrow agent at the expense of Contractor. At the expense of Contractor, Contractor may direct the investment of the payments into securities and receive the interest earned on the investments upon the same terms provided for in this Section 01200 for securities deposited by Contractor. Upon satisfactory completion of Contract Documents, Contractor shall receive from escrow agent all securities, interest, and payments received by the escrow agent from City, pursuant to the terms of this Section 01200. Pay to each Subcontractor, not later than 20 Days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to ensure the performance of Contractor.
 3. Contractor shall be beneficial owner of securities substituted for moneys withheld and shall receive any interest thereon.
 4. Enter into escrow agreement with Controller according to Document 00680 (Escrow Agreement for Security Deposits in Lieu of Retention), as authorized under Public Contract Code Section 22300, specifying amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of Contract Documents.
 5. Public Contract Code Section 22300 is hereby incorporated in full by this reference.

1.9 FINAL PAYMENT

- A. As soon as practicable after all required Work is completed in accordance with Contract Documents, including punchlist, testing, record documents and Contractor maintenance after Final Acceptance, City will pay to Contractor, in manner provided by law, unpaid balance of Contract Sum of Work (including without limitation retentions), or whole Contract Sum of Work if no progress payment has been made, determined in accordance with terms of Contract Documents, less sums as may be lawfully retained under any provisions of Contract Documents or by law.
- B. Prior progress payments shall be subject to correction in the final payment. City's determination of amount due as final payment shall be final and conclusive evidence of amount of Work performed by Contractor under Contract Documents and shall be full measure of compensation to be received by Contractor.

- C. Contractor and each assignee under an assignment in effect at time of final payment shall execute and deliver at time of final payment, and as a condition precedent to final payment, Document 00650, Agreement and Release of Any and All Claims, discharging City, its officers, agents, employees, and consultants of and from liabilities, obligations, and claims arising under Contract Documents.

1.10 EFFECT OF PAYMENT

- A. Payment will be made by City, based on City's observations at the Site and the data comprising the Application for Payment. Payment will not be a representation that City has:
1. Made exhaustive or continuous on-Site inspections to check the quality or quantity of Work;
 2. Reviewed construction means, methods, techniques, sequences, or procedures;
 3. Reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by City to substantiate Contractor's right to payment; or
 4. Made examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

PART 2 DESCRIPTION OF BID ITEMS

2.1 Summary

The Bid Amounts for each Bid Item will be used for comparative bid analysis. The Bid amounts will also form the basis of monthly progress payments. Each Lump Sum bid amount will undergo further breakdown as described later in this section. Bid items are not intended to be exclusive descriptions of work categories and the Contractor shall determine and include in its pricing all materials, labor, and equipment necessary to complete project in full as shown in Contract Documents and each Bid Item (work phase) as shown and specified.

2.2 Description of Bid Items

BID ITEM NO. 1 - MOBILIZATION/DEMobilIZATION The lump sum bid for mobilization shall not exceed five percent (5%) of the total bid price. Mobilization shall include: the obtaining of insurance and bonds; moving onto the site of all equipment; submittal and approval of initial project schedule; obtaining and paying for all permits by other agencies as applicable; furnishing temporary construction utilities (temporary power, toilets, water, fences, etc.); installing construction signs; temporary facilities(s); and other construction all as required for the proper performance and completion of the work.

The lump sum bid for demobilization shall not be less than three percent (3%) of the total bid price. Demobilization shall include site cleaning and restoration of surfaces within the job site, post-construction meeting, removal of all temporary facilities and equipment from the work area, disconnection of the temporary construction utilities and turnover of project to the City.

In the event the Contractor writes in a Mobilization/Demobilization price greater than eight percent (8%) on the Bid Schedule found in Section 00400, **BID**, the City will pay any excess with the final Progress Payment.

Contractor may apply for payment of mobilization on a percent complete basis as the items covered in the Mobilization are being completed. Payment for Mobilization/Demobilization will be made at the lump sum price named in the Bid Schedule under Item 1, and no additional compensation shall be made therefore.

BID ITEM NO. 2 – SITE WORK The lump sum bid for site work shall include, but is not limited to: the demolition and disposal work associated with pavement removal; excavation, hauling, and disposal work associated with grading; furnishing materials and installing new paving; furnishing materials and installing 10-foot wide access road around tank perimeter; demolition of existing fencing and furnishing and installing new fencing and gate; dewatering; and shoring, including an amount for providing a detailed plan of work safety, maintaining safety during construction, and conforming to Labor Code Section 6707, all applicable safety orders and permits, as required by the contract plans and specifications.

Contractor may apply for payment of Site Work on a percent complete basis as the items covered in Site Work are being completed. Payment for Site Work will be made at the lump sum price named in the Bid Schedule under Item 2, and no additional compensation shall be made therefore.

BID ITEM NO. 3 – STORM DRAIN FACILITIES The lump sum bid for Storm Drain Facilities shall include, but is not limited to: removal of approximately 200 feet of 18-inch RCP storm drain pipe across the tank site; furnishing and installing storm drain manholes and piping; performing tie-ins for new storm drain pipes to existing storm drain structures and piping; furnishing and installing the tank overflow and drain box; furnishing and installing pre-sloped trench drain system around pump station perimeter, and other appurtenances necessary for a complete and operational system as required by the contract plans and specifications. All excavation, backfill, and compaction associated with these pipelines and structures are to be included in this lump sum bid item.

Contractor may apply for payment of Storm Drain Facilities work on a percent complete basis as the items covered in the Storm Drain Facilities are being completed. Payment for Storm Drain Facilities will be made at the lump sum price named in the Bid Schedule under Item 3, and no additional compensation shall be made therefore.

BID ITEM NO. 4 – WELDED STEEL TANK The lump sum bid price for welded steel tank shall include, but is not limited to: furnishing and installing a 2.0 million gallon welded steel tank, tank mixing system, interior inlet and outlet piping, appurtenances, coatings, cathodic protection, and foundation; and excavating site and preparing subgrade as required by the contract plans and specifications.

Contractor may apply for payment of Welded Steel Tank on a percent complete basis as the items covered in Welded Steel Tank are being completed. Payment for Welded Steel Tank will be made at the lump sum price named in the Bid Schedule under Item 4, and no additional compensation shall be made therefore.

BID ITEM NO. 5 – PUMP STATION BUILDING The lump sum bid price for Pump Station Building shall include, but is not limited to, furnishing and installing a precast concrete building, finishes, doors, louvers, skylights, exhaust fan, gutters and downspouts, foundation; excavating site and preparing subgrade; and other appurtenances necessary for a complete and operational building as required by the contract plans and specifications.

Contractor may apply for payment of Pump Station Building on a percent complete basis as the items covered in Pump Station Building are being completed. Payment for Pump Station Building will be made at the lump sum price named in the Bid Schedule under Item 5, and no additional compensation shall be made therefore.

BID ITEM NO. 6 – VERTICAL TURBINE PUMPS The unit bid price for Vertical Turbine Pumps shall include, but is not limited to: furnishing and installing three (3) vertical turbine pumps; excavating, installing, backfilling, and compacting for pump barrel; furnishing and installing pump pad as required by the contract plans and specifications.

Contractor may apply for payment of Vertical Turbine Pumps on a percent complete basis as the items covered in Vertical Turbine Pumps are being completed. Payment for Vertical Turbine Pumps will be made at the unit price named in the Bid Schedule under Item 6, and no additional compensation shall be made therefore.

BID ITEM NO. 7 – BOOSTER PACKAGED PUMP SYSTEM The lump sum bid price for Booster Packaged Pump System shall include, but is not limited to: furnishing and installing a booster packaged pump system, equipment pad, tap and piping from tank discharge header to pump, piping from pump to tie-in at existing 4"W; furnishing and installing appurtenances for a complete and operational system as required by the contract plans and specifications. All excavation, backfill, and compaction associated with these pipelines are to be included in this lump sum bid item.

Contractor may apply for payment of Booster Packaged Pump System on a percent complete basis as the items covered in Booster Packaged Pump System are being completed. Payment for Booster Packaged Pump System will be made at the lump sum price named in the Bid Schedule under Item 7, and no additional compensation shall be made therefore.

BID ITEM NO. 8 – STANDBY GENERATOR UNIT The unit bid price for Standby Generator Unit shall include, but is not limited to: furnishing and installing a new standby generator unit as required by the contract plans and specifications.

Contractor may apply for payment of Standby Generator Unit on a percent complete basis as the items covered in Standby Generator Unit are being completed. Payment for Standby Generator Unit will be made at the unit price named in the Bid Schedule under Item 8, and no additional compensation shall be made therefore.

BID ITEM NO. 9 – STANDBY GENERATOR UNIT ANCILLARY APPURTENANCES The lump sum bid price for Standby Generator Unit Ancillary Appurtenances shall include, but is not limited to: furnishing and installing the equipment pad, conduit and wiring to the pump station building, grounding, and bollards for a complete and operational system as required by the contract plans and specifications.

Contractor may apply for payment of Standby Generator Ancillary Appurtenances on a percent complete basis as the items covered in Standby Generator Ancillary Appurtenances are being completed. Payment for Standby Generator Ancillary Appurtenances will be made at the lump sum price named in the Bid Schedule under Item 9, and no additional compensation shall be made therefore.

BID ITEM NO. 10 – EMERGENCY EYE WASH AND SHOWER The lump sum bid price for Emergency Eye Wash and Shower shall include, but is not limited to: furnishing and installing an emergency eye wash and shower, hose bib, water heater, tap and piping from 4"W, backflow preventer and meter, and appurtenances for a complete and operational system as required by the contract plans and specifications. All excavation, backfill, and compaction associated with these pipelines are to be included in this lump sum bid item.

Contractor may apply for payment of Emergency Eye Wash and Shower work on a percent complete basis as the items covered in Emergency Eye Wash and Shower are being completed. Payment for Emergency Eye Wash and Shower will be made at the lump sum price named in the Bid Schedule under Item 10, and no additional compensation shall be made therefore.

BID ITEM NO. 11 – TANK INLET AND OUTLET PIPING The lump sum bid price for Tank Inlet and Outlet Piping shall include, but is not limited to: furnishing and installing piping and fittings as required by the contract plans and specifications on tank exterior, flexible sleeve couplings, flexible expansion joints, flowmeter, valves, pipe supports, thrust blocks, and appurtenances necessary for a complete and operational system; and performing tie-in to vertical turbine pumps and existing 12"W. All excavation, backfill, and compaction associated with these pipelines are to be included in this lump sum bid item.

Contractor may apply for payment of Tank Inlet and Outlet Piping work on a percent complete basis as the items covered in Tank Inlet and Outlet Piping are being completed. Payment for Tank Inlet and Outlet Piping will be made at the lump sum price named in the Bid Schedule under Item 11, and no additional compensation shall be made therefore.

BID ITEM NO. 12 – MCC, ATS, MTS, ELECTRICAL EQUIPMENT The lump sum bid price for MCC, ATS, MTS, Electrical Equipment shall include, but is not limited to: furnishing and installing the new motor control center, automatic transfer switch, manual transfer switch, variable frequency drives, lighting panel; power and signal conduits and wires for the vertical turbine pumps, booster packaged pump system, valves and flowmeter; transformer and lighting associated with the electrical equipment in the pump station building, and appurtenances for a complete and operational system as required by the contract plans and specifications.

Contractor may apply for payment of MCC, ATS, MTS, Electrical Equipment work on a percent complete basis as the items covered in MCC, ATS, MTS, Electrical Equipment are being completed. Payment for MCC, ATS, MTS, Electrical Equipment will be made at the lump sum price named in the Bid Schedule under Item 12, and no additional compensation shall be made therefore.

BID ITEM NO. 13 – SITE ELECTRICAL AND SCADA The lump sum bid price for Site Electrical and SCADA shall include, but is not limited to: coordination with the power Utility (Silicon Valley Power) for new service feed; installing new utility meter enclosure and transformer pad; furnishing and installing new conduits, wiring and other electrical appurtenances associated with the new welded steel tank, pump station building, generator, and future SCADA building; and coordination with SCADA Master Plan Project Contractor for SCADA integration, for a complete and operational system as required by the contract plans and specifications.

Contractor may apply for payment of Site Electrical and SCADA work on a percent complete basis as the items covered in Site Electrical and SCADA Improvements are being completed. Payment for Site Electrical and SCADA will be made at the lump sum price named in the Bid Schedule under Item 13, and no additional compensation shall be made therefore.

BID ITEM NO. 14 – SLURRY SEAL 12" WATER MAIN TRENCH The unit bid price for Slurry Seal 12" Water Main Trench shall include, but is not limited to: furnishing all labor, materials, tools, equipment, and incidentals required for 670 square yards of slurry seal for pavement reconstruction performed by others to install a 12" water line, complete in place, including cleaning the street, preparing the surface, furnishing and applying the asphaltic emulsion, protecting the newly sealed surface, and other incidental work as required by the contract plans and specifications.

Contractor may apply for payment of Slurry Seal 12" Water Main Trench work on a percent complete basis as the items covered in Slurry Seal 12" Water Main Trench are being completed. Payment for Slurry Seal 12" Water Main Trench will be made at the unit price named in the Bid Schedule under Item 14, and no additional compensation shall be made therefore.

BID ITEM NO. 15 – SLURRY SEAL 4” WATER MAIN TRENCH The unit bid price for Slurry Seal 4” Water Main Trench shall include, but is not limited to: furnishing all labor, materials, tools, equipment, and incidentals required for 185 square yards of slurry seal for pavement reconstruction performed by others to install a 4” water line to the Emergency Operations Center, complete in place, including cleaning the street, preparing the surface, furnishing and applying the asphaltic emulsion, protecting the newly sealed surface, and other incidental work as required by the contract plans and specifications.

Contractor may apply for payment of Slurry Seal 4” Water Main Trench work on a percent complete basis as the items covered in Slurry Seal 4” Water Main Trench are being completed. Payment for Slurry Seal 4” Water Main Trench will be made at the unit price named in the Bid Schedule under Item 15, and no additional compensation shall be made therefore.

BID ITEM NO. 16 – TANK CLEANING, TESTING, AND DISINFECTION The lump sum bid price for tank cleaning, testing, and disinfection shall include, but is not limited to: performing cleaning, flushing, leak and volatile organic compound testing, making repairs, and disinfecting the tank, including conveyance of test water from City designed source to point of use and disposal thereof as required by the contract plans and specifications.

Contractor may apply for payment of Tank Cleaning, Testing, and Disinfection on a percent complete basis as the items covered in Tank Cleaning, Testing, and Disinfection are being completed. Payment for Tank Cleaning, Testing, and Disinfection will be made at the lump sum price named in the Bid Schedule under Item 16, and no additional compensation shall be made therefore.

BID ITEM NO. 17 – MARTIN AVENUE DRIVEWAY ADA IMPROVEMENTS The unit bid price for Martin Avenue Driveway ADA Improvements shall include, but is not limited to: as per City Standard details ST-7 and ST-9, which involves removing existing driveway, curb and gutter; sawcutting and removing existing asphalt concrete and sidewalk; relocating sign(s); restoring landscaping; installing sidewalk, transition curve, driveway approach, and curb and gutter as required by the contract plans and specifications.

Contractor may apply for payment of Martin Avenue Driveway ADA Improvements on a percent complete basis as the items covered in Martin Avenue Driveway ADA Improvements are being completed. Payment for Martin Avenue Driveway ADA Improvements will be made at the unit price named in the Bid Schedule under Item 17, and no additional compensation shall be made therefore.

BID ITEM NO. 18 – TANK DEHUMIDIFICATION The unit bid price for Tank Dehumidification shall include, but is not limited to: providing, maintaining, and operating dehumidification and associated monitoring equipment for dehumidification of the tank interior during coating as required by the contract plans and specifications.

Contractor may apply for payment of Tank Dehumidification on a percent complete basis as the items covered in Tank Dehumidification are being completed. Payment for Tank Dehumidification will be made at the unit price named in the Bid Schedule under Item 18, and no additional compensation shall be made therefore.

BID ITEM NO. 19 – OVEREXCAVATION The unit bid price for Overexcavation shall include, but is not limited to: providing labor, tools, materials, equipment, and incidentals for overexcavating the trench and structures up to 12-inches when unsuitable subgrade material in the trench bottom or structure excavation bottom is encountered in order to obtain a firm and stable base as directed by the Engineer, as required by the contract plans and specifications.

Contractor may apply for payment of Overexcavation on a percent complete basis as the items covered in Overexcavation are being completed. Payment for Overexcavation will be made at the unit price named in the Bid Schedule under Item 19, and no additional compensation shall be made therefore.

END OF SECTION

SECTION 02019SP

EARTHWORK

Contractor shall replace the City Standard Specification for Section 02019 with the following Section 02019SP.

PART 1 GENERAL

1.1 THE REQUIREMENT

- A. The Contractor shall perform earthwork indicated and required for construction of the WORK, complete and in place, in accordance with the Contract Documents.
- B. A geotechnical investigation report has been prepared for design purposes entitled City of Santa Clara Corp Yard Water Tank, Santa Clara, CA. Geotechnical Engineering Investigation, Project Number 138-6-1, dated August 1, 2014, by Cornerstone Earth Group. The Contractor may rely upon the accuracy of the technical data contained in the report but shall make its own interpretations as to discussions, conclusions, or recommendations contained therein. A copy of the report is available for review at City Hall and is also included as Appendix A. See Document 00320 – Geotechnical Data and Existing Conditions.
- C. The Contractor shall retain its own geotechnical engineer and/or materials testing firm to aid it in developing its compaction methodology, shoring and dewatering plans and other earthwork related activities. The foregoing shall be included in the Contractor's total bid price for the Work.

1.2 CONTRACTOR SUBMITTALS

- A. The Contractor's attention is directed to the provisions for "Shoring and Bracing Drawings" in Section 6705 of the California Labor Code. The Contractor, prior to beginning a trench or structure excavation 5 feet deep or over, shall submit to the City and shall be in receipt of the City's written acceptance of the Contractor's detailed plan showing design of shoring, bracing, or other provisions for worker protection against the hazard of caving ground during the excavation of such trenches or structure excavation. Sloping of the sides of the excavation shall not be allowed. If such plan varies from the shoring system standards established in the CAL/OSHA Construction Safety Orders of the State of California, such alternative systems plans shall be prepared by a civil or structural engineer licensed in the State of California.
- B. The Contractor shall submit a copy of the excavation permit issued by the California Department of Industrial Safety.
- C. Shop Drawings. The Contractor shall provide submittals for earthwork materials in accordance with the requirements in Section 01330, Submittal Procedures, including geotextiles and imported foundation, bedding and backfill including sieve analyses for same.
- D. Samples. The Contractor shall provide samples for earthwork materials including geotextiles and imported foundation, bedding and backfill materials.
- E. Certifications. Provide certifications for earthwork materials per Paragraph 1.2.D, above.

1.3 QUALITY ASSURANCE

- A. Earthwork shall be tested by the Owner’s testing firm. Also see Paragraph 1.1.C, above.

PART 2 PRODUCTS

2.1 SUITABLE FOUNDATION, FILL, AND BACKFILL MATERIAL REQUIREMENTS

- A. General: Fill used for pipe trenches shall be as described below. Fill used adjacent to buried concrete structures shall also be as described below.

- B. Pipeline Foundation (may be required at some locations, to be determined in the field):

Overexcavation and placement of a layer of filter fabric wrapped foundation material should be anticipated wherever the bottom of the trench is located below the groundwater table and/or in soft/loose soils. The Engineer shall determine when overexcavation is required based on the observed condition of the trench bottom and shall order it to be performed and compensated at the unit price provided in the bid schedule.

Foundation material shall be such that a firm, stable base is achieved, but shall not be less than twelve (12) inches thick. Foundation material shall consist of clean, durable, natural, crushed (i.e. angular) aggregate uniformly graded within the following requirements:

Sieve Size	Percentage Passing
2-inch	100
1-1/2-inch	90 – 100
3/4-inch	5 - 30
3/8-inch	0-5
No. 200	0 – 2

The foundation material shall be completely wrapped (12-inches minimum wrap overlap) with geotextile filter fabric. The geotextile filter fabric shall be a non-woven material consisting of polyester, nylon, or polypropylene filaments formed into a stable network. The geotextile fabric shall be permeable, not act as a wicking agent, be inert to commonly encountered chemicals, be rot-proof, be resistant to ultra-violet light, and conform to the physical properties noted below:

Property	Test Value	Test Method
Weight	5.4 oz./yd. ² (min.)	ASTM D5261
Grab tensile strength	150 lb. (min.)	ASTM D4632
Elongation at break	50% (max.)	ASTM D4632
Puncture strength	80 lb. (min.)	ASTM D4833

Property	Test Value	Test Method
Burst strength	300 psi (min.)	ASTM D3786
Apparent opening size	#70 (max.)	ASTM D4751
Permittivity	1.0 sec ⁻¹ (min.)	ASTM D4491
UV resistance	70% (min.)	ASTM D4355

- C. The pipe zone shall extend from the top of the excavation subgrade or top of the wrapped pipeline foundation material to the top of the pipeline. The pipe bedding will be the lower four to eight of the pipe zone. Refer to City standard details in the Contract plans for the pipe bedding and pipe zone materials. When CDF is used as the pipe bedding material, the pipeline shall be elevated off of the trench bottom or foundation material using cradles, sandbags, or other approved supports prior to CDF placement. Pipe anchors/weights may be required to prevent certain pipe types from "floating" in a CDF environment.
- D. Trench backfill: The trench zone shall extend from the top of the pipe zone to the bottom of the asphalt concrete in paved areas. Trench backfill material and compaction requirement shall be in accordance with the City standard details in the Contract plans. On-site expansive soils used for trench backfill shall be greater than 3% of optimum moisture content as determined by ASTM D1557. Low expansion soils used for trench backfill shall be greater than 1% of optimum moisture content as determined by ASTM D1557.
- E. Suitable Materials: Materials not defined as unsuitable below are defined as suitable materials and may be used in fills, backfilling, and embankment construction subject to the indicated limitations. In addition, when acceptable to the Engineer, some of the material listed as unsuitable may be used when thoroughly mixed with suitable material to form a stable composite.
- a. Suitable materials may be obtained from on-site excavations, may be processed on-site materials, or may be imported. If imported materials are required by this Section, or to meet the quantity requirements of the project, the Contractor shall provide the imported materials at no additional expense to the City, unless a unit price item is included for imported materials in the bidding schedule.
- F. Unsuitable Materials: Unsuitable materials include the materials listed below:
1. Soils which, when classified under ASTM D2487 - Classification of Soils for Engineering Purposes, fall in the classifications of Pt, OH, CH, MH, or OL.
 2. Soils which cannot be compacted sufficiently to achieve the density specified for the intended use. Note that soils shall not be termed unsuitable simply because they are over optimum moisture content. The Contractor shall at its cost blend, blade, aerate and dry these materials until optimum moisture is achieved.
 3. Materials that contain hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and material which may be classified as hazardous or toxic according to applicable regulations.
 4. Soils that contain greater concentrations of chloride or sulfate ions, or have a

soil resistivity or pH less than the existing on-site soils.

5. Top soil, except for the top 6 inches of the trench where excavation takes place in an unpaved area.

2.2 USE OF FILL, BACKFILL, AND EMBANKMENT MATERIAL TYPES

- A. The Contractor shall use the types of materials as designated herein for required fill, backfill, and embankment construction hereunder.
- B. Where these Specifications conflict with the requirements of each local agency having jurisdiction or with the requirements of a pipe material manufacturer, the Engineer shall be immediately notified. In case of conflict between types of pipe embedment backfills, the Contractor shall at its cost use the agency-specified backfill material if that material provides a greater degree of structural support to the pipe, as determined by the Engineer. In case of conflict between types of trench or final backfill types, the Contractor shall at its cost use the agency-specified backfill material if that material provides the greater in-place density after compaction.

2.3 MATERIALS TESTING

- A. Soils testing of samples submitted by the Contractor will be done by a testing laboratory of the Owner's choice and at the Owner's expense. The Contractor shall supply samples for testing of material used in the work.
- B. Particle size analysis of soils and aggregates will be performed using ASTM D422 - Method for Particle-Size Analysis of Soils.
- C. Determination of sand equivalent value will be performed using ASTM D2419 - Test Method for Sand Equivalent Value of Soils and Fine Aggregate or California Test Method 217.
- D. Unified Soil Classification System: References in this Section to soil classification types and standards shall have the meanings and definitions indicated in ASTM D2487. The Contractor shall be bound by applicable provisions of said ASTM D2487 in the interpretation of soil classifications.
- E. The testing for chloride, sulfate, resistivity, and pH will be done in accordance with California Test Methods 417, 422, and 643 of the California Department of Transportation.
- F. Determination of R-value will be performed using ASTM D2844 or California Test Method 301.
- G. Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with Method C of ASTM D1557. Where cohesionless, free draining soil material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D4253 and D4254.

PART 3 EXECUTION

3.1 EXCAVATION - GENERAL

- A. General: Except when specifically provided to the contrary, excavation shall include the removal of materials of whatever nature encountered, including obstructions of nature that would interfere with the proper execution and completion of the WORK. The removal of said materials shall conform to the lines and grades indicated or ordered. Unless otherwise indicated, the entire construction site shall be stripped of vegetation and debris, and such material shall be removed from the site prior to performing an excavation or placing fill. The Contractor shall furnish, place, and maintain supports and shoring that may be required for the sides of the excavations. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926).
- B. Removal and Exclusion of Water: The Contractor shall remove and exclude water, including stormwater, groundwater, irrigation water, and wastewater, from excavations. Dewatering wells, wellpoints, sump pumps, or other means shall be used to remove water and continuously maintain groundwater at a level at least three (3) foot below the bottom of excavations before the excavation work begins at each location. Water shall be removed and excluded until backfilling and compaction are complete and field soilstesting has been completed. See Section 02140.

3.2 STRUCTURE, ROADWAY, AND EMBANKMENT EXCAVATION

- A. Excavation Beneath Structures and Embankments: Except where otherwise indicated for a particular structure or ordered by the Engineer, excavation shall be carried to the grade of the bottom of the footing or slab. Where indicated or ordered, areas beneath structures or fills shall be over-excavated. The subgrade areas beneath embankments shall be excavated to remove not less than the top 6 inches of native material and where such subgrade is sloped, the native material shall be benched. When such over-excavation is indicated, both over-excavation and subsequent backfill to the required grade shall be performed by the Contractor. When such over-excavation is not indicated but is ordered by the Engineer, such over-excavation and resulting backfill will be paid for under the separate unit price bid item. After the required excavation or over- excavation has been completed, the exposed surface shall be scarified to a depth of 12 inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density.
- B. Excavation Beneath Paved Areas: Excavation under areas to be paved shall extend to the bottom of the aggregate base or subbase, if such base is called for; otherwise it shall extend to the paving thickness. After the required excavation has been completed, the top 12 inches of exposed surface shall be scarified, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density. The finished subgrade shall be even, self-draining, and in conformance with the slope of the finished pavement. Areas that could accumulate standing water shall be regraded to provide a self-draining subgrade. The subgrade surface immediately prior to placing subsequent layers shall not vary more than 0.04 feet from the design elevation.
- C. Notification of Engineer: The Contractor shall notify the Engineer at least 3 days in advance of completion of a structure excavation and shall allow the Engineer a review period of at least one day before the exposed foundation is scarified and compacted or is covered with backfill or with construction materials.

3.3 PIPELINE AND UTILITY TRENCH EXCAVATION

- A. General: Unless otherwise indicated or ordered, excavation for pipelines and utilities

shall be open-cut trenches with widths as indicated. See trench section details in the Contract Drawings.

- B. Trench Bottom: Except when foundation material is required, the bottom of the trench shall be excavated uniformly to the grade of the bottom of the pipe bedding. Excavations for pipe bells and welding shall be made as required.
- C. Open Trench: The maximum amount of open trench permitted in one location shall be 200 feet, or the length necessary to accommodate the amount of pipe installed in a single day, whichever is greater. Trenches shall be fully backfilled at the end of each day or, in lieu thereof, shall be covered by heavy steel plates adequately braced and capable of supporting vehicular traffic in those locations where it is impractical to backfill at the end of each day. The above requirements for backfilling or use of steel plate may, at the sole discretion of the Engineer, be waived in cases where the trench is located further than 100 feet from a traveled roadway or occupied structure. In such cases, however, barricades and warning lights meeting safety requirements shall be provided and maintained.
- D. Trench Over-Excavation: Where trenches are indicated to be over-excavated, excavation shall be to the depth indicated, and backfill shall be installed to the grade of the bottom of the pipe bedding.
- E. Over-Excavation Ordered by the Engineer: When over-excavation is ordered by the Engineer additional payment will be made to the Contractor. Said additional payment will be made under separate unit price bid items for over-excavation as noted in the Bid Form.
- F. If a moveable trench shield is used during excavation operations, the trench width shall be wider than the shield so that the shield is free to be lifted and then moved horizontally without binding against the trench sidewalls. Pipe shall be blocked during trench shield movement to prevent shifting off line or grade or disjuncting the pipe. If the trench walls cave in or slough, the trench shall be excavated as an open excavation with sloped sidewalls or with trench shoring, as indicated and as required by the pipe structural design.

3.4 OVER-EXCAVATION NOT ORDERED OR INDICATED

- A. Over-excavation carried below the grade ordered or indicated, shall be backfilled to the required grade with the indicated material and compaction. Such work shall be performed by the Contractor at no additional cost to the Owner.

3.5 BACKFILL - GENERAL

- A. Backfill shall not be dropped directly upon a structure or pipe. Backfill shall not be placed around or upon a structure until the concrete has attained sufficient strength to withstand the loads imposed, per Division 3 specifications.
- B. Except for drainrock materials being placed in over-excavated areas or trenches, backfill shall be placed after water is removed from the excavation, and the trench sidewalls and bottom have been dried to a moisture content suitable for compaction.
- C. If a moveable trench shield is used during excavation, pipe installation, and backfill operations, the shield shall be moved by lifting the shield free of the trench bottom or backfill and then moving the shield horizontally. The Contractor shall not drag trench shields along the trench causing damage or displacement to the trench sidewalls, the pipe, or the bedding and backfill.

- D. Immediately prior to placement of backfill materials, the bottoms and sidewalls of trenches and structure excavations shall have loose sloughing, or caving soil and rock materials removed. Trench sidewalls shall consist of excavated surfaces that are in a relatively undisturbed condition before placement of backfill materials.
- E. For trench backfill, after compacting the bedding the Contractor shall perform a final trim of the trench bottom such that each pipe section when first laid will be continually in contact with the bedding along the extreme bottom of the pipe. Small excavations for pipe bells ("bell holes") shall be made so that pipe joint bells are not in contact with the bedding.

3.6 PLACING AND SPREADING OF BACKFILL MATERIALS

- A. Backfill materials shall be placed and spread evenly in layers. When compaction is achieved using mechanical equipment, the layers shall be evenly spread so that, when compacted, each layer shall not exceed 8 inches in thickness.
- B. Flooding and jetting is prohibited. Backfill shall be mechanically compacted.
- C. During spreading, each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer. Pipe zone (defined in Section 2.1) backfill materials shall be manually spread around the pipe so that, when compacted, the pipe zone backfill will provide uniform bearing and side support.
- D. Where the backfill material moisture content is below the optimum moisture content, water shall be added before or during spreading until the optimum moisture content is achieved.
- E. Where the backfill material moisture content is too high to permit the specified degree of compaction the material shall be dried or blended with drier material until the moisture content is satisfactory for compaction.
- F. The cost for moisture conditioning of backfill material shall be included in the various items of work and no additional payment will be made.

3.7 COMPACTION OF FILL, BACKFILL, AND EMBANKMENT MATERIALS

- A. Each layer backfill materials as defined herein shall be mechanically compacted to the indicated percentage of density. Backfill material shall be moistened (or dried) to within 3 percent of the optimum moisture content. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content.
- B. Flooding, ponding, or jetting of backfill materials shall not be permitted.
- C. Equipment weighing more than 10,000 pounds shall not be used closer to walls than a horizontal distance equal to the depth of the fill at that time. Hand operated power compaction equipment shall be used where use of heavier equipment is impractical or restricted due to weight limitations.
- D. Backfill around and over pipelines that is mechanically compacted shall be compacted using light, hand operated, vibratory compactors and rollers. After completion of at least two feet of compacted backfill over the top of pipeline, compaction equipment weighing no more than 8,000 pounds may be used to complete

the trench backfill.

- E. **Compaction Requirements:** Trench materials shall be compacted to 95% relative compaction in accordance with ASTM D1557. Laboratory Compaction Characteristics of Soils Using Modified Effort (56,000 ft - lbf/ft³) and in accordance with ASTM D4253 - Test Methods for Maximum Index Density of Soils Using a Vibratory Table, and D4254 - Test Methods for Maximum Index Density of Soils and Calculation of Relative Density. Where agency or utility company requirements govern, the highest compaction standards shall apply. Foundation and bedding material shall be compacted to the greatest extent possible using a vibratory compactor in max 8" lifts. Where placed and compacted material is disturbed due to removal of trench shoring, the disturbed material shall be re-compacted.
- F. **Curing Requirements:** Both temporary and permanent fill shall be allowed to cure at least 72 hours prior to placing asphalt concrete pavement or other surface material over it. If the placement of the temporary or permanent fill is not completed early enough to allow for placement of temporary paving, the Contractor shall provide no-skid steel plates to span the trench to accommodate traffic until the temporary pavement can be placed.

3.8 FIELD TESTING

- A. **General:** Field soils testing will be done by a testing laboratory of the Owner's choice at the Owner's expense except as indicated below.
- B. Field density in-place tests will be performed in accordance with ASTM D1556 - Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method, ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place By Nuclear Methods (Shallow Depth), or by such other means acceptable to the Engineer.
- C. In case the test of the fill or backfill show non-compliance with the required density, the Contractor shall accomplish such remedy as may be required to ensure compliance. Subsequent testing to show compliance shall be by a testing laboratory selected by the Owner and shall be at the contractor's cost.
- D. The Contractor shall provide test trenches and excavations including excavation, trench support, and groundwater removal for the Owner's field soils testing operations. The trenches and excavations shall be provided at the locations and to the depths required by the Owner. Work for test trenches and excavations shall be provided at no additional cost to the Owner.

END OF SECTION

SECTION 02050

DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes (but is not necessarily limited to):
 - 1. Demolition and removal of existing improvements as indicated on the Drawings
 - 2. Requirements for addressing complaints received by the Contractor.
- B. Full compensation for conforming to the requirements of this Section shall be considered as included in the Contract Lump Sum Price and no additional compensation will be allowed therefore.
- C. Information for the Contractor's use in preparing the demolition plan is provided in this Section.

1.2 REFERENCE STANDARDS

- A. California Health and Safety Code

1.3 RELATED SECTIONS

- A. Section 02019SP – Earthwork

1.4 DEMOLITION PLAN

- A. The Contractor shall submit a complete demolition plan to the City's representative detailing procedures and sequence of the work including traffic signing, salvage, disposal, and material handling.
- B. The Contractor shall thoroughly investigate the existing conditions at the site before proceeding with the demolition plan.
- C. The demolition plan shall consist of the following:
 - 1. The removal sequence for all items.
 - 2. Equipment locations during removal operations.
 - 3. Temporary support shoring or temporary bracing, if necessary.
 - 4. Details and locations of shields or other protective measures in sufficient numbers to assure that people, property and improvements will not be endangered.
 - 5. Items designated for salvage and date when and location where salvaged items will be delivered.
 - 6. Items designated for disposal and location where disposed items will be transported.
- D. Approval by the City's representative of the demolition plan or field inspection performed by the City's representative will in no way relieve the Contractor of full responsibility for the demolition plan and procedure.

1.5 PROJECT CONDITIONS

- A. Special care shall be exercised to protect the finishes of existing paving and other items to remain.
 - 1. Damage or disturbance to the existing pavement, curbs, sidewalks or other existing services shall be promptly restored, repaired, or replaced to match the existing condition at no additional cost to the City.
 - 2. If the Contractor has any question as to the extent of items to remain, he shall notify the City's representative and request clarification before proceeding.
- B. Damage: Promptly repair damage caused by demolition operations to existing facilities to remain and adjacent facilities as directed by the City's representative and at no additional cost to the City. If the finished surface of the asphalt concrete on existing City streets is damaged, including by direct operations, haul trucks, movement of construction equipment, or other Contractor actions, then it shall be repaired to the satisfaction of the City and the City's representative. Corrective work shall be at the Contractor's expense.

1.6 TRAFFIC

- A. The following additional requirements apply to the work that may require closing roadways to traffic for only brief periods of time.
 - 1. The closure of roadways to public traffic shall conform to the applicable requirements of City Standard Specifications.
 - 2. Conduct demolition operations and the removal of debris to ensure minimum interference with streets, walks, and other adjacent occupied or used facilities.
 - 3. Do not close or obstruct streets, walks, or other occupied or used facilities except to the extent indicated on the Drawings.
 - 4. Prior to closing a roadway to traffic, the Contractor shall have all necessary workers, materials, and equipment at the site as needed to proceed with the work in an expeditious manner. While the roadway is closed to traffic, work shall be pursued promptly and without interruption until the roadway is reopened to public traffic.
- B. Refer to Section 01500 – Temporary Facilities and Controls.

1.7 UNDERGROUND UTILITIES

- A. The Contractor's attention is directed to the existence of certain underground facilities under and in the vicinity of the Work area that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workers and the public. Facilities requiring special precautions include natural gas; and underground electric supply system conductors or cables, with potential to ground of more than 300 volts, either directly buried or in duct or conduit which do not have concentric grounded conductors or other effectively grounded metal shields or sheaths.
- B. The Contractor shall notify the City's representative and Underground Service Alert - Northern California (USA): 1-800-227-2600 at least 48 hours prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure.
- C. If such facilities are not located on the Drawings in both alignment and elevation, no work shall be performed in the vicinity of said facilities until said facilities have been located and identified by the Contractor.

- D. Service is to remain uninterrupted, unless directed otherwise by utility company or City's representative. If it is necessary to interrupt service, Contractor must allow sufficient time for utility company to arrange for the continuation of required services. Regardless, Contractor must, at the minimum, notify all utility and service providers 48 hours prior to the start of the work of this Section.

1.8 HAZARDOUS WASTE IN EXCAVATIONS

- A. If the Contractor encounters material in excavations that he has reason to believe may be hazardous waste, as defined by Section 25117 of the California Health and Safety Code, he shall immediately so notify the City's representative in writing. Excavation in the immediate area of the suspected hazardous material shall be suspended until the City's representative authorizes resumption of work. If such suspension delays the current controlling operation, the Contractor will be granted an extension of time in accordance with the terms of the Contract.
- B. The City reserves the right to retain an independent consultant for exploratory work to identify and determine the extent of such material and for removing hazardous material from such areas.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Materials and work involving alterations to existing construction shall conform to requirements of applicable Sections of the Contract Documents.

PART 3 EXECUTION

3.1 DEMOLITION

- A. Demolition work shall, in general, be as indicated in the Contract Documents and shall consist of complete removal and disposal of the demolished materials.
- B. All removed material, except that to be salvaged, stored on site and needed for backfill, shall become the property of the Contractor and shall be disposed of off-site in a legal manner.
 - 1. Concrete removed shall be broken into pieces, not larger than two (2) feet in the greater dimension, in such that the steel reinforcement bars will be segregated.
 - 2. Provide all necessary temporary enclosures necessary to protect pedestrians from possible injury.
- C. Abandonment of subsurface utilities
 - 1. Where utility is greater than 6 inches in diameter and is outside of the building footprint, cap the ends of the line with concrete to prevent entrance of water. The length of the cap shall not be less than five feet. The concrete mix shall have a minimum shrinkage.

3.2 COMPLAINTS

- A. Demolition or Construction complaints shall be accurately recorded by the Contractor as to name of complainant, telephone number, address, date, time, nature of the complaint, name of the person receiving the complaint, the complaint investigation conducted,

and the disposition of the complaint. Complaint records shall be kept at the Field Office and shall be available to the City's representative at all times.

3.3 POLLUTION CONTROLS

- A. Use water sprinkling, temporary enclosures, and other suitable methods as necessary to limit the amount of dust and dirt rising and scattering in the air to the lowest level of air pollution practicable for the condition of Work to protect adjacent buildings, automobiles and other property. Comply with all governing regulations.
- B. Clean adjacent structures and improvements of all dust, dirt, and debris caused by demolition operations.
- C. Return areas to condition existing prior to the start of the Work.
- D. See additional requirements for dust control included in Section 02010 Site Conditions and Dust Control.

3.4 SALVAGEABLE ITEMS

- A. Where required and when so directed by the City's representative to be salvaged and/or reused, existing fixtures and equipment shall be removed in the most careful manner possible to avoid damage; and, if damaged, such items shall be restored to conditions satisfactory to the City's representative.
- B. Salvageable items include; but are not necessarily limited to: valves, fittings, etc. All such items shall be delivered to the city yard having jurisdiction over the salvaged item, see Section 01100.

3.5 CLEANING

- A. Surfaces to remain, when cut, shall be carefully restored and refinished to provide a continuous, even finish to nearest intersections or edges.

3.6 SITE WASTE DIVERSION

- A. Divert green waste and existing structures to be demolished and removed by a minimum of 50% by weight for recycling or reuse purposes. Diverted waste shall be segregated from waste stream and stored in designated recycle or reuse areas. Recycled or reused materials not utilized for the project shall be hauled to construction waste recycling facilities.

END OF SECTION

SECTION 02051
CONTAMINATED MATERIALS

PART 1 GENERAL

1.1 SUMMARY

- A. Contractor shall furnish engineering, labor, materials, tools, equipment, and services required for the removal and off-site disposal of contaminated soil/materials and water encountered during the Work. The Contractor shall handle, remove, and dispose of contaminated soil/materials and water in accordance with applicable government laws, regulations, and orders, and the requirements of the Contract Documents.
- B. A Phase 1 Environmental Site Assessment has not been conducted.
- C. See Document 00320, Geotechnical Data and Existing Conditions.
- D. The Contractor is required to sample and test soil and groundwater to determine if it is contaminated. If soil or groundwater is determined to be contaminated, contaminated soil or groundwater handling, treatment and disposal shall be compensated as extra work under a negotiated unit price.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

Activities involving contaminated materials, should they be encountered, shall be in accordance with:

- A. California Hazardous Water Control Law (HWCL), Health and Safety Code, Sections 25100 through 25249.
- B. California Code of Regulations, Title 22, Division 4, Chapter 30, Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes.
- C. Federal Resources Conservation and Recovery Act (RCRA), 42 USC, Sections 6901 through 6987.
- D. Federal Hazardous and Solid Waste Amendments (HSWA), PL 98-6 16.
- E. California State Water Resources Control Board Regulations, California Code of Regulations, Sections 2501 through 2610.
- F. California Code of Regulations, Title 8, General Industry Safety Orders, Section 5194, Hazard Communication.
- G. California Labor Code, Chapter 2.5, Hazardous Substances Information and Training.
- H. California Occupational Safety and Health Administration (CAL/OSHA) regulations (Title B, CCR, Section 5192).
- I. Local City of Santa Clara regulations.
- J. Bay Area Air Quality Management District, Regulation 8, Rule 40.

- K. Santa Clara County Fire Department Regulations and Permitting Procedures.
- L. Code of Federal Regulations – Title 40 – Protection of the Environment, Part 761 (40 CFR 761), Subpart D (Storage and Disposal)
- M. Code of Federal Regulations – Title 40 – Protection of the Environment, Part 761 (40 CFR 761), Subpart J (Records and Reports)
- N. Other codes and regulations related to the scope of Work.

1.3 CONTRACTOR SUBMITTALS

In accordance with Section 01330 Submittal Procedures, the Contractor shall prepare and submit the following:

- A. Job Plan: The Contractor shall prepare and submit to the Engineer, for review, a detailed Job Plan describing the proposed methods and procedures for excavating, segregating, testing, and disposing of contaminated soil or groundwater. The Job Plan shall be submitted to the Engineer no less than fourteen (14) days prior to the start of excavation Work.
 - 1. The Job Plan shall include step-by-step procedures for the actions to be taken in identifying, handling, removing, and disposing of contaminated soil or groundwater encountered during excavation. The Job Plan shall include a description of monitoring equipment, a listing of the chemical analyses to be performed, safety considerations, Subcontractor participation, and shall demonstrate conformance to environmental, local, State, and Federal laws and regulations.
 - 2. In the event that contaminated soil and/or groundwater are encountered, Contractor shall reference and obtain required permits, licenses, certificates of disposal, and manifests. The equipment and procedures described in this Section are intended to serve as a guideline for the Contractor's use in preparing the Job Plan.
- B. Health and Safety Plan (HSP): At least thirty (30) days before the start of excavation, the Contractor shall prepare and submit to the Engineer, for review, a Health and Safety Plan (HSP), which details how the Contractor intends to protect workers while working in the presence of contaminated soils and groundwater.
 - 1. If contaminated materials are encountered during construction, the Contractor shall stop Work immediately in this area, and shall sufficiently secure the Work area such that contaminated materials or potentially contaminated materials are not exposed to public. This shall be accomplished through temporary backfilling, trench plating, covering exposed areas with plastic sheeting, or other means. The Contractor shall immediately notify the City of his findings, shall secure the area, and then shall continue Work in another area away from the area in question. The Contractor shall not continue Work in the potentially contaminated area until directed by the City. Stopping Work in a potentially contaminated area, and moving to another Work area, shall be considered part of the Work and no additional payment will be made. Payment for preparation and submittal of the HSP shall be included in the other items of work. If contaminated materials are encountered during construction,

payment for Work within contaminated areas shall be negotiated per the requirements of Section 01250, Modification Procedures.

2. The HSP shall be prepared, signed, and stamped by a Certified Industrial Hygienist employed by or under contract to the Contractor. The HSP shall be reviewed and signed by the Contractor and personnel who will be overseeing Work in the contaminated construction zones, including Subcontractors.
3. A copy of the HSP shall be provided to personnel working in the contaminated areas. Contractor personnel performing Work in the identified contaminated areas shall be required to read the HSP and shall be required to sign an acknowledgment that he/she has obtained and read a copy of the HSP. No worker shall be allowed in the identified contaminated areas until a copy of his/her signed acknowledgment has been submitted to the Engineer by the Contractor.
4. The HSP shall conform to the requirements of local, state, and federal ordinances, rules, regulations, and guidelines concerning occupational health and safety issues. Included as part of the HSP is the requirement for and the implementation of ongoing monitoring of the project by the Contractor for contaminated materials. This monitoring shall, at a minimum, include visual observation and odor detection by personnel with appropriate hazardous materials training, including 40 hours of EPA-approved Health and Safety training.
5. The excavation or exposure of soil within 100 yards of the described locations shall be monitored by the Contractor for subsurface contamination in compliance with CAL/OSHA. This monitoring shall, at a minimum, include visual observation by personnel with appropriate hazardous materials training, including 40 hours of EPA-approved Health and Safety training.
6. Analysis for contamination of soil and water samples will be provided by the Contractor through a State of California certified hazardous waste laboratory using U.S. EPA approved analytical methods. The laboratory shall be approved by the City.
7. Implementation of the HSP for the project, beyond the monitoring which is included with the HSP, requires: first, detection of contaminated materials; second, a written request by the Contractor to the Engineer; and third, approval by the Engineer in writing that the HSP shall be implemented.
8. Stockpiling of contaminated material will be allowed only at locations approved by the Engineer, shall not be commingled with non-contaminated soil, and shall comply with regulatory requirements. Unless otherwise indicated on the plans, Contractor shall provide temporary site or sites for stockpiling.
9. In the event that groundwater contamination is encountered, Contractor shall comply with applicable federal, state, and local laws and regulations pertaining to the Work performed during the dewatering and disposal of contaminated groundwater.

PART 2 – PRODUCTS

2.1 ORGANIC VAPOR ANALYZER

- A. The Contractor shall furnish a properly calibrated, fully functional organic vapor analyzer (OVA) for use at the site of every excavation or open trench. The OVA shall utilize the principle of hydrogen flame ionization, shall incorporate a chemically- resistant sampling system, shall provide accurate indication of gas concentration over the range of 0 to 10 parts per million (ppm), shall continuously sample and monitor the ambient atmosphere, shall provide both visible readouts and audible alarms, and shall be outfitted with a recording strip-chart or other permanent recording device.
- B. If the OVA provides more than one (1) monitoring scale, then the monitor shall be set to monitor over the zero (0) to ten (10) ppm range at all times during use.
- C. The audible alarms shall be set to activate at a level equal to ten (10) percent of the lower explosive limit (LEL) for methane.
- D. The organic vapor analyzer shall be a Model OVA 128 Century Organic Vapor Analyzer as manufactured by the Foxboro Company, Foxboro, Massachusetts, or approved equal.

PART 3 – EXECUTION

3.1 MONITORING

- A. The Contractor shall calibrate and make available the OVA equipment daily.
- B. The preliminary mode of examination for petroliferous soil and/or groundwater shall be through visual and olfactory means. Upon the first observation of soil or water that may contain petroliferous products, the Contractor shall stop excavation Work and immediately notify the Engineer. No excavation of petroliferous soil, nor pumping of petroliferous water, may occur except in the presence of the Engineer.
- C. Following sensory observation of petroliferous products, the OVA equipment shall be brought to the excavation site and the atmosphere shall be tested by a qualified, fully trained employee of the Contractor who shall make the tests in the presence of a City representative. The Contractor's Job Plan and Health and Safety Plan shall be immediately placed into effect.
- D. Potentially contaminated soil or water shall be segregated and tested to determine the constituency and quantity of petroliferous products. The soil or water shall then be disposed of in accordance with applicable local, State, and Federal law, following the procedures described in the Contractor's Job Plan and Health and Safety Plan.

END OF SECTION

SECTION 02071SP
WATER MAINS AND SERVICES

The paragraphs indicated herein of Section 02071 of the Standard Specifications shall not be modified or deleted, but shall be supplemented as follows:

Add to paragraph 2.1 the following:

Approved Pipe Manufacturers:

1. US Pipe
2. Pacific States
3. Or approved equal

Add to paragraph 2.3 the following:

“Pressure rating of fittings shall be equal to or greater than that of adjoining pipe.”

Add to paragraph 2.4 the following:

Manufacturers:

1. Mueller A-2360
2. Clow F-6106
3. M&H Style 4067
4. Or approved equal

Add paragraph 2.24 as follows:

2.24 BUTTERFLY VALVES

- A. General: Butterfly valves shall be Class 150B and shall conform to ANSI/AWWA C504, subject to the following requirements. Valves shall be of the size and class indicated. Flanged valves shall have ANSI 125-lb standard split-V type packaging, or other acceptable seal. The interior passage of butterfly valves shall not have any obstructions or stops. The rubber seats shall be EPDM elastomer and shall be positively clamped or bonded into the body of the valve, but cartridge-type seats which rely on a high coefficient of friction for retention shall not be acceptable.
- B. Valve Discs:
 1. ASTM A48, Class 40C, cast iron.
 2. Seating Edge: 316 stainless steel.
 3. Configuration: Offset to provide uninterrupted 360-degree sealing surface.

- C. Valve Shaft:
 - 1. Material: 316 stainless steel.
 - 2. Seal: Packing; minimum of 4 rings.
- D. Test each valve under test pressure equal to twice its design water-working pressure, unless specified otherwise. Leak test each valve at 150 psi for class 150B valves and 250 psi for class 250B valves.
- E. All butterfly valves shall have certification as a complete valve for the NSF-61 standard and shall also include certification for the Annex G portion of NSF-61 or the equivalent NSF-372 certification.
- F. Manual Actuators: All buried valves shall be equipped with a two-inch (2 in) square actuating nut. All valves 14-in and larger shall be equipped with a position indicator. All valves shall open counter-clockwise. All non-buried valves shall be equipped with a handwheel.
- G. Lining and Coating: All ferrous surfaces of the valves body shall be lined and coated with 20 mils minimum high solids epoxy.
- H. Polyethylene wrap shall be used for buried installation of butterfly valves.
- I. Manufacturers (non-buried valves):
 - 1. Henry Pratt Company (Model 2FII)
 - 2. Mueller Corporation (Lineseal XP)
 - 3. Or approved equal
- J. Manufacturers (buried valves):
 - 1. Henry Pratt Company (Groundhog Series)
 - 2. Mueller Corporation (Lineseal III)
 - 3. Or approved equal

Add paragraph 2.25 as follows:

2.25 SWING CHECK VALVES

- A. Size: As indicated on the plans.
- B. The rubber flapper swing check valve shall be installed for use in basic flow reversal situations, and may be mounted either horizontally or vertically.
- C. The valve shall be ANSI Class 150 with standard ASTM A536 65-45-12 ductile iron body and steel-reinforced EPDM Rubber Flapper with "O-ring" face, epoxy lining and shop primed exterior coating. It shall operate at 2 PSIG, with a maximum of 250 PSIG.
- D. Flanges: ANSI B16.5 class 150
- E. Manufacturer:
 - 1. Crispin Model RF Series
 - 2. APCO Series 100
 - 3. or approved equal.

- F. Factory Coating: Primer that is compatible with field-applied top coat.
- G. Lining: 12-mil holiday-free epoxy per AWWA C550. Lining shall be NSF 61 certified suitable for potable water use.

Add paragraph 2.26 as follows:

2.26 RUBBER DUCKBILL CHECK VALVE

- A. Size: As indicated on the plans
- B. Duckbill check valve shall be constructed of EPDM 100% elastomer and have an integral elastomeric flange.
- C. Style: ANSI B16.5 Class 150 flanged with Type 316 stainless steel backup/retaining ring
- D. Application: Potable water – Requires NSF 61 Certification.
- E. Manufacturer:
 - 1. Tideflex Series 35
 - 2. General Rubber Flex-Valve 4200
 - 3. or approved equal

Add paragraph 2.27 as follows:

2.27 EXTENSION STEMS

- A. Extension stems shall be manufactured by Mueller, Kennedy, or approved equal. Stem diameters shall be 1-1/4 inches unless otherwise shown. Stem guides shall be Mueller A26448, Kennedy, or equal. Guides shall be spaced such that the slenderness ratio of the stem body does not exceed 200. Extensions shall be positively attached to the valve operating nut.

Add paragraph 2.28 as follows:

2.28 WELDED STEEL PIPE AND FITTINGS

- A. Materials: Carbon Steel – ASTM A106, Grade B.
- B. Service: Potable water, 60 degrees F.
- C. Working Pressure: Varies, maximum 150 psig.
- D. Test Pressure: 200 psig.
- E. Pipe and Fitting Dimensions: Schedule 40.
- F. Lining and Coating:
 - 1. Steel pipe and fittings shall be factory lined with fusion-bonded epoxy in accordance with AWWA C213 and shall be NSF 61 certified for potable water use. Lining thickness shall be a minimum of 12 mils.
 - 2. Coating for steel pipe located inside the tank and attached to the tank exterior shall be in accordance with Section 09910, Tank Painting.
 - 3. Coating for steel pipe not located inside the tank and not attached to the tank exterior shall be in accordance with Section 09900, Paints and Coatings.

4. All welded joints shall be field epoxy coated in accordance with Section 09910, Tank Painting .
- G. Fittings (Other than flanges)
 1. Materials: Carbon Steel
 - a. Wrought – ASTM A 234, Grade WPB
 - b. Forgings – ASTM A 105
 - c. Plate for fabrication
 - 1) ASTM A 36, or
 - 2) ASTM A 283, Grade C, or
 - 3) ASTM A 570, Grade 30, 33 or 36
 2. Construction/Dimensions: Carbon Steel
 - a. ANSI B 16.9 – Wrought steel buttwelding fittings
 - b. ANSI B 16.11 – Forged steel fittings
 - c. ANSI B 16.28 – Wrought steel short radius elbows
- H. Flanges
 1. Materials: Carbon Steel
 - a. Plate – ASTM A 36, or
 - b. ASTM A 283, Grade C, or
 - c. ASTM A 570, Grades 30, 33, or 36
 2. Construction standards
 - a. Carbon steel – AWWA C207, Class D unless otherwise indicated on Plans, or ANSI B 16.5, or MSS SP44
 3. All flanges are to be flat-faced unless otherwise noted.
 4. Gaskets: ANSI B16.5, Figure E1, Group 1a.
 5. Bolting: Quenched and Tempered Alloy Steel Bolts and Studs per ASTM A 354, with fluoropolymer coating.
 6. Nuts: Carbon Steel per ASTM A 194, with fluoropolymer coating.
- I. Joint Harness Assemblies: Fabricated steel lugs and tie rods per AWWA Manual M11.
 1. Tie rod material: Alloy Steel per ASTM A 354 with fluoropolymer coating.
- J. Piping Components
 1. Welding outlet: Bonney Weld-O-Let, Grinnell Fig. 1811, Phoenix Forging Co. Trans-O-Con, or approved equal.
 2. Threaded outlet: Bonney Thread-O-Let, Grinnell Fig. 1812, Phoenix Forging Co. Trans-O-Con, or approved equal.
 3. Welding cap: Standard Weight: Taylor Forge, Grinnell Fig. 1801, or approved equal.
 4. Welding ell:
 - a. Long radius: Taylor Forge, Grinnell Fig. 1701, or approved equal.
 - b. Short radius: Taylor Forge, Grinnell Fig. 1731, or approved equal.
 5. Concentric reducer: Taylor Forge, Grinnell Fig. 1781 or approved equal.

2.29 VALVE LABELING

- A. The Contractor shall submit a schedule of valves to be labeled indicating in each case the valve location and the proposed wording for the label.
- B. Label shall be constructed of stainless steel with engraved or stamped lettering or solid black plastic laminate with white embossed letters. Label shall be fastened to the valve in an accessible location with appropriately sized oval head stainless steel screws or drive pins. Label shall indicate clearly the following information:
 1. Manufacturer

2. Date of manufacture
3. Model and size
4. Serial number
5. Valve nomenclature to be coordinated with the City

Add to paragraph 3.2 the following:

“Follow manufacturer’s instructions for installation, pipe cutting, pipe restraint and maximum joint deflection.”

Replace the last paragraph of 3.9 with the following:

“Bolts, nuts, washers, and any other metallic elements exposed to the soil shall be coated with bitumastic in accordance with Section 2.16, entitled "Bitumastic".”

END OF SECTION

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SECTION 02100

SITE PREPARATION

PART 1 GENERAL

1.1 SUMMARY

- A. The work described in this Section includes those measures required during the Contractor's initial move onto the site to protect existing fences; buildings, structures, and associated improvements; streets, and utilities downslope of construction areas from damage due to boulders, trees or other objects dislodged during the construction process; clearing, grubbing and stripping; and regrading of certain areas to receive fill.

1.2 SITE INSPECTION

- A. Prior to moving onto the project site, the Contractor shall visit and inspect the site conditions and review maps of the existing facilities delineating the City's property and right-of-way lines.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 SITE ACCESS

- A. The Contractor shall develop necessary access to the site, including temporary fences to be installed in order to prohibit entry of unauthorized persons.
- B. Utility Interference: Where existing utilities interfere with the Work of this Section, the City shall be notified of interferences before proceeding in accordance with the Contract Documents.

3.2 CLEARING, GRUBBING, AND STRIPPING

- A. Construction areas shall be cleared of grass and weeds to at least a depth of six inches and cleared of structures, concrete or masonry debris, trees, logs, upturned stumps, loose boulders, and other objectionable material which would interfere with the performance or completion of the Work, create a hazard to safety, or impair the Work's subsequent usefulness or obstruct its operation. Loose boulders within 10 feet of the top of cut lines shall be incorporated in landscaping or removed from the site. Trees and other natural vegetation outside the actual lines of construction shall be protected from damage during construction, as directed by the Engineer.
- B. Within the limits of clearing, the areas below the natural ground surface shall be grubbed to a depth necessary to remove stumps, roots, buried logs, and other objectionable material. Septic tanks, drain fields, and connection lines and other underground structures, debris or waste shall be totally removed if they are found on the site. Objectionable material from the clearing and grubbing process shall be removed from the site and wasted in approved safe locations.
- C. For mass earthwork areas the entire area to be affected by construction shall be stripped to a depth of 1 foot below the existing ground contours. The stripped

materials shall be stockpiled and incorporated into landscaped areas or other non-structural embankments.

- D. Unless otherwise shown or specified, native trees larger than three inches in diameter at the base shall not be removed without the Engineer's approval. Open cut excavation Work shall not occur within tree drip lines. The removal of trees, shrubs, fences, or other improvements outside of rights-of-way as deemed necessary by the Contractor, shall be arranged with the Owner, and be removed and replaced, at no additional cost to the Owner.
- E. Serious injuries to trees to remain shall be avoided. No major roots or branches shall be cut if such cutting would seriously injure or imperil the safety of the trench or excavation. All limbs, roots, or branches, which are cut or broken, shall be trimmed and painted with an approved tree seal. If other objects are injured or damaged by reason of the Contractor's operations, they shall be replaced or restored, at the Contractor's expense, to the condition at the time the Contractor entered upon the Work.

3.3 OVEREXCAVATION, REGRADING, AND BACKFILL UNDER FILL AREAS

- A. In areas to receive fill, refer to the plans for scarification, optimum moisture content, and recompaction requirements.
- B. Any holes remaining after stripping and grubbing shall be backfilled unless they are located within an area designated for further excavation. Backfill material and placement shall be in accordance with Section 02019SP, Earthwork, and the plans.

END OF SECTION

SECTION 02140

DEWATERING

PART 1 GENERAL

1.1 SUMMARY

- A. The Contractor shall design, provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of all water from any source entering the excavations or other parts of the Work. Dewatering shall be accomplished by methods that will ensure a dry excavation and preserve the final lines and grades of the bottoms of excavations.
- B. The Contractor shall provide labor, materials, and equipment necessary to dewater trench, shaft and structure excavations, in accordance with the requirements of the Contract Documents, to enable pipes, foundations, manhole bases to be installed in excavations that are free from standing or flowing water that may be due to groundwater, surface water, storm water, precipitation, recycled water, or wastewater. The Contractor shall secure the applicable permits to complete the requirements of this Section of the Specifications, including disposal of dewatering water to sanitary sewers.
- C. Standing water in excavations will not be allowed. The Contractor shall maintain a dry working area for excavations.
- D. If treatment of contaminated groundwater prior to discharge to sanitary sewers is required, said treatment shall be paid as extra work per Section 01250, Modification Procedures. The Contractor shall prepare a Groundwater Testing, Treatment and Disposal Plan and submit it to the Engineer for review prior to discharge. Contractor shall de-silt groundwater prior to discharge.
- E. A geotechnical investigation report has been prepared for design purposes by Cornerstone Earth Group entitled City of Santa Clara Corp Yard Water Tank, Project Number 138-6-1, dated August 1, 2014. The Contractor may rely upon the accuracy of the technical data contained in the report but shall make its own interpretations as to discussions, conclusions, or recommendations contained therein. A copy of the report is available at City Hall and also included as Appendix A for the Contractor's information.
- F. For the purposes of initial design of temporary dewatering and shoring systems, the short-term ground water level should be taken as 8 feet below present ground surface, per the Geotechnical Report. Final design of dewatering and shoring systems shall be based on actual groundwater levels and flow quantities encountered by the Contractor.

1.2 CONTRACTOR SUBMITTALS

- A. Prior to commencement of excavation, the Contractor shall submit a detailed dewatering plan (including groundwater testing, treatment and disposal plan) and operation schedule for dewatering of excavations. The dewatering plan shall conform to requirements of the groundwater discharge permit. The Contractor may be required to demonstrate the system proposed and to verify that adequate equipment, personnel, and materials are provided to dewater the excavations at

all locations and times. The Contractor's dewatering plan shall be submitted for review by the Engineer.

- B. Shop Drawings. Contractor's Dewatering Plan shall show and describe the number, location, size and depths of wells, pumps, piping, generators and associated equipment. A Well Abandonment Plan shall also be provided confirming compliance with County of Santa Clara requirements.

1.3 QUALITY CONTROL

- A. It shall be the sole responsibility of the Contractor to control the rate and effect of the dewatering in such a manner as to avoid objectionable settlement and subsidence.
- B. Dewatering operations shall be adequate to fully dewater excavations to three (3) feet below the bottom of excavation and to assure the integrity of existing improvements and to enable construction of the finished project and shall be the responsibility of the Contractor.
- C. Where critical structures or facilities exist immediately adjacent to areas of proposed dewatering, reference points shall be established and observed at frequent intervals to detect settlement which may develop. The responsibility for conducting the dewatering operation in a manner which will protect adjacent structures and facilities rests solely with the Contractor. Modifications to the dewatering system shall be required if settlements are measured. The cost of repairing damage to adjacent structures and restoration of facilities shall be the responsibility of the Contractor.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Dewatering may include the use of wells, well points, sumps, temporary pipelines, storage tanks, de-silting facilities, rock or gravel placement, and other means. Standby pumping and generating equipment shall be maintained on the jobsite. Groundwater treatment facilities may include carbon treatment units, storage tanks, pumps, piping flow meters, sampling equipment and associated equipment. The design of dewatering systems should be made based on the actual groundwater inflow into the excavations and the type of shoring used. The Contractor may rely upon the accuracy of the technical data contained in the geotechnical investigation report but shall make its own interpretations as to discussions, conclusions, or recommendations contained therein. A copy of the Geotechnical report is available for review at the City. See Document 00320 Geotechnical Data and Existing Conditions.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Dewatering and groundwater treatment equipment shall be installed and operated in accordance with the Contractor's approved Dewatering Plan and Groundwater Testing, Treatment and Disposal Plan.

3.2 TESTING

- A. Dewatering equipment testing is not required; however, the equipment shall perform to achieve effective dewatering of excavations. If the equipment provided is not adequate

the Contractor shall at its cost augment or replace the equipment until adequate dewatering is achieved.

- B. Groundwater treatment testing is required to make sure that the requirements for discharge into the sewer system are met. The Contractor shall provide equipment to treat the groundwater as needed.

3.3 GENERAL

- A. The Contractor shall provide equipment necessary for dewatering. It shall have on hand, at all times, sufficient pumping and power generation equipment and machinery in good working condition and shall have available, at all times, competent workmen for the operation of the pumping equipment. Adequate standby equipment shall be kept available at all times to insure efficient dewatering and maintenance of dewatering operation during power failure. The foregoing shall also apply to groundwater treatment equipment.
- B. Dewatering for structures and pipelines shall commence when groundwater is first encountered, and shall be continuous until such times as water can be allowed to rise in accordance with the provisions of this Section or other requirements.
- C. At all times, site grading shall promote drainage. Surface runoff shall be diverted away from excavations. Water entering the excavation from surface runoff shall be collected in shallow ditches around the perimeter of the excavation, drained to sumps, and be pumped or drained by gravity from the excavation to maintain a bottom free from standing water.
- D. Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.
- E. If foundation soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with drain rock at no additional cost to the City.
- F. The Contractor shall maintain the water level three (3) feet below the bottom of excavation in Work areas where groundwater occurs during excavation construction, backfilling, and up to acceptance.
- G. Flotation shall be prevented by the Contractor by maintaining a positive and continuous removal of water. The Contractor shall be fully responsible and liable for damages which may result from failure to adequately keep excavations dewatered.
- H. If well points or wells are used, they shall be adequately spaced to provide the necessary dewatering and shall be sandpacked and/or other means used to prevent pumping of fine sands or silts from the subsurface. A continual check by the Contractor shall be maintained to ensure that the subsurface soil is not being removed by the dewatering operation. If shoring is not designed to resist hydrostatic pressures, then dewatering systems must be designed to draw down the groundwater level to three (3) feet below the excavation bottom and beyond the level of the sidewalls. In this case, wells are required. Final design of dewatering and shoring systems should be based on actual groundwater levels and flow quantities encountered by the Contractor.
- I. The Contractor shall dispose of water from the Work in a suitable manner without damage to adjacent property. Dewatering shall be disposed of to the sanitary sewers only. Storm drains shall not be used. Contractor shall be responsible for obtaining permits that may be necessary to dispose of water. Water shall be settled and/or filtered

using an approved method to remove silt, sand and fine-sized soil particles before disposal into drainage systems. Contaminated groundwater shall be treated prior to disposal to a sanitary sewer.

- J. The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted backfill and prevent flotation or movement of structures, pipelines, and sewers.

3.4 MEASUREMENT & PAYMENT

- A. Dewatering of trenches and other excavations shall be considered as incidental to the construction of the Work and costs thereof shall be included in other bid items of Work involved, unless a separate bid item has been established for dewatering.

END OF SECTION

SECTION 02620

WATER STORAGE TANK TESTING AND DISINFECTION

PART 1 GENERAL

1.1 SCOPE

- A. The Contractor shall perform all cleaning, flushing, testing, and disinfection of the steel tank for potable water, including conveyance of test water from City designated source to point of use, and including all disposal thereof, complete and acceptable, all in accordance with the requirements of the Contract Documents.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes: All Work shall comply with all codes, as referenced herein.

- B. Commercial Standards:

ANSI/AWWA 8300	Hypochlorites
ANSI/AWWA B301	Liquid Chlorine
ANSIIAWWA C652	Disinfection of Water-Storage Facilities
ANSI/AWWA C653	Disinfection of Water Treatment Plants
APHA/AWWA/WPCF	Standard Methods for the Examination of Water and Wastewater (16th ed.)

1.3 Contractor SUBMITTALS

- A. General:

- 1. Make all submittals and resubmittals in strict accordance with the provisions of Section 01330.
- 2. Make all submittals listed in Part 1.03-B, and any others required to fully describe what is to be furnished and/or installed under this Section.

- B. Required Submittals:

- 1. A testing schedule, including proposed plans for water conveyance, control, disposal, and disinfection shall be submitted in writing for approval a minimum of 48 hours before testing is to start.

PART 2 PRODUCTS

2.1 MATERIALS REQUIREMENTS

- A. Temporary valves, bulkheads, or other water control equipment and materials shall be as determined by the Contractor subject to the Engineer's review. No materials shall be used which would be injurious to the construction or its future function.

- B. Chlorine for disinfection shall be in the form of liquid chlorine, Sodium hypochlorite solution, or calcium hypochlorite granules or tablets. Liquid chlorine shall be in accordance with the requirements of ANSI/AWWA B301. Sodium hypochlorite and calcium hypochlorite shall be in accordance with the requirements of ANSI/AWWA B300. Liquid chlorine shall be used only: (1) in combination with appropriate gas flow chlorinators and ejectors; (2) under the direct supervision of an experienced technician; and (3) when appropriate safety practices are observed.

PART 3 EXECUTION

3.1 GENERAL

- A. Enough water for one (1) filling of the tank for testing and disinfecting will be furnished by the City; however, the Contractor shall make all necessary provisions for conveying the water from the City designated source to the points of use. Water required for subsequent refills of the tank for testing and disinfection shall be at the Contractor's own expense.
- B. The Contractor is responsible for coordinating and notifying the City a minimum of 10 days prior to requiring water sampling to allow the City to make arrangements to obtain water sampling kits. The City is responsible for collecting and performing laboratory analysis for the first round of water samples for bacteriological, VOC, taste, and odor testing. Sampling kits and laboratory analysis for subsequent testing due to a negative result shall be the Contractor's responsibility and at the Contractor's own expense.
- C. The steel tank shall be tested and disinfected. Disinfection shall be accomplished by chlorination. Testing and disinfecting operations shall be combined. All chlorinating and testing operations shall be done in the presence of the Engineer.
- C. Disinfection operations shall be scheduled by the Contractor as late as possible during the contract time period so as to assure the maximum degree of sterility of the facilities at the time the Work is accepted by the City. A certificate of disinfection shall be submitted to the City at completion. Bacteriological testing shall be performed by a certified testing laboratory acceptable to the City. Results of the bacteriological testing shall be satisfactory to the State Department of Health or other appropriate regulatory agency. A hard copy of the bacteriological test results shall be submitted to the City.
- D. Protective coatings shall be applied to the interior surfaces of the tanks before the combined testing and disinfecting operations.
- E. Discharge of chlorinated water from the tank, if necessary, shall be performed as follows:
 - 1. Prior to discharge of chlorinated water, a reducing agent shall be applied to the water to be wasted to neutralize the chlorine residual remaining in the water.
 - 2. A chlorine residual of less than 0.1 mg/l along with a pH between 6.5 and 8.5 is required prior to discharge.
 - 3. All discharges shall be controlled so as not to cause erosion or flooding downstream. The Contractor shall coordinate all discharges with the appropriate regulatory agencies.

3.2 PRELIMINARY CLEANING AND FLUSHING

- A. Prior to both testing and disinfecting, the tank shall be cleaned by thoroughly hosing down all surfaces with a high pressure hose and nozzle of sufficient size to deliver a

minimum flow of 50 gpm. All water, dirt, and foreign material accumulated in this cleaning operation shall be discharged from the structure or otherwise removed.

3.3 TESTING OF STEEL TANK

- A. General: Testing shall not be performed sooner than 14 days after all portions of structure walls and associated roof systems have been completed. The test shall consist of filling the structure with water to the maximum operating water surface. The rate of filling shall not exceed 48 inches of depth per day. All visible leakage shall be repaired.
- B. Leakage Test and Repairs: After the structure has been filled, the water loss leakage test shall be performed as follows: an initial water level reading shall be made. Seven days following the initial reading, a second reading shall be made. The structure shall be considered to have passed the test if water loss during the 7-day period, as computed from the two water level readings, does not exceed 0.2 percent of the total volume of water in the structure, after allowance is made for evaporation loss. If intermediate readings or observed leakage indicate that the allowable leakage will be exceeded, the test may be terminated before the end of the 7-day period and appropriate action taken to correct the problem before commencing a new 7-day test period. Should the structure fail to pass the test, the test shall be repeated for up to 3 additional 7-day test periods. If, at the end of 28 days, the structure still fails to pass the leakage test, the Contractor shall empty the structure as acceptable to the Engineer and shall examine the interior for evidence of any cracking or other conditions that might be responsible for the leakage.
 - 1. Any evidence of leakage shall be repaired. Defective welds shall be repaired and repainted per AWWA D100. Following these operations, the Contractor shall again test the hydraulic structure. The structure will not be accepted as completed until the water loss leakage test is passed and all visible leakage repaired. The retesting shall again be combined with disinfection, exclusive of the spraying operation.

3.4 DISINFECTION OF STEEL TANK

- A. The steel tank shall be disinfected by chlorination. Chlorination of the tank shall be performed in accordance with the requirements of ANSI/AWWA C652 using a combination of chlorination Methods 2 and 3 as modified herein.
- B. Chlorination: A strong chlorine solution (about 200 mg/l) shall be sprayed on all interior surfaces of the structure. Following this, the structure shall be partially filled with water to a depth of approximately one foot. During the partial filling operation, a chlorine-water mixture shall be injected by means of a solution-feed chlorinating device in such a way as to give a uniform chlorine concentration during the entire filling operation. The point of application shall be such that the chlorine solution will mix readily with the inflowing water. The dosage applied to the water shall be sufficient to provide a chlorine residual of at least 50 mg/l upon completion of the partial filling operation. A backflow device shall be used to prevent the strong chlorine solution from flowing back into the lines supplying the water. After the partial filling has been completed, sufficient water shall be drained from the lower ends of appurtenant piping to ensure filling the lines with the heavily chlorinated water.
- C. Retention Period: Chlorinated water shall be retained in the partially filled structure and appurtenant piping long enough to destroy all non-spore-forming bacteria, and in any event, for at least 24 hours. After the chlorine-treated water has been retained for the required time, the free chlorine residual in the structure and appurtenant piping shall be

at least 25 mg/l. All valves shall be operated while the lines are filled with the heavily chlorinated water.

- D. Final Filling of Structure: After the free chlorine residual has been checked, and has been found to satisfy the above requirement, the water level in the structure shall be raised to its final elevation by addition of potable water. Before final filling is commenced, the quantity of heavily-chlorinated water remaining in the structure after filling the piping shall, unless otherwise acceptable to the Engineer, be sufficient, when the water level is raised to its final elevation to produce a free chlorine residual of between 1 and 2 mg/l. After the structure has been filled, the strength of the chlorinated water shall be determined. If the free chlorine residual is less than 1 mg/l, an additional dosage shall be applied to the water in the structure. If the free chlorine residual is greater than 2 mg/l, the structure shall be partially emptied and additional potable water added. In no case shall water be released prior to the expiration of the required retention period.

3.5 BACTERIOLOGICAL SAMPLING AND TESTING

- A. Disinfected water storage facilities shall be sampled and tested in accordance with ANSI/AWWA C652.

3.6 CONNECTIONS TO EXISTING SYSTEM

- A. Where connections are to be made to an existing potable water system, the interior surfaces of all pipe and fittings used in making the connections shall be swabbed or sprayed with a one percent hypochlorite solution before they are installed. Thorough flushing shall be started as soon as the connection is completed and shall be continued until all discolored water is eliminated.

END OF SECTION

SECTION 03200
CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 SCOPE

- A. This section covers reinforcement for cast-in-place and precast concrete.

1.2 SUBMITTALS

- A. General:
1. Make all submittals and resubmittals in strict accordance with the provisions of Section 01330.
 2. Make all submittals listed in Part 1.2-B, and any others required to fully describe what is to be furnished and/or installed under this Section.
- B. Required Submittals:
1. Drawings and Data
 - a. All submittals of Drawing, manufacturers' certificates of compliance, certification of reinforcement, reinforcement bar lists, placement Drawing, test data, catalog data sheets and other data
 - b. Bar lists and Drawing for the fabrication and placing of reinforcement shall be submitted for review and shall have sufficient plans, elevations, and sections to adequately detail and label all reinforcement. The bar lists and Drawing shall also include a reference to the structure in which the reinforcement will be installed and to the project drawing showing the reinforcement.
 2. Manufacturer's Certificate of Compliance
 - a. A manufacturer's certificate of compliance, which includes the name of the project and, when requested, copies of independent test results confirming compliance with specified requirements, for the following materials: Mechanical connections

PART 2 PRODUCTS

2.1 MATERIALS

Bars, Except Weldable	ASTM A 615, Grade 60, deformed
Bars, Weldable	ASTM A 706 or A 615, Grade 60, deformed, with maximum carbon equivalent of 0.55%
Bar Supports	CRSI Class 1, plastic protected; or Class 2, stainless steel protected
Mechanical Connections	Classified Type 2 per ACI 318. Dayton/Richmond "Dowel Bar Splicer" or "Coupler Splice" System, Bar-Lock "Coupler Systems" or Barsplice Products or Lenton by Erico, or approved equal.

2.2 REINFORCEMENT

- A. Reinforcement shall be accurately formed and shall be free from loose rust, scale, concrete splatter, and contaminants which reduce bond. Unless otherwise indicated on

the Drawing or specified herein, the details of fabrication shall conform to ACI 315 and ACI 318.

- B. Splices: Splices shall conform to the details indicated on the Drawing. Splices at locations other than those indicated on the Drawing shall be submitted to the City Representative for review and concurrence.
- C. Mechanical Connections: Mechanical connections shall be used only as indicated on the Drawing. Connections in adjacent bars shall be spaced at least 30 inches apart.
- D. Welding: Except where indicated on the Drawing, welding or tack welding of reinforcement is not permitted. Preheating and welding shall conform to AWS D1.4. Reinforcement which has been welded improperly or without the City Representative's concurrence shall be removed and replaced.

PART 3 EXECUTION

3.1 STORAGE AND HANDLING

- A. Reinforcing steel shall be carefully handled and shall be stored on supports which prevent the steel from touching the ground.

3.2 PLACEMENT

- A. Reinforcement shall be accurately positioned on supports, spacers, hangers, or other reinforcement, and shall be secured in place with wire ties or suitable clips.
- B. With the exception of contact splices, the clear distance between parallel bars shall not be less than 2-1/2 inches and not less than 3 bar diameters. Where reinforcement in beams is placed in two or more layers, the bars in the upper layer shall be placed directly above the bars in the lower layer.
- C. Reinforcement for beams or slabs which are supported by concrete columns shall not be installed until after the concrete for the column has been placed.
- D. Before concrete is placed, reinforcement shall be rigidly secured in proper position. All surfaces encrusted with dried concrete from previous placements shall be cleaned and the entire installation shall be acceptable to City Representative. Remove all frost, ice, and snow before concrete is placed.

3.3 PLACING CONCRETE

- A. Concrete shall be placed and compacted in wall or column forms before any reinforcement is placed in the system to be supported by such walls or columns.

3.4 DUCT BANKS

- A. All reinforcement and other magnetic materials installed in duct banks shall be installed parallel to the individual ducts, unless they enclose all the ducts of the duct bank.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals:
 - 1. Drawings and Data. All submittals of drawings; manufacturers' certificates of compliance, recommendations, and test data; reports; catalog data sheets; and other data shall be in accordance with the Submittals section, unless otherwise specified herein.
 - 2. Manufacturer's Certificate of Compliance. A manufacturer's certificate of compliance, which includes the name of the project and copies of independent test results confirming compliance with specified requirements, shall be submitted to the Owner's Representative for the following materials when used:
 - a. Cement.
 - b. Admixtures.
 - c. Fly Ash.
- B. Ready-Mixed Concrete Producer Qualifications: ASTM C 94.
- C. Comply with ACI 301, "Specification for Structural Concrete"; ACI 117, "Specifications for Tolerances for Concrete Construction and Materials"; and CRSI's "Manual of Standard Practice."
- D. Storage and Handling: Cement, slag cement and fly ash shall be stored in suitable moistureproof enclosures. Cement, slag cement and fly ash which have become caked or lumpy shall not be used.
- E. Aggregates shall be stored so that segregation and the inclusion of foreign materials are prevented. The bottom six inches of aggregate piles in contact with the ground shall not be used.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet, hot-dipped galvanized per ASTM 123.
- B. Supports for Reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing welded wire fabric in place shall be plastic or galvanized steel compatible with galvanized welded wire fabric and complying with CRSI specifications.
- C. Portland Cement: ASTM C 150, Type V. Low Alkali.
 - 1. Use one brand of cement throughout project.
- D. Fly Ash: ASTM C 618, Type F.
- E. Aggregates: ASTM C 33, uniformly graded.

1. For exposed exterior surfaces, do not use fine or coarse aggregates that contain substances that cause spalling.
- F. Water: Potable.
- G. Admixtures, General: Provide concrete admixtures that contain not more than 0.1 percent chloride ions.
1. Water Reducing/Normal Set: ASTM C 494, Type A, except as otherwise specified herein.
 2. Water Reducing/Retarding: ASTM C 494, Type D, except as otherwise specified herein.
 3. Air-Entraining: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
 4. Superplasticizing/Normal Set: ASTM C 494, Type F, extended slump life type, except as otherwise specified herein.
 5. Superplasticizing/Retarding: ASTM C 494, Type G, extended slump life type, except as otherwise specified herein.
 6. Shrinkage Reducing Admixture: Grace "Eclipse Plus," BASF (Master Builders) "Tetraguard AS20," or approved equal.
- H. Joint Sealant: One-Part, low modulus, neutral-cure silicone sealant complying with ASTM C 920 for Type S, Grade P, Class 25, suitable for diesel/oil submersion.
- I. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

2.2 MIXES

- A. Mix Design: Using concrete materials acceptable to Owner's Representative, a tentative concrete mixture shall be designed and tested in the laboratory for each size and combined gradation of aggregates and for each consistency as indicated and intended for use on the Work and as specified.

Concrete proportions shall be established based on laboratory trial mixtures that meet the following requirements:

1. The combination of materials shall be as proposed for use in the Work.
 2. Mixtures shall conform with the limiting requirements specified herein.
 3. The required average compressive strength, f'_{cr} , of the trial mixture, using 6" X 12" cylinders, shall exceed the specified minimum acceptable compressive strength, f'_{cr} , as required in Sections 2.2B and 2.2C.
 4. Trial mixtures of the proportions and consistencies specified for the Work shall be prepared. The compressive strength of the cylinders made from the three trial mixtures shall produce a range of compressive strengths exceeding or encompassing the f'_{cr} required for the Work.
 5. For each proposed concrete mixture that is required to be tested, at least three 6 by 12 inch compressive strength test cylinders shall be made for each age. Each change in the water-cementitious materials ratio shall be considered a new concrete mixture. Each mixture shall be tested at the ages of seven days and 28 days with two test cylinders broken at 28 days.
 6. When a shrinkage reducing admixture is proposed, trial batches shall be prepared with and without the shrinkage reducing admixture.
- B. Normal-Weight Concrete for all flatwork and other minor structures: Prepare design mixes, proportioned according to ACI 301, as follows:
1. Minimum Compressive Strength:
 - a. Field, 7 days: 3,000 psi

- b. Field, 28 days ($f'c$): 4,000 psi
 - c. Laboratory, 28 days ($f'cr$): 5,200 psi
 2. Maximum Water-Cementitious Materials Ratio: 0.42
 3. Maximum Coarse Aggregate Size: 1-1/2 inch
 4. Maximum Slump:
 - a. Before Adding Superplasticizer: 4 inches
 - b. After Adding Superplasticizer: 8 inches
 5. Air Content: Maintain within range permitted by ACI 301.
 6. Fly Ash Replacement: 15-25 percent
 7. Maximum Chloride Ion: 0.15 percent
 8. Max Shrinkage, based on 4x4x11 inch specimen:
 - a. Laboratory: 0.048 percent
 - b. Field: 0.064 percent
 - C. Measure, batch, mix, and deliver concrete according to ASTM C 94.
 1. When air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.
 2. Concrete must not be placed if air temperature is below 42 deg F.

2.3 TESTS AND REPORTS

- A. Preliminary Review: Reports covering the source and quality of concrete materials and the concrete proportions proposed for the work shall be submitted to Owner's Representative for review before performing the required trial mixture designs and before concrete work is started.
- B. Mixture Design Testing: All tests and reports required for preliminary review shall be made by an independent testing laboratory at the expense of Contractor specifically for this project. All materials shall be tested in accordance with the specified test methods and reports for these tests shall be prepared specifically for this project. If the source of any concrete materials is changed during the Contract, the materials and the new mixture design shall be tested in accordance with the specified preliminary review requirements and reports shall be submitted for review.
 1. Aggregates shall be sampled and tested in accordance with ASTM C 33. In addition, the bulk specific gravity of each aggregate shall be determined in accordance with ASTM C 127 and ASTM C 128.
 2. Concrete test specimens shall be made, cured, and stored in accordance with ASTM C 192 and tested in accordance with ASTM C 39.
 3. Slump shall be determined in accordance with ASTM C 143. Total air content shall be determined in accordance with ASTM C 231 and verified in accordance with ASTM C 138. Concrete temperature shall be determined in accordance with ASTM C 1064 and unit weight (mass) shall be determined in accordance with ASTM C 138. Water-soluble chloride ion shall be determined in accordance with ASTM C 1218.
 4. Initial set tests shall be made at ambient temperatures of 70°F and 90°F to determine compliance with the specified time for initial set. The test at 70°F shall be made using concrete containing the specified normal set/water-reducing admixture and, when required, air entraining admixture. The test at 90°F shall be made using concrete containing the specified retarding/water-reducing admixture and, when required, air entraining admixture. Initial set shall be determined in accordance with ASTM C 403.
 5. A preliminary test on a trial batch shall be conducted at the project site, using the proposed superplasticizer in the accepted mixture design to determine the correct dosage. When superplasticizer is not included in the trial mixture, the trial batch tested at the site shall be used to determine compatibility of the

- superplasticizer with the other materials used in the concrete, including the other admixtures.
6. A drying shrinkage test shall be conducted on the preliminary trial batch with the maximum water-cementitious materials ratio used to qualify each proposed concrete mixture design using the concrete materials, including admixtures, that are proposed for the project. Three test specimens shall be prepared for each test. Drying shrinkage specimens shall be 4 inch by 4 inch by 11 inch prisms with an effective gauge length of 10 inches, fabricated, cured, dried, and measured in accordance with ASTM C 157
- C. Mixture Design Report: Design quantities and test results on each mixture shall be submitted for review and shall be accepted before concrete work is started. The report on each tentative concrete mixture and on the proposed concrete mixture shall be submitted to Owner's Representative and shall contain the following information:
1. Aggregate Reports (ASTM C 33)
 - a. Source and type
 - b. Fine and Coarse gradations
 - c. Alkali-aggregate reactivity
 - d. Combined fine and coarse aggregate gradation
 2. Cement Mill Report
 3. Cementitious Material: type, data sheet, and test report
 4. Admixtures
 - a. Data sheets and certifications for each required
 - b. Manufacturer's approval letter
 5. Job-specific laboratory trial mix
 6. Compressive strength at 7 and 28 days
 7. Mixture Proportions
 - a. Slump
 - b. Water content
 - c. Water-cementitious materials ratio
 - d. Brand, type, composition, and quantity of cement
 - e. Brand, type, composition and quantity of fly ash
 - f. Specific gravity of each aggregate
 - g. Ratio of fine to total aggregates
 - h. Air content
 - i. Temperature
 - j. Unit weight
 8. Water-Soluble Chloride Ion Report
 9. Shrinkage Report
 10. Field Compression Test Evaluation Reports Taken at End of Delivery Truck Chute

PART 3 EXECUTION

3.1 CONCRETING

- A. Construct formwork according to ACI 301 and maintain tolerances and surface irregularities within ACI 347R limits of Class A, 1/8 inch for concrete exposed to view and Class C, 1/2 inch for other concrete surfaces.
- B. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- C. Comply with ACI 304, "Guide for Measuring, Mixing, Transporting, and Placing Concrete," and as specified.

- D. Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in. Repair any damage to paint on deck prior to pour per Section 99100.
- E. Place concrete in a continuous operation and consolidate using mechanical vibrating equipment.
- F. Protect concrete from damage. Repair surface defects in formed concrete and slabs.
 - 1. Patching Defective Areas: Repair and patch defective areas with cement mortar when acceptable to City.
 - 2. Repairing Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface tolerances specified for each surface and finish. Correct low and high areas as specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness by using a template having the required slope.
 - a. Repair finished unformed surfaces containing defects that affect the concrete's durability. Surface defects include crazing and cracks in excess of 0.01 inch wide or that penetrate to the reinforcement regardless of width, spalling, popouts, honeycombs, rock pockets, and other objectionable conditions.
 - b. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.
 - c. Correct low areas in unformed surfaces during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete. Proprietary underlayment compounds may be used when acceptable to City.
 - d. Repair defective areas, except random cracks and single holes not exceeding 1 inch in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose reinforcing steel with at least 3/4 inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
 - 3. Repair isolated random cracks and single holes 1 inch or less in diameter by dry-pack method. Groove top of cracks and cut out holes to sound concrete and clean of dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding compound. Place dry-pack before bonding agent has dried. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- G. Owner's Field Control Testing: Field control tests, including aggregate gradation (if needed), slump, air content, and making compression test cylinders, shall be performed by Owner's Representative or testing laboratory personnel. Contractor shall provide all facilities and the services of one or more employees as necessary to assist with the field control testing.
 - 1. Slump: A slump test shall be made for each 50 cubic yards of concrete. Slump shall be determined in accordance with ASTM C 143.
 - 2. Unit Weight: A unit weight test shall be made on concrete from each batch of concrete from which concrete compression test cylinders are made. Unit weight shall be determined in accordance with ASTM C 138.
 - 3. Concrete Temperature: A concrete temperature test shall be made on concrete from the first batch of concrete mixed each day and on concrete from each batch

of concrete from which concrete compression test cylinders are made. Concrete temperature shall be determined in accordance with ASTM C 1064.

4. Water-Soluble Chloride Ion: Water-soluble chloride ion testing shall be performed once for each 1,000 cubic yards of concrete in accordance with ASTM C 1218.
5. Compression Tests: One set of four concrete compression test cylinders shall be made each day when 25 to 50 cubic yards of concrete is placed. One additional set of test cylinders shall be made from each additional 50 cubic yards, or major fraction thereof, placed in any one day. Two cylinders of each set shall be tested at an age of seven days and the remaining cylinders shall be tested at an age of 28 days.

Test cylinders shall be 6 inches in diameter by 12 inches high and shall be made, cured, stored, and delivered to the laboratory in accordance with ASTM C 31 and tested in accordance with ASTM C 39.

Each set of compression test cylinders shall be marked or tagged with the date and time of day the cylinders were made, the location in the work where the concrete represented by the cylinders was placed, the number of the delivery truck or batch, the air content, the slump, the unit weight, and the concrete temperature.

6. Shrinkage Tests: Concrete shrinkage tests shall be performed once for each 1,000 cubic yards of concrete with controlled shrinkage that is placed and shall be made on concrete from a batch of concrete from which concrete compression test cylinders are made. Shrinkage testing shall be conducted as specified for the preliminary trial mixes.

The average drying shrinkage of each set of test specimens cast in the field from concrete delivered to the site as measured at the 21 days' drying age shall not exceed the values indicated in 2.3C.

- H. Evaluation and Acceptance of Concrete: Concrete will be evaluated for compliance with all requirements of the specifications. Concrete strength will be only one of the criteria used for evaluation and acceptance of the concrete. The results of all tests performed on the concrete and other data and information concerning the procedures for handling, placing, and curing concrete will be used to evaluate the concrete for compliance with the specified requirements. Compression tests will be evaluated in accordance with ACI 318 and as specified herein. A strength test shall be the average of the compressive strengths of two cylinders made from the same concrete sample tested at 28 days.
 1. Compression Test Evaluation: Compressive strength test results will be evaluated for compliance with the specified strength requirements. The strength level of the concrete will be considered satisfactory when the averages of all sets of three consecutive strength tests equal or exceed the specified compressive strength, f'_c , and no individual strength test result falls below the specified compressive strength by more than 500 psi.

END OF SECTION

SECTION 05090

ANCHORAGE IN CONCRETE

PART 1 GENERAL

1.1 SCOPE

- A. This section covers the procurement and installation of anchors in concrete for structural applications. It includes cast-in-place anchor bolts, adhesive anchors, expansion anchors, and epoxy grouted anchor bolts and reinforcing steel to be installed in concrete.
- B. When this section is referenced by any equipment section, anchorage for that equipment, including anchors and anchor bolts, shall be as specified herein.

1.2 GENERAL

- A. Unless otherwise specified or indicated on the Drawings, all anchors and anchor bolts in concrete shall have minimum diameter of 3/4 inch.
- B. Unless otherwise indicated on the Drawings, all anchors and anchor bolts used shall be stainless steel.

1.3 SUBMITTALS

- A. Data and catalog cuts indicating the manufacturer and types of adhesive anchors, expansion anchors, and epoxy grouts to be supplied shall be submitted in accordance with the submittal section. All anchorage products and systems used shall have a current product report on file with the International Code Council (ICC).

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Materials shall be handled, transported, and delivered in a manner which will prevent damage or corrosion. Damaged materials shall be promptly replaced. Materials shall be shipped and stored in original manufacturers' packaging.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Materials shall be as indicated below:

Reinforcing Bars	ASTM A615, Grade 60, deformed.
Reinforcing Bars, Weldable	ASTM A706, Grade 60, deformed.
Anchor Bolts and Nuts	
Carbon Steel	ASTM A307 or ASTM A36, with compatible nuts.
Stainless Steel	Bolts, ASTM F593, Alloy Group 2; nuts, ASTM F594, Alloy Group 2.
Galvanized Steel	Carbon steel bolts and nuts; hot-dip galvanized, ASTM A153 and A385.
Flat Washers	ANSI B18.22.1; of the same material as anchor bolts and nuts.

Threaded Rod Anchors and Nuts	
Carbon steel	ASTM A36, with compatible nuts.
Stainless steel	Rods, ASTM F593, Alloy Group 2; nuts, ASTM F594, Alloy Group 2.
Galvanized steel	Carbon steel rods and nuts; hot-dip galvanized, ASTM A153 and A385.
Adhesive Anchors for Concrete	
Threaded Rods and Nuts	As specified for Threaded Rod Anchors and Nuts and as recommended by the adhesive manufacturer.
Adhesive	Hilti "HIT HY 200"; Simpson "SET-XP"; ITW Ramset/Redhead "Epcon Ceramic 6" System; Powers Fasteners "Power Fast Epoxy Injection Gel" System; or approved equal.
Epoxy Grout for Reinforcing Bars, Threaded Rod Anchors, and Anchor Bolts	
Adhesive	
For Floors and Horizontal Surfaces	Sika "Sikadur 35, Hi-Mod LV"; ChemRex "Concrete Liquid LPL"; Sika "Sikadur 32 Hi-Mod", or equal.
For Vertical Surfaces and Overhead Applications	Sika "Sikadur 31 Hi-Mod Gel"; W.R. Meadows "Rezi-Weld Gel Paste State", or approved equal
Aggregate	As recommended by the epoxy grout manufacturer.
Water	Clean and free from deleterious substances.

2.2 ANCHORS

A. Adhesive Anchors

1. Only acceptable adhesive anchor systems shall be used. Acceptable systems shall include only those systems and products specified or specifically indicated by product name on the Drawings. Alternative anchoring systems may be used only when specifically accepted by City Representative. An acceptable adhesive anchor system may be used as an alternative in locations where epoxy grouted anchor bolts and epoxy grouted threaded rod anchors are specified or indicated.
2. Threaded rod anchors in adhesive anchor systems shall be furnished with a sufficient length to provide an embedment depth of at least 15 rod diameters and free of coatings that would weaken the bond with the adhesive. Unless otherwise required, single nut and washer shall be furnished for threaded rod anchors, adhesive anchors, and expansion anchors. Anchor bolts and threaded rod anchors that are to be epoxy grouted shall be clean and free of coatings that would weaken the bond with the epoxy.

B. Epoxy Grouted Anchor Bolts and Reinforcing

1. Epoxy grout for installing reinforcing steel dowels and anchor bolts not indicated to be adhesive anchors shall consist of a two-component liquid epoxy adhesive of viscosity appropriate to the location and application, and an inert aggregate filler component, if recommended by the adhesive manufacturer. Components shall be packaged separately at the factory and mixed immediately before use.

PART 3 EXECUTION

3.1 GENERAL

- A. Anchor bolts shall be installed at the locations indicated on the Drawings or as required by the equipment manufacturer.
- B. Anti-seize thread lubricant shall be liberally applied to projecting, threaded portions of stainless steel anchors immediately before final installation and tightening of the nuts.

3.2 EPOXY GROUT

- A. Epoxy grout components shall be packaged separately at the factory and shall be mixed immediately before use. Proportioning and mixing of the components shall be done in accordance with the manufacturers' recommendations.
- B. An acceptable adhesive anchoring system may be used where epoxy grouted threaded rod anchors are indicated on the Drawings.

- 1. Preparation. Where indicated on the Drawings, anchor bolts, threaded rod anchors, and reinforcing bars shall be epoxy grouted in holes drilled into hardened concrete. Diameters of holes shall be as follows:

<u>Item</u>	<u>Diameter of Hole</u>
Reinforcing Bars and Threaded Rod Anchors	1/8 inch larger than the outside diameter of the bar or the rod.
Headed Anchor Bolts	Bolt diameter plus two (2) inches and sufficient to clear the bolt head.

The embedment depth for epoxy grouted anchor bolts, threaded rod anchors, and reinforcing bars shall be at least 15 bolt, rod, or bar diameters, unless otherwise indicated on the Drawings.

Holes shall be prepared for grouting as recommended by the epoxy grout manufacturer.

- 2. Installation. Anchor bolts, threaded rod anchors, and reinforcing bars shall be clean, dry, and free of grease and other foreign matter when installed. The bolts, rods, and bars shall be set and positioned and the epoxy grout shall be placed and finished in accordance with the recommendations of the grout manufacturer. Care shall be taken to ensure that all spaces and cavities are filled with epoxy grout, without voids.

3.3 ADHESIVE ANCHORS

- A. Only acceptable adhesive anchor systems shall be used. Alternative anchoring systems may be used only when acceptable to City Representative. An acceptable adhesive anchor system may be used as an alternative in locations where epoxy grouted anchor bolts and threaded rod anchors are specified or indicated. The embedment depth for adhesive anchors shall be at least 15 rod diameters unless indicated on the Drawings. Temperature of substrate and epoxy grout during installation and curing shall not exceed manufacturers' recommendations.
- B. Adhesive for adhesive anchors shall be statically mixed in the field during application. All proportioning and mixing of the components shall be in accordance with the manufacturers' recommendations.

- C. Anchors shall be installed in holes drilled into hardened concrete or grout filled masonry. Diameter of holes shall be 1/16 inch larger than the outside diameter of the rod unless recommended otherwise by the anchor system manufacturer. Holes shall be prepared for insertion of the anchors by removing all dust and debris using procedures recommended by the adhesive manufacturer.
- D. Adhesive anchors and holes shall be clean, dry, and free of grease and other foreign matter at the time of installation. The adhesive shall be placed, the rods shall be set and positioned, and the adhesive shall be finished, all in accordance with the recommendations of the material manufacturer. Care shall be taken to ensure that all spaces and cavities are filled with adhesive, without voids, and remain filled with adhesive until completion of the curing period. Adhesive shall be cured in accordance with the recommendations of the adhesive manufacturer.
- E. Adhesive anchor installations require special inspection in accordance with CBC Section 1701 and manufacturer specifications. Contractor shall notify Owner two (2) working days advance notice for special inspections.

END OF SECTION

SECTION 05500

MISCELLANEOUS METAL WORK

PART 1 GENERAL

1.1 THE REQUIREMENT

The Contractor shall furnish, fabricate, and install miscellaneous metalwork and appurtenances, complete, in accordance with the requirements of the Contract Documents.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02071SP – Water Mains and Services
- B. Section 13210 – Welded Steel Tank and Appurtenances

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes: Work shall be in conformance with all codes, as referenced herein.
- B. Commercial Standards:

AA-M32	C22A41
AISC	Specifications and Commentary
AISI	Specifications and Commentary
ASTM International:	
ASTM A36/A36M	Standard Specification for Carbon Structural Steel.
ASTM A53/A53M	Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
ASTM A123/A123M	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
ASTM A153/A153M	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
ASTM A167	Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
ASTM A276	Standard Specification for Stainless Steel Bars and Shapes.
ASTM A297/A297M	Standard Specification for Steel Castings, Iron-Chromium and Iron-Chromium-Nickel, Heat Resistant, for General Application.
ASTM A283/283M	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.

ASTM A307	Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
ASTM A312/A312M	Standard Specification for Seamless and Welded Austenitic Stainless Steel Pipes.
ASTM A325	Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
ASTM A354	Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners.
ASTM A479/A479M	Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
ASTM A500	Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
ASTM A501	Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
ASTM A554	Standard Specification for Welded Stainless Steel Mechanical Tubing.
ASTM A563	Standard Specification for Carbon and Alloy Steel Nuts.
ASTM A572/A572M	Standard Specification for High-Strength Low Alloy Columbium-Vanadium Structural Steel.
ASTM B26/B26M	Standard Specification for Aluminum-Alloy Sand Castings.
ASTM B85	Standard Specification for Aluminum-Alloy Die Castings.
ASTM B177	Standard Guide for Chromium Electroplating on Steel for Engineering Use.
ASTM B209	Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
ASTM B210	Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes.
ASTM B211	Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire.
ASTM B221	Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
ASTM B695	Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.
ASTM F436	Standard Specification for Hardened Steel Washers.

ASTM F593	Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
ASTM F594	Standard Specification for Stainless Steel Nuts.
ASTM F1554	Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.

American Welding Society:

AWS A2.4	Standard Symbols for Welding, Brazing, and Nondestructive Examination.
AWS D1.1	Structural Welding Code - Steel.
AWS D1.6	Structural Welding Code - Stainless Steel.
NFPA 101	Life Safety Code
NAAMM	Metal Bar Grating Manual (MBG 531)

1.4 Contractor SUBMITTALS

A. General:

1. Make all submittals and resubmittals in strict accordance with the provisions of Section 01330.
2. Make all submittals listed in Part 1.4-B, and any others required to fully describe what is to be furnished and/or installed under this Section.

B. Required Submittals:

1. Shop Drawings: Shop drawings of all miscellaneous metalwork. At a minimum, shop drawings shall include all dimensions, materials of construction, and identify all manufacturers or fabricators.
2. Products: Product submittals shall include expanding-type anchors.

PART 2 PRODUCTS

2.1 GENERAL

- A. Standard: All structural steel shapes, plates, bars, and their products shall conform to the requirements of ASTM A36.
- B. Corrosion Protection: Unless otherwise indicated, all miscellaneous steel metalwork shall be hot-dip galvanized after fabrication, as specified herein.
- C. Stainless Steel: Unless otherwise indicated, stainless-steel metalwork shall be of Type 316 stainless steel and shall not be galvanized. Stainless steel bolts shall conform to Type 316.

2.2 BOLTS AND ANCHORS

- A. Standard Service Bolts (Not Buried or Submerged): Except where otherwise indicated, all bolts, anchor bolts, and nuts shall be steel, galvanized after fabrication, as specified herein. Threads on galvanized bolts and nuts shall be formed with suitable taps and dies such that they retain their normal clearance after hot-dip galvanizing. Tank anchor bolts shall conform to the specifications of ASTM F1554, 55 ksi yield strength. Except as

otherwise specified herein, steel for bolts and cap screws shall be in accordance with the requirements of ASTM A325, or threaded parts of ASTM A36.

- B. Buried or Submerged Bolts: Unless other corrosion-resistant bolts are shown, all bolts, anchor bolts, nuts, and washers which are buried, submerged, or below the top of the wall inside any hydraulic structure shall be Type 316 stainless steel, using a marine grade anti-seize compound on all fastener connections.
- C. Bolt Requirements:
 - 1. The bolt and nut material shall be free-cutting steel.
 - 2. The nuts shall be capable of developing the full strength of the bolts. Threads shall be Coarse Thread Series conforming to the requirements of the American Standards for Screw Threads. All bolts and cap screws shall have hexagon heads, and nuts shall be Heavy Hexagon Series.
 - 3. The length of all bolts shall be such that after joints are made up, each bolt shall extend through the entire nut, but in no case more than 1/2 inch beyond the nut.

2.3 METAL GRATING

- A. Metal grating shall be aluminum. All grating shall be completely banded.
- B. Design metal grating in accordance with NAAMM MBG 531 for bar type grating with a minimum live load of 100 psf, and a maximum deflection of L/240. Design supporting members as necessary to reinforce openings in the grating.
- C. Per NAAM MBG 531, band edges of grating with bars of the same size as the bearing bars. Weld banding in accordance with the manufacturer's standard for trip. Design tops of bearing bars, cross, or intermediate bars to be in the same plane and match grating finish.
- D. Anchor grating to structural members with bolts, toggle bolts, or expansion shields and bolts.

2.4 SEAT ANGLES, SUPPORTS, AND GUIDES

- A. Seat angles for grating shall be steel as coordinated with metal grating manufacturer.

PART 3 EXECUTION

3.1 FABRICATION AND INSTALLATION REQUIREMENTS

- A. Fabrication and Erection: Except as otherwise indicated, the fabrication and erection of structural steel shall conform to the requirements of the American Institute of Steel Construction "Manual of Steel Construction," Ninth edition (Allowable Stress Design).

3.2 WELDING

- A. Method: All welding shall be by the metal-arc method or gas-shielded arc method, as described in the American Welding Society's "Welding Handbook," as supplemented by other pertinent standards of the AWS. Qualification of welders shall be in accordance with the AWS Standards governing same. Aluminum welding shall be performed using the helium shielded arc method.

- B. Quality: In assembly and during welding, the component parts shall be adequately clamped, supported, and restrained to minimize distortion and for control of dimensions. Weld reinforcement shall be as indicated by the AWS Code. Upon completion of welding, all weld spatter, flux, slag, and burrs left by attachments shall be removed. Welds shall be repaired to produce a workmanlike appearance, with uniform weld contours and dimensions. All sharp corners of material to be painted or coated shall be ground to a minimum of 1/32 inch on the flat.

3.3 GALVANIZING

- A. All structural steel plates, shapes, bars, and fabricated assemblies that are to be galvanized shall, after the steel has been thoroughly cleaned of rust and scale, be galvanized in accordance with the requirements of ASTM A123. Any galvanized part that becomes warped during the galvanizing operation shall be straightened.
- B. Bolts, anchor bolts, nuts, and similar threaded fasteners, after being properly cleaned, shall be galvanized in accordance with the requirements of ASTM A153.
- C. Field repairs to galvanizing shall be made using a sprayed zinc coating or zinc-rich paint meeting the requirements of ASTM A780.
- D. Passivators shall not be used on any galvanized metal that is to be painted.

END OF SECTION

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SECTION 07714

GUTTERS AND DOWNSPOUTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes pre-finished aluminum gutters and downspouts.
 - 1. Provide precast concrete splash pads.

1.2 REFERENCES

- A. American Architectural Manufacturers Association:
 - 1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
 - 2. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
 - 3. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
 - 4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- B. ASTM International:
 - 1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 - 3. ASTM B32 - Standard Specification for Solder Metal.
 - 4. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 5. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction.
- C. Copper Development Association Inc.:
 - 1. CDA - Copper in Architecture - Handbook.
- D. Federal Specification Unit:
 - 1. FS TT-C-494 - Coating Compound, Bituminous, Solvent Type, Acid Resistant.
- E. Sheet Metal and Air Conditioning Contractors:
 - 1. SMACNA - Architectural Sheet Metal Manual

1.3 DESIGN REQUIREMENTS

- A. Conform to SMACNA Manual for sizing components for rainfall intensity.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.
- C. Product Data: Submit data on manufactured components, materials, and finishes.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with SMACNA Manual.
- B. Perform Work in accordance with 2013 California Building Code (CBC).

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope to drain.
- B. Prevent contact with materials during storage capable of causing discoloration, staining, or damage.

1.7 WARRANTY

- A. Furnish five year manufacturer warranty for gutter and downspout finishes.

PART 2 PRODUCTS

2.1 GUTTERS AND DOWNSPOUTS

- A. Product Description:
 - 1. Gutters: Sheet metal; SMACNA Rectangular style profile.
 - 2. Downspouts: Sheet metal; SMACNA Round profile.
 - 3. Splash Pads: Precast concrete type, size and profiles indicated; minimum 3000 psi at 28 days, with minimum 5 percent air entrainment.

2.2 COMPONENTS

- A. Aluminum Sheet: ASTM B209, alloy and temper as required for application and finish; Class II clear anodized finish.

2.3 ACCESSORIES

- A. Anchors and Supports: Profiled to suit gutters and downspouts.
 - 1. Anchoring Devices: In accordance with SMACNA requirements and type recommended by fabricator.
 - 2. Gutter Supports: Brackets or Straps.
 - 3. Downspout Supports: Straps.
- B. Fasteners: Aluminum or Stainless steel.
- C. Primer: Zinc molybdate type.
- D. Protective Backing Paint: Zinc molybdate alkyd.

2.4 FABRICATION

- A. Form gutters and downspouts of profiles indicated.
- B. Fabricate with required connection pieces.

- C. Form sections to shape indicated on Drawings, square, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance.
- D. Hem exposed edges of metal.
- E. Fabricate gutter and downspout accessories; seal watertight.

2.5 FACTORY FINISHING

- A. Class II Natural Anodized Finish: AAMA 611 AA-M12C22A31; clear anodic coating not less than 0.4 mils thick.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify surfaces are ready to receive gutters and downspouts.

3.2 PREPARATION

- A. Paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to minimum dry film thickness of 15 mil.

3.3 INSTALLATION

- A. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.
- B. Set splash pads under downspouts. Secure in place.

END OF SECTION

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SECTION 08333

OVERHEAD COILING DOORS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes overhead coiling door, and operating hardware.

1.2 REFERENCES

- A. ASTM International:
1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 2. ASTM A666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 3. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 4. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Intertek Testing Services (Warnock Hersey Listed):
1. WH - Certification Listings.
- C. National Electrical Manufacturers Association:
1. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).
 2. NEMA ICS 2 - Industrial Control and Systems: Controllers, Contactors, and Overload Relays, Rated Not More Than 2000 Volts AC or 750 Volts DC.
 3. NEMA MG 1 - Motors and Generators.
- D. National Fire Protection Association:
1. NFPA 80 - Standard for Fire Doors, Fire Windows.
 2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- E. Underwriters Laboratories Inc.:
1. UL - Building Materials Directory.
 2. UL 10B - Fire Tests of Door Assemblies.
 3. UL 325 - Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.3 DESIGN REQUIREMENTS

- A. Wind Loads: Design door assembly to withstand wind/suction load of 20 psf, with maximum deflection of 1/120, and without damage to door or assembly components.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware locations, and installation details.
- C. Product Data: Submit general construction, component connections and details.

- D. **Manufacturer's Installation Instructions:** Indicate installation sequence and procedures, and adjustment and alignment procedures.

1.5 CLOSEOUT SUBMITTALS

- A. **Operation and Maintenance Data:** Submit lubrication requirements and frequency, and periodic adjustments required.

1.6 QUALITY ASSURANCE

- A. **Surface Burning Characteristics:**
 - 1. **Foam Insulation:** Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- B. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation board.
- C. Perform Work in accordance with 2013 California Building Code (CBC).

1.7 QUALIFICATIONS

- A. **Manufacturer:** Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. **Installer:** Company specializing in performing work of this section with minimum five years documented experience approved by manufacturer.

PART 2 PRODUCTS

2.1 OVERHEAD COILING DOORS

- A. **Manufacturers:**
 - 1. Cornell Iron Works, Inc.
 - 2. Overhead Door Corporation

2.2 COMPONENTS

- A. **Curtain:** Conforming to the following:
 - 1. **Aluminum Slats:** Interlocking, minimum 0.040 inches of ASTM B221 aluminum alloy Type 6063.
 - a. **Type:** Sandwich slat construction with manufacturer's standard insulated core.
 - 2. **Slat Ends:** Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
 - 3. **Curtain Bottom:** Fitted with aluminum angles, channels, or hollow extrusion to provide reinforcement and positive contact with floor in closed position.
- B. **Guides:** Minimum 0.1875 inch; formed aluminum angles, continuous, vertical mounted; stainless steel mounting brackets.
- C. **Roller Shaft Counterbalance:** Steel pipe and helical steel spring system, capable of producing torque sufficient to ensure smooth operation of curtain from any position and capable of holding position at mid-travel; with adjustable spring tension.
- D. **Hood Enclosure:** minimum 0.040 inch thick aluminum; internally reinforced to maintain rigidity and shape.

- E. Hardware:
 - 1. Locks: Furnish locks to allow doors to be secured.
 - 2. Cylinders: Contractor to install construction core, Schlage full format interchangeable cores with six pin cylinders, installed as part of Work of this section.
 - 3. Handle: Inside side mounted, adjustable keeper, spring activated latch bar with feature to keep in locked or retracted position; interior and exterior handle.
 - 4. Weatherstripping: Moisture and rot proof, resilient type for complete weathertight installation.
 - a. Bottom Bar: Weather/sensing edge within neoprene or rubber astragal extending full width of door bottom bar.
 - b. Guides: Nylon brush sealing against fascia side of curtain.
 - c. Hood: Neoprene/rayon baffle to impede air flow above coil.
 - d. Lintel: Nylon brush fitted at door header to impede air flow.

2.3 SHOP FINISHING

- A. Aluminum: clear anodized finish.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify opening sizes, tolerances and conditions are acceptable.

3.2 INSTALLATION

- A. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- B. Securely and rigidly brace components suspended from structure
- C. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- D. Coordinate installation of sealants and backing materials at frame perimeter.
- E. Install perimeter trim and closures.

3.3 ERECTION TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent Work.
- B. Maximum Variation From Plumb: 1/16 inch.
- C. Maximum Variation From Level: 1/16 inch.
- D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 ft straight edge.

3.4 ADJUSTING

- A. Adjust door hardware and operating assemblies for smooth and noiseless operation.

3.5 CLEANING

- A. Clean door and components.

- B. Remove labels and visible markings.

END OF SECTION

SECTION 08410

ALUMINUM-FRAMED ENTRANCES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes aluminum-framed entrances including aluminum doors and frames including metal infill panels.
- B. Related Sections:
 - 1. Section 08710 - Door Hardware: Mortised hardware reinforcement requirements affecting framing members; hardware items other than specified in this section.

1.2 REFERENCES

- A. Aluminum Association:
 - 1. AA ADM 1 - Aluminum Design Manual.
- B. American Architectural Manufacturers Association/Window & Door Manufacturers Association:
 - 1. AAMA/WDMA 101/I.S.2 - Specification for Windows, Doors and Unit Skylights.
 - 2. AAMA 502 - Voluntary Specification for Field Testing of Windows and Sliding Glass Doors.
 - 3. AAMA 503 - Voluntary Specification for Field Testing of Metal Storefronts. Curtain Wall and Sloped Glazing Systems.
 - 4. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
 - 5. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
 - 6. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
 - 7. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
 - 8. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
 - 9. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site.
 - 10. AAMA MCWM-1 - Metal Curtain Wall Manual.
 - 11. AAMA SFM-1 - Aluminum Store Front and Entrance Manual.
- C. American Society of Civil Engineers:
 - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- D. ASTM International:
 - 1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
 - 2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 3. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 4. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 5. ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric).
 - 6. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 7. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).

8. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
9. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
10. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
11. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
12. ASTM E547 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential.
13. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Curtain Walls, and Doors by Uniform or Cyclic Static Air Pressure Difference.
14. ASTM E1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
15. ASTM E1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

E. California Department of Health Services:

1. CA/DHS/EHLB/R-174 - Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.

F. Green Seal:

1. GC-03-2nd Edition, January 7, 1997 - Anti-Corrosive Paints.

G. National Fenestration Rating Council Incorporated:

1. NFRC 100 - Procedures for Determining Fenestration Product U-Factors.

H. SSPC: The Society for Protective Coatings:

1. SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).
2. SSPC Paint 25 - Red Iron Oxide, Zinc Oxide, Raw Linseed Oil, and Alkyd Primer.

1.3 SYSTEM DESCRIPTION

- A. Aluminum-framed entrance includes tubular aluminum sections with supplementary internal support framing, shop fabricated, factory finished, insulated metal panel infill, related flashings, anchorage and attachment devices.
- B. System Assembly: Shop unitized assembly.

1.4 PERFORMANCE REQUIREMENTS

- A. System Design: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall, including building corners.
 1. As calculated in accordance with applicable code, as tested in accordance with ASTM E330.
- B. System Assembly: Accommodate without damage to components or deterioration of seals, movement within system, movement between system and peripheral construction, dynamic loading and release of loads, deflection of structural support framing.

- C. **Water Leakage:** None, when measured in accordance with ASTM E547 with test pressure difference of 20 percent of design pressure, with minimum differential of 2.86 lbf/sq ft and maximum of 12.00 lbf/sq ft .
- D. **Thermal and Solar Heat Transmittance of Assembly (U Value and SHGC):** Comply with ICC IECC for climate zone in which project is located.
- E. **Expansion / Contraction:** Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over 12 hour period without causing detrimental effect to system components and anchorage.
- F. **System Internal Drainage:** Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to exterior by weep drainage network.

1.5 SUBMITTALS

- A. **Section 01330 - Submittal Procedures:** Submittal procedures.
- B. **Shop Drawings:** Indicate system dimensions, framed opening requirements and tolerances, affected related Work and expansion and contraction joint location and details.
- C. **Product Data:** Submit component dimensions, describe components within assembly, anchorage and fasteners, infill, and internal drainage details.
- D. **Manufacturer's Certificate:** Certify products meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

- A. **Perform Work in accordance with AAMA SFM-1 and AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.**
- B. **Surface Burning Characteristics:**
 - 1. **Foam Insulation:** Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

1.7 QUALIFICATIONS

- A. **Manufacturer and Installer:** Company specializing in manufacturing aluminum systems with minimum three years documented experience.

1.8 DELIVERY, STORAGE, AND PROTECTION

- A. **Handle Products of this section in accordance with AAMA MCWM-1 - Curtain Wall Manual #10.**
- B. **Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.**

1.9 ENVIRONMENTAL REQUIREMENTS

- A. **Do not install sealants nor glazing materials when ambient temperature is less than 40 degrees F during and 48 hours after installation.**

PART 2 PRODUCTS

2.1 ALUMINUM-FRAMED ENTRANCES

- A. Furnish materials in accordance with 2013 California Building Code (CBC).
- B. Product Description:
 - 1. Aluminum Frame: Non-thermally broken; drainage holes; internal weep drainage system.
 - 2. Doors: Aluminum doors; 1-3/4 inches thick, nominal 6 inch wide top rail and vertical stiles, nominal 12 inch wide bottom rail.

2.2 COMPONENTS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M); 6063 alloy, T5 temper typical, 6061 alloy, T6 temper for extruded structural members.
- B. Sheet Aluminum: ASTM B209 (ASTM B209M), 5005 alloy, H15 or H34 temper.
- C. Sheet Steel: ASTM A653/A653M; galvanized to minimum G90 (Z275) coating class.
- D. Steel Sections: ASTM A36/A36M; shaped to suit mullion sections, galvanized.
- E. Infill Panels:
 - 1. Insulated Panels: Manufacturer's standard insulated panel construction with aluminum outer and inner faces and special insulating core; 1 inch thick.
- F. Flashings: Minimum 0.025 inch thick stainless steel.
- G. Vapor Retarder: Sheet EPDM.
- H. Air Barrier: Sheet steel, galvanized.
- I. Sealant and Backing Materials:
 - 1. Sealant Used Within System (Not Used for Glazing): Manufacturer's standard materials to achieve weather, moisture, and air infiltration requirements.
- J. Fasteners: Stainless steel.

2.3 FABRICATION

- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Arrange fasteners and attachments to conceal from view.
- E. Prepare components with internal reinforcement for door hardware.
- F. Reinforce framing members for imposed loads.

2.4 SHOP FINISHING

- A. Clear Anodized Aluminum Surfaces: AAMA 611, AA-M12C22A41 non-specular as fabricated mechanical finish, medium matte chemical finish, and Architectural Class I 0.7 mils clear anodized coating.
- B. Concealed Steel Items: Galvanized to ASTM A123/A123M; galvanize after fabrication.
- C. Apply bituminous paint to concealed aluminum and steel surfaces in contact with cementitious or dissimilar metals.
- D. Shop Primer for Steel Components: SSPC Paint 25 red oxide.
- E. Touch-Up Primer for Galvanized Steel Surfaces: SSPC Paint 20 zinc rich.
- F. Extent of Finish:
 - 1. Apply factory coating to surfaces exposed at completed assemblies.
 - 2. Apply finish to surfaces cut during fabrication so no natural aluminum is visible in completed assemblies, including joint edges.
 - 3. Apply touch-up materials recommended by coating manufacturer for field application to cut ends and minor damage to factory applied finish.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other Work.
- B. Verify wall openings are ready to receive Work of this Section.

3.2 INSTALLATION

- A. Install wall system in accordance with AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances.
- E. Coordinate attachment and seal of perimeter air and vapor retarder materials.
- F. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- G. Install integral flashings and integral joint sealers.
- H. Set thresholds in bed of mastic and secure.
- I. Install hardware using templates provided. Refer to Section 08710 for installation requirements.

- J. Install infill panels using method required to achieve performance criteria.
- K. Coordinate installation of perimeter sealants.

3.3 ERECTION TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 ft, whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.4 ADJUSTING

- A. Adjust operating hardware for smooth operation.

3.5 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- C. Remove excess sealant by method acceptable to sealant manufacturer.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Protect finished Work from damage.

END OF SECTION

SECTION 08620

UNIT SKYLIGHTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Manufactured plastic unit skylights with integral metal frame.
 2. Support curbs.

1.2 REFERENCE STANDARDS

- A. American Architectural Manufacturers Association:
1. AAMA 101 - Voluntary Performance Specification for Windows, Skylights and Glass Doors.
- B. ASTM International:
1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 2. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 3. ASTM D635 - Standard Test Method for Rate of Burning and Extent and Time of Burning of Plastics in a Horizontal Position.
 4. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
 5. ASTM D2843 - Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.
 6. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. California Department of Health Services:
1. CA/DHS/EHLB/R-174 - Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.
- D. Federal Specification Unit:
1. FS TT-C-494 - Coating Compound, Bituminous, Solvent Type, Acid Resistant.
- E. South Coast Air Quality Management District:
1. SCAQMD Rule 1168-January 7, 2005 - Adhesive and Sealant Applications.

1.3 COORDINATION

- A. Coordinate Work with roofing and Precast Building Manufacturer.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit structural, thermal, and daylighting performance values.
- C. Shop Drawings: Indicate configurations, dimensions, locations, fastening methods, and installation details.

- D. Manufacturer's Instructions: Submit special procedures, and perimeter conditions requiring special attention.

1.5 QUALITY ASSURANCE

- A. Test and label unit skylights in accordance with AAMA 101, including performance grade for positive and negative wind pressure.
- B. Light Transmitting Plastics: Class CC1 defined by applicable code when tested in accordance with ASTM D635 in thickness for intended use.
 - 1. Self Ignition Temperature: Minimum 650 degrees F when tested in accordance with ASTM D1929.
 - 2. Smoke Developed Index: Maximum 450 when tested in accordance with ASTM E84 or maximum 75 when tested in accordance with ASTM D2843 in thickness for intended use.
- C. Perform Work in accordance with 2013 California Building Code (CBC).

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

1.7 WARRANTY

- A. Furnish five year manufacturer's warranty for unit skylights.

PART 2 PRODUCTS

2.1 UNIT SKYLIGHTS

- A. Product Description: Factory-assembled glazing in aluminum frame; double dome.
 - 1. Rectangular domed shape.
 - 2. Nominal Size: 36 x 36 inch inside diameter.
- B. Performance / Design Criteria:
 - 1. Primary Performance Requirements: AAMA 101 Designation CW30 Commercial or better.
 - 2. Air Infiltration: Limit air infiltration through assembly to 0.3 cfm/sq ft of wall area, measured at reference differential pressure across assembly of 1.57 psf as measured in accordance with ASTM E283.
 - 3. Water Leakage: None, when measured in accordance with ASTM E331 with test pressure difference as defined by AAMA 101.
 - 4. Allow for expansion and contraction within system components caused by a cycling surface temperature range of 170 F degrees without causing detrimental effects to system or components.
 - 5. Provide glazing system with minimum visible light transmittance of 90 percent for clear skylights, maximum ultraviolet transmission of 2.0 percent and shading coefficient of 0.89 for clear skylights.

2.2 SUSTAINABILITY CHARACTERISTICS

- A. Indoor Environmental Quality Characteristics:
 - 1. Adhesives and Sealants: Maximum volatile organic compound content in accordance with product and testing requirements of CA/DHS/EHLB/R-174.

- B. Indoor Environmental Quality Characteristics:
 - 1. Interior Sealants and Sealant Primers: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.

2.3 COMPONENTS

- A. Double Glazing: Thermoformed Co-Polyester; factory sealed.
 - 1. Outer Glazing: Clear transparent.
 - 2. Inner Glazing: Clear transparent.
- B. Frames: ASTM B221 Extruded aluminum reinforced corner joints, integral curb frame mounting flange to receive roofing flashing system, with integral condensation drainage gutter, glazing retainer; clear anodized finish.
- C. Support Curbs: ASTM B209 Sheet aluminum, sandwich construction; 1 inch thick, 4 inches high; glass fiber or rigid plastic insulation; with integral flange for anchorage to roof deck.

2.4 FABRICATION

- A. Factory-assembled unit consisting of plastic glazing, extruded aluminum glazing retainer, gaskets, inner frame incorporated into curb, and integral curb with self-contained roof flashing flanges.
- B. Fabricate free of visual distortion and defects.
- C. Fabricate to achieve leak proof, and weathertight assemblies.
- D. Fabricate components to allow for expansion and contraction with minimum clearance and shim spacing around perimeter of assembly.

2.5 ACCESSORIES

- A. Anchorage Devices: Type recommended by manufacturer, exposed to view.
- B. Protective Back Coating: Zinc molybdate alkyd.
- C. Sealant: Manufacturer's recommended sealants integral with each unit skylight installation, nonhardening, nonskinning, nondrying, nonmigrating butyl based sealants.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings and substrate conditions are ready to receive Work of this section.

3.2 PREPARATION

- A. Apply protective back coating on aluminum surfaces of skylight units to be in contact with cementitious materials or dissimilar metals.

3.3 INSTALLATION

- A. Flash curb assembly into roof system.

- B. Place unit skylights and secure to curb assembly. Install integral setting sealant for watertight installation.
- C. Only waterproof and weathertight assemblies will be acceptable.

3.4 CLEANING

- A. Remove protective material from prefinished aluminum surfaces.
- B. Wash down exposed surfaces; wipe surfaces clean.
- C. Remove excess sealant.

END OF SECTION

SECTION 08710

DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes hardware for aluminum doors.
 - 1. Provide weatherstripping, seals, and thresholds.
- B. Related Sections:
 - 1. Section 08410 - Aluminum-Framed Entrances.
- C. Allowances: Include purchase, delivery, and installation of door hardware.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A156.1 - Butts and Hinges.
 - 2. ANSI A156.2 - Bored and Preassembled Locks and Latches.
 - 3. ANSI A156.3 - Exit Devices.
 - 4. ANSI A156.4 - Door Controls - Closures.
 - 5. ANSI A156.5 - Auxiliary Locks and Associated Products.
 - 6. ANSI A156.6 - Architectural Door Trim.
 - 7. ANSI A156.7 - Template Hinge Dimensions.
 - 8. ANSI A156.8 - Door Controls - Overhead Holders.
 - 9. ANSI A156.12 - Interconnected Locks and Latches.
 - 10. ANSI A156.13 - Mortise Locks and Latches.
 - 11. ANSI A156.14 - Sliding and Folding Door Hardware.
 - 12. ANSI A156.15 - Closer Holder Release Devices.
 - 13. ANSI A156.16 - Auxiliary Hardware.
 - 14. ANSI A156.18 - Materials and Finishes
 - 15. ANSI A156.19 - Power Assist and Low Energy Power Operated Doors.
 - 16. ANSI A156.23 - Electromagnetic Locks.
 - 17. ANSI A156.24 - Delayed Egress Locks.
 - 18. ANSI A156 - Complete Set of 24 BHMA Standards (A156 Series) with Binder.
- B. Builders Hardware Manufacturers Association:
 - 1. BHMA Directory of Certified Products.
- C. National Fire Protection Association:
 - 1. NFPA 80 - Standard for Fire Doors, Fire Windows.
 - 2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- D. Underwriters Laboratories Inc.:
 - 1. UL 10B - Fire Tests of Door Assemblies.
 - 2. UL 305 - Panic Hardware.
 - 3. UL - Building Materials Directory.
- E. Intertek Testing Services (Warnock Hersey Listed):
 - 1. WH - Certification Listings.

1.3 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings:
 - 1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts.
 - 2. Submit manufacturer's parts lists.
- C. Manufacturer's Installation Instructions: Submit special procedures, and perimeter conditions requiring special attention.

1.4 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of installed cylinders and their master key code.
- B. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- C. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with the following requirements:
 - 1. ANSI A156 series.
- B. Furnish hardware marked and listed in BHMA Directory of Certified Products.
- C. Perform Work in accordance with 2013 California Building Code (CBC).

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Hardware Supplier: Company specializing in supplying commercial door hardware with minimum three years documented experience
- C. Hardware Supplier Personnel: Employ Architectural Hardware Consultant (AHC) to assist in work of this section.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually with necessary fasteners, instructions, and installation templates, when necessary; label and identify each package with door opening code to match hardware schedule.

1.8 COORDINATION

- A. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
 - 1. Provide templates or actual hardware as required to ensure proper preparation of doors and frames.

- B. Coordinate Owner's keying requirements during course of Work.

1.9 WARRANTY

- A. Furnish five year manufacturer warranty for locksets and door closers.

1.10 MAINTENANCE MATERIALS

- A. Furnish special wrenches and tools applicable for each different and for each special hardware component.
- B. Furnish maintenance tools and accessories supplied by hardware component manufacturer.

PART 2 PRODUCTS

2.1 COMPONENTS

- A. General Hardware Requirements: Where not specifically indicated, comply with applicable ANSI A156 standard for type of hardware required. Furnish each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
 - 1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
 - 2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
 - 3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
 - a. Finish: Match hardware item being fastened.
- B. Hinges: ANSI A156.1, full mortise type, template type, ANSI A156.7, complying with following general requirements unless otherwise scheduled.
 - 1. Widths: Sufficient to clear trim projection when door swings 180 degrees.
 - 2. Number: Furnish minimum three hinges to 90 inches high, four hinges to 120 inches high for each door leaf.
 - 3. Size and Weight: 4-1/2 inch heavy weight typical for 1-3/4 inch doors.
 - 4. Pins: Furnish nonferrous hinges with non-removable pins (NRP).
 - 5. Tips: Flush tips.
- C. Locksets: Furnish locksets compatible with specified cylinders. Typical 2-3/4 inch backset. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt, verify type of cutouts provided in metal frames.
 - 1. Mortise Locksets: ANSI A156.13, Series 1000, Grade 1 unless otherwise indicated.
- D. Cylinders: ANSI A156.5, Grade 1, Schlage, 6 pin type interchangeable core type cylinders.
 - 1. Cylinders: construction cores.
 - 2. Keying: construction keying.
- E. Closers: ANSI A156.4 modern type with cover, surface mounted closers; full rack and pinion type with steel spring and non-freezing hydraulic fluid.
 - 1. Adjustability: Furnish controls for regulating closing, latching, speeds, back checking, and hold open.
 - 2. Arms: Type to suit individual condition; parallel-arm closers at reverse bevel doors and where doors swing full 180 degrees.
 - 3. Location: Mount closers on inside of exterior doors.
 - 4. Operating Pressure: Maximum operating pressure as follows.

a. Exterior Doors: Maximum 8.5 pound.

- F. Thresholds, and Trim: Furnish as indicated in Schedule, with accessories as required for complete operational door installations.
1. Weatherstripping: Furnish continuous weatherstripping at top and sides of exterior doors.
 2. Thresholds: Maximum 1/2 inch height.

2.2 ACCESSORIES

- A. Lock Trim: Furnish levers with escutcheon plate.
- B. Through Bolts: Do not permit through bolts and grommet nuts on door faces unless no alternative is possible.

2.3 FINISHING

- A. Finishes: ANSI A156.18; furnish following finishes except where otherwise indicated in Schedule at end of section.
1. Hinges:
 - a. BHMA 630 and 626, satin finish.
 2. Typical Exterior Door Hardware:
 - a. BHMA 630, satin finished stainless steel.
 - b. BHMA 605, bright brass (yellow), clear coated.
 - c. BHMA 613, oil rubbed satin bronze.
 3. Closers:
 - a. BHMA 628, satin aluminum, clear anodized.
 4. Thresholds:
 - a. BHMA 630, satin finished stainless steel.
 5. Other Items: Furnish manufacturer's standard finishes to match similar hardware types on same door, and maintain acceptable finish considering anticipated use and BHMA category of finish.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify doors and frames are ready to receive door hardware and dimensions are as indicated on shop drawings.

3.2 INSTALLATION

- A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.
- B. Mounting Heights From Finished Floor to Center Line of Hardware Item: Comply with 2013 California Building Code (CBC).

3.3 FIELD QUALITY CONTROL

- A. Architectural Hardware Consultant inspect installation and certify hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.4 ADJUSTING

- A. Adjust hardware for smooth operation.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Do not permit adjacent work to damage hardware or hardware finish.

3.6 SCHEDULES

- A. The following hardware sets are intended to establish type and standard of quality when used together with this sections requirements. Examine Drawings and Specifications and furnish proper hardware for door openings.

Hardware Set 1: HW-1	
Hinges:	Full mortise hinges as specified.
Lock:	Mortise lock, Entrance Function.
Closer:	Surface mounted as specified.
Weatherstripping:	Rubber or door manufacturers recommendation

END OF SECTION

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SECTION 09900
PAINTS AND COATINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation, furnishing, and application of paint and special protective coatings. This section does not apply to Painting and Coatings required for the 2.0 million gallon water tank.

1.2 RELATED SECTIONS

- A. Division 1 General Requirements
- B. Division 2 Site Construction
- C. Division 3 Concrete
- D. Division 5 Metals
- E. Division 9 Finishes
- F. Division 10 Specialties
- G. Division 11 Equipment
- H. Division 15 Mechanical
- I. Division 16 Electrical

1.3 REFERENCES

- A. SSPC – Society of Protective Coatings: Surface Preparation Specifications
- B. Applicable standards of the American National Standards Institute, Inc. (ANSI)
- C. National Association of Corrosion Engineers (NACE)
- D. American Society for Testing and Materials (ASTM)

1.4 DEFINITIONS

- A. Submerged Metal: Metal surfaces below a plane 1 foot above maximum liquid surface, metal surfaces above maximum liquid surface which are a part of immersed equipment, concrete embedded surfaces of metallic items, such as wall pipes, pipes, pipe sleeves, and structural steel, except reinforcing steel and the following specific surfaces.
- B. Exposed Metal - Mildly Corrosive: Exposed metal surfaces, except aluminum or stainless steel, located inside or outside of structures and exposed to weather or highly humid atmosphere, such as vaults, similar areas, and where indicated.

- C. Exposed Metal – Atmospheric: Exposed metal surfaces located inside or outside of structures and exposed to weather, including metal doors, hatches, and frames, vents, louvers, pipe supports, interior metal ductwork, flashing, sheet metalwork, miscellaneous architectural metal trim, miscellaneous metal fabrications.
- D. Exposed Metal - Interior: Exposed metal surfaces, except aluminum or stainless steel, located inside structures and not exposed to weather or highly humid atmosphere.

1.5 ABBREVIATIONS

- A. MDFT: Minimum Dry Film Thickness
- B. MDFTPC: Minimum Dry Film Thickness Per Coat
- C. Mil: Thousandths of an inch
- D. SFPG: Square Feet Per Gallon
- E. SFPGPC: Square Feet Per Gallon per Coat

1.6 SUBMITTALS

- A. Product Data: Paint System Data Sheet (PSDS), Material Safety Data Sheets (MSDS), Technical Data Sheets and paint colors available for each product used for each paint system.
- B. Manufacturer's Instructions: Indicate surface preparation procedures, substrate conditions requiring special attention, and application instructions.
- C. Applicator's Experience: List of references substantiating required experience as specified.
- D. Manufacturer's Certificate: Stating that factory applied coating system(s) meet or exceed requirements specified in this Section. If manufacturer of finish coating differs from that of shop or field-applied primer, provide both manufacturers' written confirmation that materials are compatible.

1.7 QUALITY ASSURANCE

- A. Applicator's Experience: Minimum 5 years' demonstrated experience in application of specified products.
- B. Applicator shall initiate and enforce quality control procedures consistent with applicable ANSI, NACE and SSPC standards and the coating manufacturer's recommendations.

1.8 REGULATORY REQUIREMENTS

- A. Conform to federal, state, and local requirements limiting the emission of volatile organic chemicals (VOC). Specific requirements may be secured through local office of Air Pollution Control Officer.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in unopened containers clearly labeled with name, date of manufacture, batch number, color, and name of manufacturer.

- B. Store products in a protected area, which maintains temperatures and other environmental conditions within range recommended by manufacturer.
- C. Materials stored in excess of shelf life noted, if any, shall be immediately removed from the job site.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply paint when temperatures are outside ranges recommended by paint manufacturer, in dust, smoke-laden atmosphere, damp or humid weather.
- B. Do not perform abrasive blast cleaning when relative humidity exceeds 85 percent or when surface temperature is less than 5 degrees F above dewpoint of ambient air.
- C. Paint shall be applied only under such combination of humidity and temperature of the atmosphere and surfaces to be painted as will cause evaporation rather than condensation.

1.11 SPECIAL GUARANTEE

- A. Provide coating applicator's and coating manufacturer's extended guarantee or warranty, with Owner named as beneficiary, in writing, as special guarantee. Special guarantee shall provide for correction, or at the option of the Owner, removal and replacement of Work specified in this Specification section found defective during a period of 2 years after the date of Substantial Completion.

1.12 EXTRA STOCK

- A. Upon completion of this portion of the Work, deliver to the Owner the following extra stock of paint:
 - 1. Approximately 10%, or 5 one-gallon containers, whichever is more, of each color used in each coating material used.
 - 2. One unbroken gallon of each type of solvent and thinner required in this specification for future maintenance.

PART 2 PRODUCTS

2.1 GENERAL

- A. All materials of a paint system shall be produced by the same manufacturer. Thinners, cleaners, driers, and other additives shall be as recommended by the manufacturer of the particular coating.
- B. Use only primers that are compatible with surfaces, finish coats that are compatible with primers, and tools and equipment that are compatible with all three.
- C. Furnish materials in accordance with the California Building Code, latest edition.

2.2 MANUFACTURERS

- A. Heavy-Duty Industrial Coatings
 - 1. Devoe Coatings
 - 2. Tnemec Company
 - 3. Ameron
 - 4. Valspar
 - 5. Approved equal.

- B. Wax Tape Wrap and Wax Tape Primer
1. The Trenton Corporation
 2. Approved equal.

2.3 PAINT MATERIALS

- A. Paint products are specified in the following table. Products are referred to by code in the Paint Application Schedule.

CODE	PRODUCT	DESCRIPTION
AL	Acrylic/Latex Finish	Semi-gloss, single component, minimum solids by volume 43%
AP	Aromatic Polyurethane	Moisture cured, Mio-zinc filled primer
CBF	Cementitious Block Filler	Multiple-component, water-based, cementitious acrylic
CE	Catalyzed Epoxy	Multiple purpose, two component epoxy suitable for immersion service system and as a prime coat for metal and galvanized surfaces
CTE	Coal Tar Epoxy	Corrosion- and chemical-resistant coating for us on steel or concrete in immersion and underground conditions.
EF	Modified Polyamine Epoxy	100% volume solids epoxy, thin film flooring
GRE	Glass Reinforced Epoxy	100% solids, glass reinforced epoxy
MTE	Moisture Tolerant Epoxy	100% solids penetrating epoxy
PE	Polyurethane Enamel	High-gloss or high semi-gloss, aliphatic polyurethane enamel
WBAE	Water-based Acrylic Epoxy	Non-yellowing, low odor, acrylic epoxy wall coating
WP	Water Based Polyurethane Enamel	High-gloss or high semi-gloss, water-based acrylic polyurethane
WT	Wax Tape Wrap	Plastic-fiber felt, saturated with a blend of microcrystalline waxes, plasticizers and corrosion inhibitors, forming a tape wrapper
WTP	Wax Tape Priming Paste	High temperature petrolatum wax coating compound that will not melt and can be applied at ambient temperatures up to 200° F
ZRP	Organic Zinc Rich Primer	Converted epoxy, or urethane type, minimum 14 lb. metallic zinc content per gallon

2.4 COLORS

- A. Colors: Colors shall be as selected by the City.
- B. Use colorants free of lead, lead compounds, or other materials which might be affected by the presence of gases likely to be present at the project.
- C. Proprietary identification of colors is for identification only. Any authorized manufacturer may supply matching color.

2.5 TESTING GAUGES

- A. Furnish a magnetic type dry film thickness gauge, to test coating thickness specified in mils. Unit to be as recommended by the coating manufacturer.
- B. Furnish an electrical holiday detector, low voltage, wet sponge type to test finish coat, except zinc primer, high-build elastomeric coatings, and galvanizing, for holidays and discontinuities. Unit to be as recommended by the coating manufacturer.
- C. Furnish a high voltage holiday detector for elastomeric coatings in excess of 25 mils dry film thickness. Unit to be as recommended by the coating manufacturer.

PART 3 EXECUTION

3.1 GENERAL

- A. Surface Preparation Inspection:
 - 1. Inspect and provide substrate surfaces prepared in accordance with these Specifications and the printed directions and recommendations of paint manufacturer whose product is to be applied. In the event of a conflict, the more stringent shall apply.
 - 2. Provide Coating Inspector minimum 7 days' advance notice prior to start of surface preparation work or coating application work.
 - 3. Perform such work only in the presence of Coating Inspector, unless Coating Inspector grants prior approval to perform such work in Coating Inspector's absence.
- B. For coatings subject to immersion, obtain full cure for completed system. Consult coatings manufacturer's written instructions for these requirements. Do not immerse coating for any purpose until completion of curing cycle.
- C. The intention of these Specifications is for new concrete, metal and submerged metal surfaces to be painted, whether specifically mentioned or not, except as modified herein. Concealed structural steel surfaces shall receive prime coat only unless modified herein. Exterior concrete surfaces will not be painted unless specifically indicated.

3.2 MANUFACTURER'S SERVICES

- A. Coating manufacturer's representative shall be present at site as required to resolve field problems attributable to, or associated with the manufacturer's product.

3.3 SURFACES NOT REQUIRING PAINTING

- A. Unless otherwise specified or indicated on Drawings, do not paint the following items:
1. Exterior concrete and masonry surfaces.
 2. Nonferrous and corrosion-resistant ferrous alloys such as copper, bronze, monel, aluminum, chromium plate, and stainless steel, except where:
 - a. Required for electrical insulation between dissimilar metals.
 - b. Aluminum and stainless steel are embedded in concrete or masonry, or aluminum is in contact with concrete or masonry.
 - c. Color coding of equipment and piping is required.
 3. Nonmetallic materials (not including wood) such as glass, PVC, porcelain, and plastic (FRP) except as required for architectural painting or color coding.
 4. Prefinished electrical and architectural items such as motor control centers, switchboards, switchgear, panelboards, transformers, disconnect switches, acoustical tile, cabinets, building louvers, wall panels, etc., unless color coding of equipment is required.
 5. Nonsubmerged electrical conduits attached to unpainted concrete surfaces.
 6. Items specified to be galvanized after fabrication unless specifically noted or subject to immersion. Manufactured items and materials that are "factory" galvanized shall be prepared and coated as specified hereinafter for the exposure condition of the item and for architectural purposes unless otherwise specified herein. Repair of damaged galvanized surfaces is required.

3.4 PROTECTION OF SURFACES NOT TO BE PAINTED

- A. Protect all surfaces adjacent to, or downwind of work area from overspray. Contractor shall be responsible for any damage resulting from overspray.
- B. Remove, mask, or otherwise protect hardware, lighting fixtures, switch plates, aluminum surfaces, machined surfaces, couplings, shafts, bearings, nameplates on machinery, and other surfaces not intended to be painted.
- C. Provide drop cloths to prevent paint materials from falling on or marring adjacent surfaces.
- D. Protect working parts of mechanical and electrical equipment from damage during surface preparation and painting process.
- E. Mask openings in motors to prevent paint and other materials from entering.

3.5 APPLICATION SAFETY

- A. Perform painting in accordance with recommendations of the following:
1. Paint manufacturer's instructions.
 2. Federal, state, and local agencies having jurisdiction.
- B. Contractor will be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees) and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Safety provisions will conform to U.S. Department of Labor, Occupational Safety and Health Act, any equivalent state law, and all other applicable federal, state, county, and local laws, ordinances, and codes.
- C. Contractor will comply with all safety training requirements promulgated or required for this project.

3.6 PAINT MIXING

- A. Prepare and mix paint and coatings in accordance with manufacturer's instructions.
- B. Prepare multiple-component coatings using all of the contents of the container for each component as packaged by the paint manufacturer. No partial batches will be permitted. Do not use multiple-component coatings that have been mixed beyond their pot life. Provide small quantity kits for touch-up painting and other small areas. Mix only the components specified and furnished by the paint manufacturer. Do not intermix additional components for reasons of color or otherwise, even within the same generic type of coating.
- C. Keep paint materials sealed when not in use.
- D. Alternate colors to provide a visual reference where more than one coat of a material is applied within a given system.

3.7 SURFACE PREPARATION

- A. Metal Surfaces
 - 1. Remove oil, grease, welding flux and other surface contaminants using steam, open flame, hot water, or cold water with detergent additives followed with clean water rinsing. Small areas may be cleaned using suitable solvents.
 - 2. Round all sharp edges and grind smooth burrs, jagged edges and surface defects.
 - 3. Prepare welds so that there is: (a) no undercutting or reverse ridges on weld bead; (b) no weld splatter on or adjacent to weld; and (c) no sharp peaks or ridges along weld bead.
 - 4. Prepare metal surfaces as specified in accordance with SSPC Specifications as follows:
 - a. SP1 – Solvent Cleaning
 - b. SP2 – Hand Tool Cleaning
 - c. SP3 – Power Tool Cleaning
 - d. SP5 – White Metal Blast Cleaning
 - e. SP6 – Commercial Blast Cleaning
 - f. SP7 – Brush-Off Blast Cleaning
 - g. SP8 – Pickling
 - h. SP10 – Near-White Blast Cleaning
 - i. SP11 – Power Tool Cleaning to Bare Metal
 - j. SP12 – High Pressure Water Jetting
 - 5. Wherever “solvent cleaning”, “hand tool cleaning”, “wire brushing”, “blast cleaning”, or similar metal surface preparation methods are specified or used in paint manufacturer’s instructions, conform to SSPC Specifications listed above.
 - 6. Where OSHA or EPA regulations preclude standard abrasive blast cleaning, wet or vacu-blast methods may be required. Follow coatings manufacturer’s recommendations for wet blast additives and first coat application.
 - 7. Blast Cleaning Requirements: Comply with applicable federal, state, and local, air pollution and environmental control regulations for blast cleaning and disposition of spent aggregate and debris.
 - 8. Clean surfaces of all dust and residue from surface preparation operations by air blast cleaning or other dry method prior to painting. Paint surfaces the same day they are prepared; do not allow surfaces to rust prior to painting.
- B. Concrete Surfaces
 - 1. Wait at least 30 days after concrete has been placed before preparing surface.

2. Remove all grease, oil, dirt, salts or other chemicals, loose materials and other foreign matter by solvent, detergent or other suitable cleaning method.
3. Brush-off blast clean all concrete surfaces per ASTM D4259 to remove loose concrete and to provide a tooth for binding. Surface profile shall be as recommend in writing by the coating manufacturer. If brush-off blasting is impractical, surface may be acid etched with muriatic acid solution. Approval subject to producing desired profile. Acid etching of vertical or overhead surfaces or surfaces in the wet well will not be accepted.
4. Unless otherwise required for proper adhesion, surfaces shall be dry prior to painting. Verify dryness by testing for moisture per ASTM D4263.

C. Masonry Surfaces

1. Cure masonry construction for at least 14 days before starting surface preparation work. Surface preparation shall comply with ASTM D4261.
2. Remove all oil, grease, dirt, salts or other chemicals, loose materials, or other foreign matter by solvent, detergent washing, or other suitable cleaning methods.
3. Clean masonry surfaces of all mortar and grout spillage and other surface deposits using either (a) nonmetallic fiber brushes and commercial muriatic acid followed with rinsing with clean water; or (b) brushoff blasting; or (c) water blasting.
4. Avoid damage to the masonry mortar joints or adjacent surfaces.
5. Unless otherwise required for proper adhesion, surfaces shall be dry prior to painting.
6. Masonry surfaces which are to be painted shall have a uniform texture and be free of surface imperfections which would impair the intended finished appearance.
7. Masonry surfaces which are to remain uncoated, or are specified to receive a clear coating, shall be free of discolorations and be uniform in texture after cleaning.

- D. Plastic: Hand sand with medium grit sandpaper to provide tooth for coating system. Large areas may be power sanded provided excess material is not removed.

3.8 APPLICATION OF PAINT

A. General

1. Inspection: Schedule with Coating Inspector in advance for cleaned surfaces and all coats prior to succeeding coat.
2. Apply coatings in accordance with manufacturer's recommendations. Allow sufficient time between coats to assure drying of previous coat.
3. Fusion bonded coatings may be applied using electrostatic, fluidized bed, or flocking method.
4. Paint units to be bolted together or to structure prior to assembly or installation.
5. Extent of Coating (Immersion): Coatings shall be applied to all internal vessel and pipe surfaces, nozzle bores, flange gasket sealing surfaces, carbon steel internals, and stainless steel internals, unless otherwise specified.

B. Shop Primed or Factory Finished Surfaces

1. Inspection: Schedule with Coating Inspector in advance for shop primed and factory finished items.
2. Repair chipped, peeled or abraded coatings to satisfaction of Engineer by hand or power sanding, feathering the edges, and spot priming with specified primer. Prepare and prime holdback areas for welding as required for specified paint system after welding is completed. Apply all coatings in accordance with manufacturer's instructions.
3. Remove all factory-applied bituminous or asphaltic varnishes from ductile iron pipe prior to application of specified coatings.

- C. **Manufacturer Applied Paint Systems:** Repair abraded areas in accordance with equipment manufacturer's directions. Blend repaired areas into original finish. Provide appropriate liquid repair kits for field repair of fusion bonded coatings.
- D. **Film Thickness:**
1. **Number of Coats:**
 - a. Minimum required irrespective of coating thickness.
 - b. Additional coats may be required to obtain minimum required paint thickness, depending on method of application, differences in manufacturer's products, and atmospheric conditions.
 2. **Application Thickness:**
 - a. Do not exceed coating manufacturer's recommendations.
 - b. Measure using a wet film thickness gauge to ensure proper coating thickness during application.
 3. **Film Thickness Measurements and Electrical Inspection of Coated Surfaces:**
 - a. Perform with properly calibrated instruments.
 - b. Recoat and repair as necessary for compliance with the Specifications.
 - c. All coats will be subject to inspection by Coating Inspector and coating manufacturer's representative.
 4. Visually inspect concrete, nonferrous metal, plastic, and wood surfaces to ensure proper and complete coverage has been attained.
 5. Give particular attention to edges, angles, flanges, and other similar areas, where insufficient film thickness are likely to be present, and ensure proper millage in these areas.
 6. Apply additional coats as required to complete hiding of underlying coats. The hiding shall be so complete that the addition of additional coats would not increase the hiding.
 7. **Thickness Testing:**
 - a. After repaired and recoated areas have dried sufficiently, final tests will be conducted by the Coating Inspector.
 - b. Measure coating thickness specified in mils with a magnetic type dry film thickness gauge as specified.
 - c. Test finish coat, except zinc primer, galvanizing, and elastomeric coatings, for holidays and discontinuities with an electrical holiday detector, low voltage, wet sponge type as specified.
 - d. Holiday detect coatings with high voltage units when recommended by the coating manufacturer.
 - e. Check each coat for correct millage. Do not make measurement before a minimum of 8 hours after applications of coating.
- E. **Porous Surfaces, Such as Concrete, Masonry:**
1. **Filler/Surfacer:** Use coating manufacturer's recommended product to fill air holes, bug holes, and other surface voids or defects.
 2. **Prime Coat:**
 - a. May be thinned to provide maximum penetration and adhesion.
 - b. **Type and Amount of Thinning:** Determined by paint manufacturer and dependent upon surface density and type of coating.
 3. **Surfaces Specified to Receive Water Base Coating:** Damp, but free of running water, just prior to application of coating.
- F. **Damaged Coatings, Pinholes, and Holidays:**
1. Feather edges and repair in accordance with recommendations of paint manufacturer.

2. Hand or power sand visible areas of chipped, peeled, or abraded paint, and feather the edges. Follow with primer and finish coat. Depending on extent of repair and appearance, a finish sanding and topcoat may be required.
3. Repair fusion bonded coatings as recommended by original applicator. Applicator shall provide liquid repair kits for this purpose as recommended by coating manufacturer.
4. Apply finish coats, including touchup and damage-repair coats, in a manner which will present a uniform texture and color-matched appearance.

G. Unsatisfactory Application:

1. If item has improper finish color or insufficient film thickness, clean and top coat surface with specified paint material to obtain specified color and coverage. Obtain specific surface preparation information from coating manufacturer.
2. Evidence of runs, bridges, shiners, laps, or other imperfections shall be cause for rejection.
3. Repair defects in coating system per written recommendations of coating manufacturer.
4. Leave all staging up until Coating Inspector has inspected surface or coating. Replace staging removed prior to approval by Coating Inspector.

3.9 CLEANING

- A. Collect waste material which may constitute a fire hazard, place in closed metal containers and remove daily from site.
- B. Remove paint spatters from adjoining surfaces. Repair any damage to coatings or surfaces caused by cleaning operations.

3.10 PAINTS AND COATINGS APPLICATION SCHEDULE

- A. Unless otherwise shown or specified in these Specifications, paint or coat the work in accordance with the following application schedule. In the event of discrepancies or omissions in the following, request clarification from the Coating Inspector before starting work in question.

APPLICATION	SURFACE PREPARATION (paragraph 3.7)	PRIMER Paint Material (paragraph 2.3), No. Coats, and Min. Cover	FINISH Paint Material (paragraph 2.3) No. Coats, and Min. Cover
Submerged Metal	SP 5	CE, 1 coat 5.0 mils	CE, 2 coats 5.0 mils, each coat
Exposed Metal – Mildly Corrosive	SP 10	CE, 1 coat 5.0 mils	PE, 2 coats 2.0 mils, each coat
Exposed Metal – Atmospheric	SP 6	CE, 1 coat 5.0 mils	WP, 2 coats 2.0 mils, each coat

APPLICATION	SURFACE PREPARATION (paragraph 3.7)	PRIMER Paint Material (paragraph 2.3), No. Coats, and Min. Cover	FINISH Paint Material (paragraph 2.3) No. Coats, and Min. Cover
Exposed Metal – Interior (Apply primer to all surfaces; finish coat need only be applied to surfaces exposed when construction is complete.)	SP 6 or SP 8	AP, 1 coat 2.5 mils	WP, 2 coats 2.0 mils, each coat
Buried Ductile Iron Pipe and Fittings	Manufacturer's Applied Coating	See Section 02071	See Section 02071
Galvanized surfaces requiring painting	SP 1 followed by ASTM D6386	CE, 1 coat 3.0 mils	PE, 1 coat 2.5 mils
Repair of galvanized metal	SP 1 followed by SP 2, or ASTM D6386	none	ZRP, 1 coat 2.5 mils
Interior concrete and cement grout surfaces in new below grade structures	Concrete	Unpainted	Unpainted
Interior concrete floor, ceiling, and walls in the pump station	Concrete	EF, 1 coat 6.0 mils	EF, 1 coat 6.0 mils
Exposed fiberglass, PVC, CPVC, and PVCW, including piping.	Plastic	CE, 1 coat 3.0 mils	PE, 1 coat 2.5 mils
Aluminum and cementitious or dissimilar metal insulation.	SP 1	CE, 1 coat 5.0 mils	CE, 1 coat 5.0 mils
Miscellaneous metal attached to the tank (ladders, appurtenances, etc), interior and exterior	See Section 09910	See Section 09910	See Section 09910
Conduit and piping on tank interior and attached to tank exterior	See Section 09910	See Section 09910	See Section 09910
Welded steel reservoir, interior and exterior	See Section 09910	See Section 09910	See Section 09910

END OF SECTION

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SECTION 09910

TANK PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. The Contractor shall furnish all labor, materials, equipment, transport and waste disposal, and incidentals required to coat interior and exterior surfaces, including surface preparation, residue removal, touch-up paint, protection of uncoated surfaces, and clean up, of a 2.0 million gallon welded steel water tank (103-foot inside diameter x 33-foot high overflow depth) with a NSF/UL 61 certified lining system. Steel appurtenances such as ladders, vents, manways, piping, or other fixtures which are welded or otherwise permanently directly affixed to the tank, except for stainless steel, shall be considered to be a part of the tank and undergo identical surface preparation and coating as the tank in accordance with the requirements of this specification.
- B. The top side of the rafters shall receive the full coating system prior to erection. Verification shall be made by the coating inspector prior to erection.

1.2 RELATED SECTIONS

- A. Section 02620, Water Storage Tank Testing and Disinfection.
- B. Section 09900, Painting.
- C. Section 13210, Welded Steel Tank and Appurtenances.

1.3 REFERENCES

- A. 29 CFR, Code of Federal Regulations
 - 1. Title 29 Occupational Safety and Health Administration (OSHA), U.S. Department of Labor
 - 2. Title 40 Environmental Protection Agency
- B. ASTM, American Society for Testing and Materials International
 - 1. D16 Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products
- C. SSPC, Steel Structures Painting Council, the Society for Protective Coatings
 - 1. SP1 Solvent Cleaning
 - 2. SP6 Commercial Blast Cleaning
 - 3. SP7 Brush-Off Blast Cleaning
 - 4. SP10 Near-White Blast Cleaning
 - 5. PA Guide 11 Protecting Edges, Crevices, and Irregular Steel Surfaced by Stripe Coating
- D. NSF International
 - 1. NSF 61 Drinking Water System Components
- E. AWWA (American Water Works Association)
 - 1. D102 Standard for Coating Steel Water-Storage Tanks

- F. NACE International, The Corrosion Society
- G. ISO (International Organization for Standardization)
 - 1. 8502-3 Preparation of Steel Substrates Before Application of Paints and Related Products

1.4 SUBMITTALS

- A. Product Data: Provide data on all finishing products.
 - 1. Technical data sheet for each product used, including statements of the suitability of the material for the intended use, weight in pounds/gallon (ASTM D-2196), % solids by volume (ASTM D-2369), percent solids by weight (ASTM D-2369), air cure dry time to re-coat (ASTM D-1640), minimum adhesion to steel substrate (ASTM D-4541) using a type II instrument (minimum 800 psi), adhesion between coats (ASTM D-4541)
 - 2. Instructions and recommendations for surface preparation, thinning, mixing, handling, application, coating repair, proper storage, and application equipment. This shall include minimum time requirements for coating, recoating and surface patches.
 - 3. Material safety data sheet for each product used.
- B. Samples: Submit two samples, 6 x 6 inch in size illustrating selected colors and textures for each color selected.
- C. Manufacturer's Instructions: Indicate special surface preparation procedures, substrate conditions requiring special attention.
- D. Qualifications of Coating Contractor.
 - 1. Copy of California Contractor's license.
 - 2. The Contractor shall provide evidence of regular engagement in the application of high performance industrial coatings on potable water storage tanks for at least five years prior to commencement of this work. Provide five references from projects completed within the last 5 years, including name of project, size of project, name and phone number of Owner and Engineer.
 - 3. Written certification that each applicator performing Work on the projects is trained and qualified to perform the Work.
 - 4. Written certification from the Contractor that they are qualified to apply the coating system specified.
- E. Health and Safety Plan
- F. Laboratory test results for representative waste samples prior to removing any waste materials from the job site.
- G. Receipts from disposal site for all wastes. Receipts shall identify disposed material and source, show quantity of disposed material in tons or cubic yards, and show method used for final disposition as buried, incinerated, and chemically treated and/or other means.

1.5 PERMITS, CERTIFICATES, LAWS AND ORDINANCES

- A. The Contractor shall, at his own expense, procure all permits, certificates, and licenses required of him by law for the execution of the work. He shall comply with all Federal, State, Air Quality District, County, City or District laws, ordinances, or rules and regulations relating to the performance of the work.

- B. Without limiting the general aspects or other requirements of this specification, all surface preparation, coating and painting of surfaces shall conform to applicable standards and practices as set forth by the National Association of Corrosion Engineers (NACE), Steel Structures Painting Council (SSPC), American Water Works Association (AWWA), and coating manufacturer's printed instructions.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container label to include manufacturer's name, type of paint, brand name, lot number, brand code, date of manufacture, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Store paint materials at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.
- D. All compressors and operating equipment shall be placed into secondary containment to prevent accidental spills.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Contractor shall not abrasive blast when air temperature is less than 5 degrees F above dew point.
- B. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer, or as specified herein.
- C. No primer or paint shall be applied during rain, fog, or snow or during periods of high humidity when condensation of moisture on the cleaned steel surfaces occurs, when conditions are such that dust, dirt, debris or insects will collect or adhere onto the freshly applied paint, when the air or metal temperature is below 60 degrees F, or the relative humidity is greater than 45 percent.

1.8 SAFETY AND HEALTH

- A. The Contractor shall provide and require use of personal protective life saving equipment for persons working in or about project site in accordance with requirements set forth in the latest revisions of OSHA Regulations for Construction, AWWA, Section 7, or other regulatory agencies applicable to the construction industry. The manufacturer's printed instructions, appropriate technical bulletins and manuals, including SSPC-Paint Application Guide No. 3, shall apply.
- B. Head and Face protection and Respiratory Devices: When paints or coatings are applied in confined areas, all persons exposed to toxic vapors or atomized coatings shall wear air-supplied masks. Equipment shall also include protective helmets that shall be worn by all persons while in the vicinity of the work area. In addition, workers engaged in or near work during abrasive blasting, shall wear eye and face protection devices and air purifying respirators with appropriate filters. Barrier creams shall be used on any exposed skin.
- C. The Contractor shall at all times conduct his work so as to assure the least possible inconvenience to the general public and adequate protection of persons and property in the work vicinity. Attention shall be paid to prevailing winds to reduce drifting of abrasive

blast residue, dust, and paint or coating overspray. At no time should drifting materials exceed any governmental agency's laws, codes, or guidelines or the limits of the construction site. Public noise exposure shall be limited to hours of operation specified and delineated by the City.

- D. Ventilation: All solvent vapors shall be completely removed by suction type, explosion-proof exhaust fans and blowers, as described in AWWA Section 7-Safety precautions. Air shall not be forced from the outside into the enclosure. Care should be taken to remove toxic vapors and atomized particles with special attention given to the lowest and coolest areas.
- E. Ventilation systems shall run continuously and remain in service during coating application and for a minimum of seven days after completion of final coating application or coating repair, or until coating has fully cured, whichever is longer. Fuel or electricity costs, general maintenance and operations, shall be the responsibility of the Contractor unless specified otherwise.
- F. Sound Levels: Whenever occupational noise exposure exceeds maximum allowable sound levels, Contractor shall provide and require the use of approved ear protection devices.
- G. Illumination: Adequate illumination shall be provided to minimize glare and shadows while work is in progress, including explosion-proof lights and electrical equipment. Whenever required by the Engineer, Contractor shall provide additional illumination and necessary supports to cover all areas to be inspected.
- H. Temporary Scaffolding: All temporary scaffolding shall have an interior stairway and shall conform to applicable safety standards. Exterior scaffolding ladders are not acceptable. Scaffolding shall be erected where requested by the Engineer to facilitate inspection and be moved by the Contractor to locations requested by the Engineer.
- I. Grounding: Blasting and painting hoses and surfaces to be blast cleaned shall be grounded to prevent accumulation of a charge of static electricity. All air lines shall have cable whip checks installed.
- J. Fire Hazard: Flammable, volatile solvents in paint and coating constitute a major hazard with regard to fire and explosions wherever flame or spark exposure is possible. All flames, smoking, and welding, etc., are strictly prohibited. Fire abatement devices shall be readily available and in operating condition. All paints and coatings shall be stored in conformance with applicable State, County and/or Local Fire Codes pertaining to flammable materials.
- K. The Contractor shall take necessary precautions to keep fire hazard to a minimum, removing from the area daily all oily rags, waste, and other combustibles not in covered containers.

1.9 INSPECTION AND TESTING

- A. The City shall provide the services of a NACE Certified Coating Inspector (Coating Inspector). All work related to the application of coating, including surface and coating preparation, shall be done under the supervision of the Coating Inspector. Prior to the start of surface preparation work the Contractor shall establish a schedule with the Coating Inspector to ensure that all surface preparation work is inspected. Coating

Inspector shall perform a preliminary examination and provide acceptance of the surface preparation and each coat prior to application of the next coat.

- B. The Coating Inspector shall examine all materials, tools, and equipment to be used in the blasting and coating operations and shall have the authority to direct the Contractor to remove, replace, or repair any materials, tools, or equipment found not to be in conformance with the Contract Documents including the approved shop drawings and manufacturer's recommendations. The coating inspector will also observe the Contractor's safety activities throughout blasting and coating operations and the Contractor shall immediately rectify any deficiencies noted in that observation. The Contractor shall be fully responsible for compliance with all safety measures, hazardous and toxic materials regulations, and site security. Observation of or failure to observe any safety efforts of the Contractor by the Coating Inspector shall not relieve the Contractor of this responsibility nor shall any liability transfer from the Contractor to the City or the Coating Inspector.

1.10 RECORD KEEPING

- A. The Contractor shall maintain a record of the actual weight of blast cleaning abrasive used for field abrasive blast cleaning, submitted within 24 hours after blasting is completed.
- B. The Contractor shall maintain a daily written record of the quantity of coating material applied and the corresponding surface area covered. Record shall also include quantity of thinner used for each coat and total amount used. The record shall also include a description of the area, the batch number, the metal surface temperature, the ambient temperature, the relative humidity, the dew point and the applicator.
- C. The Contractor shall provide a signed copy of the record to the Coating Inspector each day which documents the work of the previous day. The Coating Inspector shall verify all reported information, including quantities, and investigate and resolve any discrepancies.

1.11 SERVICES OF MANUFACTURER

- A. The coating manufacturer shall provide written certification that the Contractor's site Supervisor and any individuals involved with coating application has been trained and is approved by the Manufacturer to apply the coating system. The Contractor shall require that the coating manufacturer provide a representative for technical field support to resolve any problems associated with the product or the application of the product provided by the manufacturer. The manufacturer's representative shall be present during the Coating Inspector's final inspection of the coating.

1.12 WARRANTY

- A. The Contractor and manufacturers shall provide a three year warranty for the coating system following final acceptance. The Contractor shall submit a three-year warranty bond for the complete coating system. The Contractor shall provide all equipment, labor and materials associate with repair of failures identified as a part of warranty inspections at no cost to the City.

PART 2 PRODUCTS

2.1 COATING MATERIALS

- A. Products manufactured by Tnemec, Devoe and Carboline have been approved. This is an open specification based solely on performance.
- B. Materials by other manufacturers are acceptable provided that they are established as being of equal quality and performance to the coatings specified. Proposed substitution will be evaluated based on the performance of the entire system and published performance data. The Contractor shall provide satisfactory documentation from the firm manufacturing the proposed substitute or "or-equal" material that said material meets the requirements and is equivalent or better than the listed performance requirements.
- C. Paint System A: Tank Interior (Epoxy/Epoxy/Epoxy) - To be considered as an equivalent to the coating materials listed hereinafter for interior tank coating use, a material shall be of the generic classification specified, shall be approved by the NSF as an acceptable coating for potable water tanks and shall meet or exceed the performance criteria as determined by the Engineer:
1. Interior Primer - Generic Classification: Two Component Polyamidoamine Epoxy; Manufacturers Tnemec Series N140 Pota-Pox Plus, Devoe Bar-Rust 233H, or approved equal. 6.0 mils minimum to 9.0 mils maximum Dry Film Thickness (DFT). Coat color shall be buff.
 2. Interior Finish - Generic Classification: Two Component Polyamidoamine Epoxy; Manufacturers Tnemec Series N140 Pota-Pox Plus, Devoe Bar-Rust 233H, or approved equal. 6.0 mils minimum to 9.0 mils maximum DFT. Coat color shall be white.
 3. Total System Thickness: Minimum 12.0 mils DFT and maximum 18.0 mils DFT
- D. Paint System B: Tank Exterior (Zinc/Epoxy/Polyurethane) - To be considered as an equivalent to the coating materials listed hereinafter for exterior tank coating use, a material shall be of the generic classification specified and shall meet or exceed the coating performance criteria as determined by the Engineer:
1. Exterior Primer - Generic Classification: Two Component Zinc-Rich Primer; Manufacturers Tnemec Tneme-Zinc Series 90-97, Devoe Catha-Coat 302H, or approved equal. 2.5 mils minimum to 3.5 mils maximum DFT
 2. Exterior Intermediate - Generic Classification: Two Component Polyamidoamine Epoxy; Manufacturers Tnemec Series N69, Devoe Bar-Rust 231 or 233H, or approved equal. 5.0 mils minimum to 7.0 mils maximum DFT.
 3. Exterior Finish: Generic Classification: Aliphatic Acrylic Polyurethane; Manufacturers Tnemec Series 1075, Devoe Devthane 378, or approved equal. 3.0 mils minimum to 5.0 mils maximum. Coat color shall be Devoe Coatings, Mission Sand or approved equal.
 4. Total System Thickness: Minimum 10.5 mils DFT and maximum 15.0 mils DFT

2.2 ABRASIVES

- A. The type and size of abrasive shall be selected to produce a surface profile that meets the coating manufacturer's recommendations. All abrasives shall be new, clean, and delivered to the project in unopened, weather resistant containers. Abrasive materials shall not be recycled for further use on this project unless approved by the Coating Inspector.

- B. All abrasives shall meet the requirements of the local Bay Area Air Quality Management District. At no time will abrasives containing more than 1% free silica be allowed on the job site.
- C. All abrasives shall be disposed of in accordance with all federal, state, and local laws at the Contractor's sole expense.
- D. Abrasive material used for interior tank areas shall be silica free sand. Abrasive material used for areas other than tank interiors shall be Kleen-Blast, or approved equal. Abrasive shall produce a profile as recommended by the paint manufacturer.
- E. The abrasive to be used shall be sharp, angular, properly graded and brought to the job site in moisture-proof bags or airtight bulk containers, and shall be capable of producing the depth of profile specified by the paint manufacturer.
- F. All surfaces in the ceiling, rafters, beams and columns shall be blown down with high pressure air until all surfaces are dust free in accordance with ISO 8502-3 and by the Coating Inspector. No coatings shall be applied until the surfaces have been inspected and approved.
- G. The entire floor surface shall be vacuumed clean prior to the floor coating application.

PART 3 EXECUTION

3.1 INSTALLERS AND WORKMANSHIP

- A. Skilled craftsmen and experienced supervision shall be used on all work.
- B. All coatings shall be applied under dry and dust-free conditions. Coating shall be done in a workmanlike manner so as to produce an even film of uniform thickness. Edges, corners, crevices and joints shall receive special attention to insure that they have been thoroughly cleaned and that they receive an adequate thickness of coating material. The finished surfaces shall be free from runs, drops, overspray, ridges, waves, laps, brush marks and variations in color, texture, and finish. The finished surfaces shall be even in color and appearance. The hiding shall be so complete that the addition of another coat would not increase the hiding.
- C. All damage to surfaces resulting from work shall be cleaned, repaired and refinished to original condition.

3.2 PROTECTION OF SURFACES NOT TO BE COATED

- A. Remove, mask or otherwise protect all surfaces not intended to be coated or that may be damaged by abrasive blasting. Provide drop cloths to prevent coating materials from falling on or marring adjacent surfaces.

3.3 DEHUMIDIFICATION

- A. The Contractor shall provide dehumidification as required to establish and maintain the specified temperature and relative humidity inside the tank. If weather conditions are determined by the City to pose a substantial delay in the project's completion, the City may, at its sole discretion require dehumidification and/or equipment in accordance with the bid documents at no additional cost to the City. The City shall not provide a time

extension for weather delay. The Contractor shall bear all cost and liability for work resulting from dehumidification equipment failure, breakdown, power failure, or down time.

- B. The Contractor shall provide dehumidification continuously from start of abrasive blasting, until a minimum of three (3) days after application of final coat and all repairs are completed, or for a longer period as recommended by the coating system's manufacturer. The Contractor shall submit a letter from the dehumidification manufacturer that the equipment has been properly sized for this project prior to any abrasive blasting operations. A minimum of two air change per hour is required.
- C. The Contractor shall provide dehumidification equipment consisting of a solid desiccant design having a single rotary desiccant bed capable of continuous operation, fully automatic with drip-proof electrical controller. No liquid desiccant, granular, or loose lithium chloride drying systems shall be accepted. Air heaters alone are not acceptable as dehumidification units.
- D. The Contractor shall ensure that relative humidity of processed air from dehumidification unit not exceed forty five percent.
- E. The Contractor shall ensure areas adjacent to the surface that is to be blasted and coated are not exposed to a relative humidity greater than forty-five percent at any time during blasting, cleaning, coating, or curing.
- F. The Contractor shall ensure that during blast cleaning and coating, and for 72 hours after final coat and all repairs are completed continuous 24/7 dehumidification, dehumidification units shall maintain an air and steel temperature of 60 degrees F minimum inside the tank.
- G. The Contractor shall ensure dehumidification equipment is placed as close to tank opening as possible.
- H. The Contractor shall ensure cleaning of dehumidification filters prior to start of dehumidification and weekly cleaning thereafter.
- I. The Contractor shall ensure dehumidification tubing is maintained as follows:
 - 1. Mechanically connected and sealed with duct tape at joints.
 - 2. Extended to the center of the tank and attached to a diffuser that will distribute air equally throughout tank.
- J. Have no dust or other foreign matter inside tubing.
- K. The Contractor shall provide and maintain 24-hour strip chart recorder or Exactaire for humidity, dew point and temperature and place the measuring devices inside tank at the start of abrasive blasting operations.

3.4 TEMPERATURE CONTROL

- A. Auxiliary heaters or chillers may be necessary to maintain the surface temperature at a level acceptable to the coating manufacturer's application parameters. This auxiliary equipment must be approved for use by the manufacturer of dehumidification equipment and shall meet the following requirements:
 - 1. Heater and coolers shall be installed in the process air supply duct between the dehumidifier and the space as close to the space as possible.

2. Only electric or indirect gas fired auxiliary heaters shall be used. No direct fired space heaters will be allowed during the blasting, coating or curing phase.
3. Heaters shall be equipped with controls that automatically turn the heater off if the airflow is interrupted or the internal temperature of the heater exceeds its design temperature or that of the supply duct.

3.5 PREPARATION

- A. All surfaces to receive protective coatings shall be cleaned as specified herein prior to application of coatings. The Contractor shall examine all surfaces to be coated, and shall correct all surface defects before application of any coating material. All marred or abraded spots on shop-primed and on factory-finished surfaces shall receive touch-up restoration prior to any coating application. The Contractor shall wedge the roof to clean, surface prepare and coat all roof plates resting on beams and rafters.
- B. Surfaces that are not to receive protective coatings shall be protected during surface preparation, cleaning and coating operations.
- C. The minimum abrasive blasting surface preparation shall be as specified in the coating system schedules included at the end of this Section.
- D. Surface preparation for ferrous metal:
 1. Workmanship for metal surface preparation shall be in conformance with the current SSPC Standards and this Section.
 2. All oil, grease, welding fluxes and other surface contaminants shall be removed by solvent cleaning per SSPC-SP1 prior to blast cleaning.
 3. All sharp edges shall be rounded or chamfered and all burrs, and surface defects and weld splatter shall be ground smooth prior to blast cleaning.
 4. The type and size of abrasive shall be selected to produce a surface profile that meets the coating manufacturer's recommendation for the particular coating and service conditions. Abrasives for submerged and severe service coating systems shall be clean, hard, sharp cutting crushed slag or abrasive approved by Engineer. The Contractor shall furnish 1 roll of Testex tape 1.5 to 4.5 mils X-course prior to the start of abrasive blasting. The Coating Inspector may evaluate surface preparation using field abrasive blasting standards, and Testex tape. Evaluation shall be in accordance with ISO 8502-3 and may include inspection of blasted surfaces for dust and abrasive residue, using clear adhesive coated tape. Evaluation will be made immediately prior to coating application.
 5. The abrasive shall not be reused unless otherwise approved by the Engineer. For automated shop blasting systems, clean oil-free abrasives shall be maintained.
 6. The Contractor shall comply with the applicable federal, state and local air pollution control regulations for blast cleaning.
 7. Compressed air for air blast cleaning shall be supplied at adequate pressure from well-maintained compressors equipped with oil and moisture separators that remove at least 95 percent of the contaminants. Contractor shall install an air cooler and dryer in the airline between the compressor and the oil and moisture separator and use a venturi nozzle. Contractor shall verify at a minimum of two times daily that air supply is free of oil and moisture contamination (ASTM D-4285). Prior to using compressed air, the Contractor shall test the quality of air downstream of the separators at suitable outlets by blowing the air on clean white blotter for 2 minutes to check for any contamination, oil, or moisture.
 8. Surfaces shall be cleaned of all dust and residual particles of the cleaning operation by dry air blast cleaning, vacuuming or another approved method prior to painting.

9. Enclosed areas and other areas where dust settling is a problem shall be vacuum cleaned.
10. Contractor shall provide exhaust air dust collectors to prevent discharge of dust to outside air.
11. Damaged or defective coating shall be removed by the specified blast cleaning to meet the clean surface requirements before recoating.
12. Shop applied coatings of unknown composition shall be completely removed before the specified coatings are applied. Valves, castings, ductile or cast iron pipe, and fabricated pipe or equipment shall be examined for the presence of shop-applied temporary coatings. Temporary coatings shall be cleaned by solvent cleaning per SSPC-SP1 before being completely removed by abrasive blast cleaning.
13. Shop primed equipment shall be solvent cleaned in the field before finish coats are applied.

3.6 MIXING, AND THINNING OF MATERIALS

- A. Unless otherwise specified herein, the coating manufacturer's printed recommendations and instructions for thinning, mixing and handling its coating materials shall be strictly observed. Prepare multiple component coatings using all of the contents of the container for each component as packaged by the manufacturer. Do not use partial batches. Do not use multiple component products that have exceeded their shelf life. Provide four kits for touch-up and small area work. Mix only the components specified and furnished by the manufacturer. Do not intermix additional components for reasons of color or otherwise.

3.7 APPLICATION

- A. The application of protective coatings to steel substrates shall be in accordance with "Paint Application Specification No. 1, (SSPC-PA1)."
- B. Cleaned surfaces and all coats shall be inspected prior to each succeeding coat. The Contractor shall schedule such inspection with the Coating Inspector in advance.
- C. Blast cleaned ferrous metal surfaces shall be painted before any rusting or other deterioration of the surface occurs. Blast cleaning shall be limited to only those surfaces that can be coated in the same working day except where environmental controls are used and approved in writing by Coating Inspector.
- D. Coatings shall be applied in accordance with the manufacturer's instructions and recommendations, and this Section, whichever has the most stringent requirements.
- E. Each coat shall be alternately colored to distinguish it from the preceding coat.
- F. The Contractor shall wedge the roof to clean, surface prepare and coat all roof plates resting on beams and rafters.
- G. Special attention shall be given to edges, angles, weld seams, flanges, nuts and bolts and other places where insufficient film thicknesses are likely to be present. An independent stripe coat by brush, using the same primer material specified for the particular service or as recommended by manufacturer, shall be required between the prime and finish coat and shall be a contrasting color.

- H. Special attention shall be given to materials that will be joined so closely that proper surface preparation and application are not possible. Such contact surfaces shall be coated prior to assembly or installation.
- I. Finish coats, including touch-up and damage repair coats shall be applied in a manner that will present a uniform texture and color-matched appearance. Finish coat shall be smooth to touch with no sags, runs, dry spray, over-spray, cracks, pinholes or other surface defects.
- J. Coating shall not be applied closer than 6 inches from an unprepared surface.
- K. Coatings shall not be applied under the following conditions:
 - 1. Temperature exceeding the manufacturer's recommended maximum and minimum allowable.
 - 2. Dust or smoke laden atmosphere.
 - 3. Damp or humid weather exceeding the manufacturer's recommended maximum and minimum allowable.
 - 4. When the substrate or air temperature is less than 5 degrees F above the dew point.
 - 5. When air temperature is expected to be less than 5 degrees F above the dew point within 6 hours after application of coating.
 - 6. Dew point shall be determined by use of a sling psychrometer in conjunction with U.S. Dept. of Commerce, Weather Bureau psychrometric tables.
- L. The Contractor shall supply 4 data recorders such as HOBO U-12 data loggers capable of recording ambient temperature, surface temperature, dew point and relative humidity. The data loggers shall be placed in 4 quadrants and record data in 30 minute intervals 24 hours per day. The data shall be gathered and downloaded every morning and submitted to the engineer on a daily basis.

3.8 SPECIAL APPLICATION REQUIREMENTS – INTERIOR COATING

- A. Shop Coating of Inaccessible Surfaces
 - 1. Total interior coating system shall be shop applied to all inaccessible surfaces, including but not limited to top of roof rafters, bottom of roof plates over beams, angle stiffeners at tank top, mating surfaces of flanges and any other bolted connections, etc. Roof plates may be primed in the shop and wedged up with wooden wedges in the field to apply the full coating system.
 - 2. All other surfaces, including but not limited to other surfaces of the tank roof beams, support columns, the top of floor plates, the inside of the wall plates, the inside of roof vents, and all interior appurtenances, etc., shall all be shop sand blasted and shop primed and then field coated with intermediate and final coatings.
- B. Shop Coating Requirements
 - 1. Contractor shall certify that the shop primed steel was properly cleaned, sand blasted, primed and coated according to the requirements of these specifications. Contractor shall supply surface preparation and coating application logs verifying that the atmospheric conditions and surface temperatures during all coating applications are within specified limits. Shop blasting shall be done with a minimum 75% grit and 25% shot.
 - 2. The Coating Inspector shall have access to the shop during all sand blasting, cleaning and shop priming, intermediate and final coating operations. Contractor shall notify the Coating Inspector of the shop location, and work schedule a

minimum of one week in advance of the commencement of shop sand blasting, cleaning, priming and intermediate and final coating operations.

3. Any damage to the primed or coated surfaces caused by transportation shall be repaired at the Contractor's expense using the coating manufacturer's recommended procedures prior to placement.

- C. Upon completion of the tank erection, all welds, surface blemishes, and ferrous metal appurtenances shall receive an SSPC SP-10 surface preparation prior to prime coat applications.

3.9 SPECIAL APPLICATION REQUIREMENTS – EXTERIOR COATING

A. Shop Coating of Inaccessible Surfaces

1. All inaccessible metal surfaces including, but not limited to, the outside of the roof vents, the platform and railings at mid-level and at the top of the ladders and all other appurtenances which are close to the tank shall be shop sand blasted and shall have shop applied primer, intermediate and final coat of paint applied prior to transport to the site.
2. All other exterior appurtenances, tops of roof plates, bottom of floor plate, and outsides of the wall plates shall be shop sand blasted and shop primed prior to transport to the site. They shall be field coated with intermediate and final coatings. Floor plate bottoms shall receive only shop sand blasted and shop applied primer.

B. Shop Coating Requirements

1. The shop coating requirements in Part 3.8B shall apply to shop coating operations for exterior surfaces.
2. Any damage to the primed or coated surfaces caused by transportation shall be repaired at the Contractor's expense using the coating manufacturer's recommended procedures prior to placement.

- C. Upon completion of the tank erection, all welds, surface blemishes, and ferrous metal appurtenances shall receive an SSPC SP-6 surface preparation prior to prime coat applications.

3.10 CURING OF COATINGS

- A. The Contractor shall provide curing conditions in accordance with the conditions recommended by the coating material manufacturer or by this Section, whichever is the highest requirement, prior to placing the completed coating system into service.
- B. In the case of enclosed areas, forced air ventilation, using heated air if necessary, may be required until the coatings have fully cured.
- C. Forced air ventilation is required for the application and curing of coatings on the interior surfaces of enclosed hydraulic structures. During curing periods continuously exhaust air from the lowest level of the structure using portable ducting. After all interior coating operations have been completed provide a final curing period as required by the manufacturer during which the forced ventilation system shall operate continuously. Ventilation rate shall provide at least one complete air change every four hours.

3.11 APPROVAL

- A. Inspection and Testing

1. Shop Inspection:
 - a. Off site surface preparation and priming operations associated with the tank will be monitored at all times by the Engineer. If unanticipated trips to the surface preparation and priming facilities are required due to inadequate or inaccurate notification, expenses incurred by the Engineer to conduct extra trips to offsite production facilities shall be borne by the Contractor.
2. At the completion of all coating work, a final inspection shall be conducted. The Contractor and its Supervisor, a representative of the coating manufacturer, a representative of the Engineer shall conduct a final inspection to establish that all work has been completed per the Contract Documents. Any deficiencies found shall be documented and corrected before final acceptance of the WORK will be granted. The Contractor shall thoroughly document the conditions of each area of work at the time of inspection using video and still photography. A copy of the photographs and video shall be provided to the City, and the Contractor shall keep the originals. The photographs and video shall be the basis of evaluation of the condition of the coating systems at the warranty inspection.
3. Scaffolding or ladders shall be erected or moved to locations where requested by the Coating Inspector to facilitate inspection.
4. Whenever required by the Coating Inspector, the Contractor shall provide additional illumination required for inspections. Adequate illumination shall include explosion proof lights and electrical equipment where required to meet safety standards. The Coating Inspector shall determine the level of illumination for inspection purposes.
5. Inspection Devices: The items listed below, or approved equals, shall be provided to the Coating Inspector, by the Contractor, in good working condition and with calibration data prior to beginning any work and shall remain available until final acceptance of the coating applications:
 - a. Film Thickness: Non-destructive measurement devices.
 - b. Magnetic dry film thickness gauge: Magnetic-type dry film thickness gauge
 - 1) Mikrotest model FM, Elcometer model 111/1EZ
 - c. Pinhole and Holiday Detection: High voltage holiday detectors
 - 1) Tinker & Razor Model AP-W/6,000
 - 2) D.E. Stearns Model 14/20.
 - 3) Or equal
 - d. Pinhole and Holiday Detection: Low voltage holiday detectors
 - 1) Tinker & Razor Model M1
 - 2) K-D Bird Dog
 - 3) Or equal
 - e. Psychrometer: Sling, mechanized or digital.
 - f. Surface Temperature: Magnetic surface temperature gauge.
 - g. Coating Adhesion Testing:
 - 1) Elcometer Model 106
6. Surfaces prepared as described in this Specification and per the manufacturer's recommendations shall be observed by the Coating Inspector prior to application of coatings to verify compliance.
7. Film Thickness: Prepared surfaces and all coating system component applications shall be inspected prior to each succeeding application. The procedure for collecting representative thickness data shall be as follows:
 - a. On ferrous metals, the dry film coating thickness shall be measured in accordance with the SSPC "Paint Application Specification No. 2" using a magnetic-type dry film thickness gauge. No measurements shall be made until at least 8 hours after application of the coating.

- b. On non-ferrous metals and other substrates, the coating thicknesses shall be measured at the time of application using a wet film gauge.
 - c. Coating Inspector shall determine where and how often to test for film thicknesses, and as a minimum the requirements of SSPC-PA-2 will be followed.
 - d. At each inspection point, a minimum of three gauge readings shall be taken, moving the gauge 1 to 3 inches for each new gauge reading.
 - e. Discard any unusually high or low gauge reading that cannot be repeated consistently. Take the average (mean) of the three gauge readings as the spot measurement. The average spot measurement shall meet or exceed the specified dry film thickness for each application.
8. Coating Pinhole and Holiday Detection: The Contractor shall test the completed coating application, including roof plates and rafters, for pinholes and holidays using a low or high voltage spark tester as recommended by coating manufacturer and witnessed by the Coating Inspector. The required test voltage shall be established by the manufacturer's recommendations and testing of induced holidays. Pinhole and holiday testing shall be conducted on completed coating sections within 48 hours of final application. The electrode movement over the coating surface shall be continuous and shall proceed in a systematic manner, which ensures 100 percent coverage of the coating surface. All defects shall be clearly marked by the Coating Inspector followed by repair and retesting by the Contractor. Holiday detectors shall be of the following type:
- a. For surfaces having a total dry film coating thickness exceeding 20 mils a pulse-type high voltage holiday detector shall be used. The unit shall be adjusted to operate at the voltage required to cause a spark jump across an air gap equal to twice the specified coating thickness.
 - b. For surfaces having a total dry film coating thickness of 20 mils or less a low voltage holiday detector shall be used. The unit shall operate at less than 75-volts. For thicknesses between 10 and 20 mils, a non-sudsing type wetting agent, such as Kodak Photo-Flo, or equal, shall be added to the water prior to wetting the detector sponge.
9. Testing for Volatile Organic Compounds
- a. Testing for volatile organic compounds (VOCs) shall be according to the California Department of Health Service Sanitation and Radiation Laboratory guidelines set forth in "Collection, Pretreatment, Storage, and Transportation of Water and Wastewater Samples," most current edition.
 - b. The testing for VOCs shall occur simultaneously with the testing and disinfection of the tank described in Section 02620. The tank shall be filled and the contents retained for seven (7) calendar days. Prior to contents release for distribution, a sample of water shall be taken by the City in the presence of the Contractor and analyzed according to California Health Department requirements. Such testing shall be at the City's expense and performed by the City's representative.
 - c. In some instances, Contractor may find it necessary to extend coating cure times beyond manufacturer's recommendations in order to achieve satisfactory action levels, due to temperatures and humidity conditions at project site.
 - d. If test results reveal unacceptable levels of impurities or volatile organic compounds, tank shall be drained, flushed, refilled, and retested. Such remedial action will be performed at Contractor's expense, and will be continued until satisfactory levels are achieved. The Contractor will be required to pay for the additional water to refill the tank.
 - e. Contractor shall submit a letter to the City prior to disinfection indicating that the tank lining is fully cured and ready to be placed into service.

10. Acceptance
 - a. Acceptance by the City of the completed work as herein specified is subject to a guarantee by the Contractor against any repairs, leaks or damage caused by defective workmanship or materials furnished by the Contractor for a period of three years after Notice of Completion has been issued.
 - b. Warranty Inspection: A warranty inspection on the tank interior and exterior shall be conducted as outlined in AWWA D102, Section 9, within eleven (11) months following completion and acceptance of all coating and painting work. The City shall establish a date for the inspection and notify the Contractor thirty days in advance. All parties present at the Pre-Job conference are required to attend this inspection. The City shall drain the tank and the Contractor shall supply suitable interior lighting, ventilation, and scaffolding for the inspection. The Contractor shall prepare a report for the City, as outlined in Section 9.4. Any work found to be defective under Section 9.3 guidelines shall be repaired in accordance with the manufacturer's recommendations, this specification and to the satisfaction of the Engineer. Repair of the tank shall be at the City's convenience and shall be performed within such stated date as the City designates. The Contractor shall be liable for re-disinfection, all remedial work including repair of all failures by removing the deteriorated coating, cleaning the surface, and recoating with the same system in accordance with this Section. The City may allow surface preparation of small failures (areas less than 1 sq ft.) by cleaning to bare metal in accordance with appropriate SSPC-SP standards, however, the method of repair is at the sole discretion of the City. The Contractor shall bear the expense of all warranty inspections of the remedial work required by the City including disinfection of the tank interior.

3.12 REPAIRS

- A. If an area is found to have an improper finish, insufficient film thickness or other deficiencies, clean, prepare and topcoat the coating surface per the manufacturer's recommendations to obtain the specified finish and coverage. Work shall be free of runs, bridges, shiners, laps or other imperfections.
- B. Damaged or defective coating shall be removed by the specified blast cleaning to meet the clean surface requirements before recoating.
- C. If the total dry film thickness exceeds the NSF approved thickness for the coating applied, the Contractor shall be responsible to remove any excess mils. Areas of repair shall be of the same quality of the original application. The Contractor shall bare all costs for the removal and reapplication of the coating.

3.13 SITE RESTORATION/CLEANUP

- A. Upon completion of the work, the Contractor shall remove all staging, scaffolding, abrasives, containers, etc., from the work site in a manner approved by the Engineer. Disposal of abrasive blast residue and waste materials shall be in a manner consistent with guidelines set forth by the U.S. Environmental Protection Agency (USEPA) or California Environmental Protection Agency (Cal/EPA).

- B. Materials classified as hazardous shall be removed and disposed of at Class 1 Landfill, or in a manner consistent with standards and guidelines set forth by the above-named agencies, or as directed by the Engineer.
- C. The Contractor shall take all necessary measures to protect the public from any hazardous materials found at the site. All hazardous materials shall be removed and disposed of by the Contractor in accordance with all local, State, and Federal agencies' rules, regulations, laws, or ordinances, in existence at the time of the work.
- D. The Contractor shall bear all costs for waste sampling, testing, accumulation, transport, and disposal, including the cost for wastes classified as hazardous and non-hazardous.
- E. The City may make exceptions to offsite disposal of abrasive blast media, provided all Material Safety Data Sheets show that residue present in the abrasive material is NOT classified "Hazardous" by the USEPA or Cal/EPA. A written request for onsite disposal shall be submitted to the Engineer four weeks in advance of cleanup operations.
- F. Coating, paint spots and/or oil stains upon adjacent surfaces shall be removed and the job site cleaned. All damage to surfaces and/or landscaping resulting from work in this section shall be cleaned, repaired, or refinished to the satisfaction of the Engineer, at no cost to the City.

3.14 COATING SCHEDULE

- A. All Surfaces and Miscellaneous Metal Attached to Tank except for stainless steel shall be coated according to the following schedule. Refer to Part 2.1 for paint system, coating materials and dry film thickness requirements.

Surface	Surface Preparation	Paint System
<u>Steel Water Tank and Miscellaneous Metal Attached to Tank</u>		
Interior, immersed, except stainless steel	SSPC SP-10	A
Exterior, non-submerged, except stainless steel	SSPC SP-6	B
Stainless Steel	None	Unpainted

3.15 ELECTRICITY

- A. It will be necessary for the Contractor to supply his own electricity at the site. If a generator is used, it shall be properly muffled to prevent loud noises and shall have a spark arrestor in good working order.

END OF SECTION

SECTION 10210

LOUVERS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes fixed louvers, frames and accessories.

1.2 REFERENCES

- A. Air Movement and Control Association International, Inc.:
 - 1. AMCA 500- L - Test Methods for Louvers, Dampers, and Shutters.
- B. ASTM International:
 - 1. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- C. California Department of Health Services:
 - 1. CA/DHS/EHLB/R-174 - Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.
- D. South Coast Air Quality Management District:
 - 1. SCAQMD Rule 1168 - Adhesive and Sealant Applications.
- E. Underwriters Laboratories Inc.:
 - 1. UL - Electrical Construction Equipment Directory.

1.3 PERFORMANCE REQUIREMENTS

- A. Louver: Water penetration at scheduled air velocity to be less than 0.01 oz per square foot of louver area.
- B. Louver: To have free area scheduled on plans.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate louver layout plan and elevations, opening and clearance dimensions, tolerances; head, jamb and sill details; blade configuration, screens, and frames
- C. Product Data: Submit data describing design characteristics, maximum recommended air velocity, design free area, materials and finishes.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit Operation and Maintenance Data.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with AMCA Certification for Water Penetration, Air Performance, and Wind Driven Rain, in compliance with AMCA 500-L.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years of experience.

1.8 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.9 COORDINATION

- A. Coordinate Work with installation of masonry flashings.

1.10 WARRANTY

- A. Furnish twenty year manufacturer warranty for louvers.

PART 2 PRODUCTS

2.1 Manufacturers:

- A. Ruskin ELF6375DX
- B. Greenheck ESD -635
- C. Substitutions: Permitted, Approved Equal.

2.2 WALL LOUVERS - DRAINABLE STYLE

- A. Louver Construction: Aluminum.
- B. Louver Panel Thickness: 6 inches deep, face measurements as scheduled on Plans.
- C. Louver Blade Design: Dual drain style.
- D. Louver: Sized to provide free area as scheduled on Plans.
- E. Water Penetration: Not more than 0.01 oz/sq ft of free area at minimum 900 ft / min face velocity.

2.3 COMPONENTS

- A. Aluminum: ASTM B221; extruded shape; ASTM B209 temper, sheet; Anodized finish.
- B. Insect Screen: aluminum mesh, set in aluminum frame.

2.4 ACCESSORIES

- A. Fasteners and Anchors: Stainless steel type.

- B. Flashings: Of same material as louver frame.

2.5 FACTORY FINISHING

- A. Exterior Aluminum Surfaces Clear Anodized

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify prepared openings and flashings are ready to receive Work and opening dimensions are as instructed by louver manufacturer.
- B. Verify electric power is available and of correct characteristics.

3.2 INSTALLATION

- A. Install louvers level and plumb.
- B. Install flashings and align louver assembly to ensure moisture shed from flashings and diversion of moisture to exterior.
- C. Secure louvers in opening framing with exposed fasteners.
- D. Install insect screen and frame to interior of louver.
- E. Install insect screen and frame to louvers.
- F. Install perimeter sealant and backing rod

3.3 CLEANING

- A. Strip protective finish coverings.
- B. Clean surfaces and components.

END OF SECTION

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SECTION 10523
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes fire extinguishers; and brackets for wall mounting.

1.2 REFERENCES

- A. National Fire Protection Association:
 - 1. NFPA 10 - Standard for Portable Fire Extinguishers.
- B. Underwriters Laboratories Inc.:
 - 1. UL - Fire Protection Equipment Directory.

1.3 PERFORMANCE REQUIREMENTS

- A. Conform to NFPA 10.
- B. Provide extinguishers classified and labeled by Underwriters Laboratories Inc for purpose specified and indicated.

1.4 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit extinguisher operational features, color and finish, and anchorage details.
- C. Manufacturer's Installation Instructions: Submit special criteria and wall opening coordination requirements.
- D. Manufacturer's Certificate: Certify Products meet or exceed specified requirements

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit test, refill or recharge schedules and re-certification requirements.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not install extinguishers when ambient temperature is capable of freezing extinguisher ingredients.

PART 2 PRODUCTS

2.1 FIRE EXTINGUISHERS

- A. Dry Chemical Type: Stainless steel tank, with pressure gage; Class B: C, Size 10
- B. Extinguisher Finish: Stainless steel finish.

2.2 ACCESSORIES

- A. Extinguisher Brackets: Stainless steel finish

PART 3 EXECUTION

3.1 INSTALLATION

- A. Mount in accordance with NFPA 10.
- B. Secure rigidly in place.
- C. Place extinguishers on wall brackets.

END OF SECTION

SECTION 11300

VERTICAL TURBINE PUMPS

PART 1 GENERAL

1.1 SCOPE

- A. CONTRACTOR shall furnish and install three (3) vertical turbine pumps and drives with associated piping, controls, wiring, and appurtenances. Pump shall be complete and operable in accordance with the requirements of this specification.
- B. The vertical turbine pump manufacturer (MANUFACTURER) is responsible for the selection, purchase coordination, and testing the entire pumping units, including but not limited to pumps, electric motors, and appurtenances. All equipment must be supplied by a single pump manufacturer, including bowls, impellers, column, suction barrels, shafting, heads, coupling, seals, and motors. Well drillers, distributors, or other non-OEM fabrication shops will not be allowed to furnish equipment built in their local fabrication shop. Equipment furnished under this section shall be fabricated and assembled in full conformity with drawings, specifications, engineering data, instructions, and recommendations of the equipment manufacturer, unless exceptions are noted by CITY.
- C. Except as modified or supplemented herein, all vertical turbine pumps shall conform to the applicable requirements of ANSI/AWWA E101 and the Hydraulic Institute Standards.
- D. The pumps shall be designed to be suitable for potable water use.
- E. Contractor is responsible for testing the pumps in manual mode only.

1.2 RELATED SECTIONS

- A. Section 02071 and 02071SP, Water Mains and Services
- B. Section 09900, Paints and Coatings
- C. Division 16, Electrical

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes. The Electrical Code, as referenced herein, shall be the latest edition of the National Electric Code (NEC).
- B. Commercial Standards. All equipment, products, and their installation shall be in accordance with the latest editions of the following standards, as applicable, and as specified in each Section of these Specifications.
 - 1. American Hydraulic Institute (AHI)
 - 2. Anti-Friction Bearing Manufacturers Association (AFBMA)
 - 3. Factory Mutual Engineering Corporation (FM)
 - 4. National Electrical Manufacturers Association (NEMA)
 - 5. Underwriters Laboratory (UL)

- C. This Section contains references to the following documents. In case of a conflict between the requirements of this Section and those of the listed document, the requirements of this Section shall prevail. The latest edition of the following reference shall be used:

ASTM A48 Gray Iron Castings

1.4 ENVIRONMENTAL CONDITIONS

- A. The equipment furnished under this Section will be installed in a pre-fabricated pre-cast concrete building. External temperatures are expected to range on average between 40 degrees F and 85 degrees F with record low and high of 20 degrees F and 110 degrees F, respectively. Relative humidity varies from 5 to 100 percent (condensing). The site is located at approximately elevation +40 feet mean sea level.

1.5 SUBMITTALS

- A. Performance Affidavit (see Quality Assurance requirements).
- B. Shop Drawings: Erection, installation, detailed equipment layouts, adjusting instructions and recommendations, outline drawings, general arrangement drawings showing the part number, parts lists and material specifications lists, and all information required to substantiate that the proposed equipment meets the specifications. Shop drawings submittals will not be considered complete if general arrangement drawings with part and material specification lists are not included.
- C. Pump performance curves for full and reduced speed showing capacity, head, brake horsepower, efficiency, required NPSH and required minimum and maximum submergence, and related pump data. The Contractor shall require the manufacturer to indicate points on the head-capacity curves, and the limits recommended for stable operation between which the pumps may be operated without surge, cavitation, and vibration. The stable operating range shall be as wide as possible based on actual hydraulic and mechanical tests.
- D. Product Data:
1. Submit information concerning materials of construction, fabrication, and protective coatings.
 2. Submit motor data sheets including motor efficiency and power factor at various loadings of nameplate horsepower.
 3. Submit Technical Manuals.
 4. Submit Parts List.
- E. Schematic and wiring diagrams.
- F. Detailed test procedures for field-testing.
- G. Manufacturer's Installation Instructions including anchor bolt layouts and details, support details, and other drawings required for proper installation.
- H. Seismic calculations required per paragraph 1.6.
- I. Operation and Maintenance manuals shall include equipment descriptions, operating instructions, drawings, troubleshooting techniques, a recommended maintenance schedule, and the recommended lubricants.

- J. Warranties.
- K. Welder qualifications.
- L. Prior to shipping, results of factory testing.
- M. Close-out Submittals:
 - 1. Resume of Service Technician's qualifications to perform required Manufacturer's Field Services (see Quality Assurance requirements).
 - 2. Certificates: MANUFACTURER's certification that the equipment was installed in accordance with the MANUFACTURER's instructions, inspected by the MANUFACTURER, serviced with the proper lubricants, and equipped with applicable safety equipment and controls.
 - 3. Results of Field Testing.

1.6 SEISMIC REQUIREMENTS

- A. Pump anchorages shall be designed for lateral earthquake effects in the appropriate zone as stated by the UBC, applied simultaneously with normal pump operation forces, as well as for maximum reactions due to other pump design events. Seismic calculations performed by a registered civil engineer are to be submitted for approval.

1.7 QUALITY ASSURANCE

- A. Equipment provided under this Section shall be end products of one manufacturer in order to achieve standardization for operation, maintenance, spare parts and manufacturer's service.
- B. The pump shall be capable of operating continuously at the specified operating conditions without cavitation or damaging vibration, as tested in accordance with the American Hydraulic Institute standards for testing.
- C. Manufacturer qualifications: Manufacturers shall have had previous experience in such manufacture and shall, upon request of the City, furnish the names of not less than 5 successful installation of its equipment of comparable nature to that offered under this contract. All manufactured items provided under this Section shall be new, or current manufacturer, and shall be the products of reputable manufacturers specializing in the manufacture of such products.
- D. Performance Affidavit: In the performance affidavit, the manufacturer must certify to the Contractor and the Owner, that the Contract Documents have been examined, and that the equipment will meet in every way the performance requirements set forth in the Contract Documents for the application specified. Shop drawings will not be reviewed prior to the receipt by the City of an acceptable performance affidavit. The performance affidavit must be signed by an officer of the company manufacturing the equipment, and witnessed by a notary public.
- E. Manufacturer's Field Services: The equipment manufacturer shall provide a qualified service technician to perform the following:
 - 1. Visit the site and to certify in writing that the equipment has been properly installed, aligned, lubricated, adjusted, and readied for operation in accordance with the specifications and drawings and with the manufacturer's recommendations.
 - 2. Provide start-up service consisting of assistance with start-up testing of the equipment to demonstrate proper operation of the equipment and controls.

3. Perform field adjustments to ensure that the equipment installation and operation comply with requirements.
- F. All pressure containing fabrications shall be welded only by welders whom are qualified to ASME code section 9. Welder certification shall be provided as part of the submittal package.
- G. Unit Responsibility: The manufacturer of the pump shall have unit responsibility for the complete motor and pump.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Preparation for shipment:
 1. All materials shall be suitably packaged and braced to protect against damage during transit, handling, and unloading. During shipping the rotating elements shall be suitably supported to protect bearings.
 2. MANUFACTURER shall package, be responsible for, and make good, any and all damage to equipment within their scope of supply until the equipment is delivered to the job site.
 3. Accessories shall be packaged separately in containers clearly marked "ACCESSORIES ONLY."
 4. A packing list, listing the contents of each container, shall be placed in a moisture-proof envelope and securely fastened to the outside of the container.
 5. MANUFACTURER shall provide written storage procedures for all equipment.
- B. Delivery to and storage at job site: The shipping containers shall provide adequate protection for the equipment in an outdoor indoor environment between +40°F +(4.5°C) and +100°F (+37.8°C) until time for installation.

1.9 WARRANTY

- A. The manufacturer shall warrant their pumps to correct defective product materials and workmanship for a period of one (1) year from acceptance of pump operational and functional field testing results.

PART 2 PRODUCTS

2.1 VERTICAL TURBINE PUMPS

- A. Manufacturers:
 1. Weir Floway Inc.
 2. Pentair
 3. Or Approved Equal
- B. Performance and Design Requirements:
 1. Three pumps shall be provided. Two active duty; one standby. Each pump shall have a nominal capacity of 1,500 gpm.
 2. The pumps shall be suitable for long term operation under the following fluid conditions:
 - a. Fluid type – potable water
 - b. Fluid temperature – 50 to 85 degrees F
 - c. Fluid pH range - 6 to 9
 - d. Fluid specific gravity - 1.0
 - e. Fluid viscosity (rated) – 1.0 cP at 68 deg. F
 - f. Seal water – Pumpage

3. **Rated Conditions:**

Description	Pump Requirement
Number of Pumps	3 (two active duty, one standby)
Design Point, ONE pump at maximum speed	1,500 gpm at 145 feet
Design Point, TWO pumps at maximum speed	3,000 gpm at 145 feet +/-
Minimum Pump Efficiency at Design Points	77%
Minimum Bowl Efficiency at Design Points	78%
Minimum Flow	200 gpm
Shutoff Head at Maximum Speed	182 feet
Maximum Pump Speed	1,770 rpm
Minimum Pump Speed	885 rpm
Maximum Motor HP	100
Pump Operation	Variable Speed
NPSHA (at barrel suction centerline)	39 feet
Note: Manufacturer shall allow for suction barrel discharge head and pump column losses in addition to losses already accounted for.	

C. **Pump Construction:**

1. The pump shall be product lubricated, barrel type installation with above grade discharge. The pump shall be provided with vertical solid shaft induction motor, fabricated discharge head, column pipe, suction bell, anchor bolts, and all other appurtenances specified herein or required for proper operation.
2. **Bowls.** Bowls shall be cast iron, ASTM A48 Class 30, with smooth surfaces void of blow holes and other irregularities, vitreous-enamel lined and exterior surface coated with 8 mils of epoxy that is NSF 61 certified. . Bowls shall be flanged and bolts shall be stainless steel, Type 316, Condition CW1. Bowl wear rings shall be stainless steel, Type 410, and replaceable. Bowl shaft shall be constructed of stainless steel, Type 416 solid shaft, ASTM A582-88a. Bowl bearings shall be bronze, ASTM B505-91 Alloy 932. The bottom bowl bearing housing shall be packed with food grade grease and designed such that no replenishing of the grease packing is required.
3. **Impellers.** Impellers shall be bronze, ASTM B5844, cast in one piece of the enclosed type. The impellers shall be statically and dynamically balanced. The impeller shall be securely fastened to the shaft with Type 316 stainless steel, ASTM A276-90a, taper split bushings (collets). Impellers shall be adjusted vertically by external means and shall have sufficient axial clearance for reliable service in accordance with the specified operating conditions.
4. **Column.** Column pipe shall be 10-inch diameter constructed of ASTM A53 Grade B steel Schedule 40, maximum 5-foot lengths, 150 lb flanges with rabbeted fits. The weight of the column pipe shall be no less than that stated in ANSI/AWWA Specification E101. Flange bolting shall be stainless steel Type 316, ASTM F593 Grade CW1.
5. **Column Line Shaft.** Column line shaft shall be constructed of stainless steel, Type 416, ASTM A582-88a, solid, turned, ground, and polished. Column line shaft shall be broken into two even length pieces to facilitate pump disassembly within the building. Threaded shaft couplings shall be supplied for shafts less than 2-3/4-inch diameter and shall be sized per ANSI/AWWA E101 section A-

- 4.1.4. Couplings shall be stainless steel, Type 416, ASTM A582-88a. Line shaft bearings shall be EPDM, sleeve type with ductile iron or bronze retainers. The column shall be lined and coated with 8 mils of epoxy that is NSF 61 certified.
6. Suction Bell and Strainer. Suction bell shall be cast iron, ASTM A48 Class 30, vitreous-enamel lined and exterior surface coated with 8 mils of epoxy. The suction bell shall be fitted with a clip-on Type 316 stainless steel heavy gauge wire woven basket type strainer.
 7. Discharge Head. Discharge head shall be fabricated of carbon steel, ASTM A53 Grade B pipe designed and reinforced to withstand pipe thrust, seismic, vibration, and dead weight load of the pump driver and entire pumping unit. Discharge flange shall be steel, ASTM A181, 150# ANSI raised face with bolt holes. Base flange shall be steel plate, ASTM A36, machined, drilled, and gasketed for mounting to pump barrel flange. A 1/4" drilled and NPT tapped outlet shall be supplied on the top centerline of the discharge outlet for connection of a pressure gauge. A 3/4" drilled and NPT tapped outlet for connection of a combination air and vacuum release valve shall be provided to vent air from the top of the barrel.
 8. All couplings and other moving or rotating parts shall be covered on all sides by an OSHA approved coupling guard. Coupling guards shall be fabricated from 16 USS gage or thicker galvanized or aluminum-clad steel or from 1/2 inch mesh expanded metal. Each guard shall be designed for easy installation and removal. All necessary supports and accessories shall be provided for each guard. The discharge head shall be line and coated with 8 mils of epoxy that is NSF 61 certified.
 9. A rigid Flanged Adjustable "Spacer" type Coupling (FASC) shall be provided to couple the motor shaft to the pump shaft. The spacer shall be of sufficient length to allow the mechanical seal to be removed without disturbing the motor. This coupling shall allow for the vertical adjustment of the shaft mounted impellers.
 10. Shaft Seal. Shaft seal shall be mechanical, cartridge type, sleeve mounted, easily replaceable and have its face continuously flushed with the product being pumped, Chesterton 155, John Crane 5610, or approved equal.
 11. Barrel. Suction barrel shall be of the ANSI/HI-9.8 length design and size recommended by the manufacturer and shall conform to Hydraulic Institute Standards. Barrel diameter shall be 20-inch maximum. Barrel inlet nozzle and flange shall be 16-inch located and sized per ANSI/HI9.8 standard. Barrel shall be designed to prevent submerged vortices from being developed. The barrel's square top mounting plate shall be of sufficient thickness to drill and tap for ANSI rated flange bolting to match the base flange of the discharge head. The top mounting plate of the barrel shall be properly machined and be gasketed or "O" ringed for a zero leakage connection to the discharge head. The pressure rating of the barrel shall be capable of containing the maximum suction pressure. Pump barrel shall be vented through the head base to the air relief valve indicated. The pumping system shall be designed to be supported from the base of the barrel. The barrel shall be lined with 8 mils of epoxy that is NSF 61 certified.
 12. All outlets and discharge piping, including pump column and discharge elbow, shall be designed and fabricated for a working pressure equal to 110 percent of the ultimate shutoff head pressure at maximum speed.

2.2 ELECTRIC MOTORS

- A. The motor shall be a vertical, solid shaft electric induction heavy duty motor with TEFC enclosure, premium efficiency, 460 volt, 3-phase, 60 Hertz.
- B. The motor horsepower shall be maximum 100.
- C. The motor shall be designed to handle 175% thrust and to accept the total, unbalanced continuous and instantaneous (no flow) down thrust and momentary up thrust imposed

by the pump on the motor thrust bearing. Drive shaft shall be sized for a critical speed of 20% above maximum operating speed.

- D. Motor shall have a non-reverse device.
- E. The pumps shall be provided with an adjustable-speed drive in accordance with Section 16265, 600-Volt Variable Frequency Drives.

2.3 PUMP CONTROLS

- A. Refer to Division 16, Electrical for pump and motor control instrumentation and appurtenances.

2.4 PRESSURE GAUGES

- A. All pumps shall be equipped with pressure gauges installed at pump discharge. Pressure gauges shall be located in a representative location, where not subject to shock or vibrations, in order to achieve true and accurate readings. Pressure gauges shall be provided with shutoff valve located between the pump and the gauge.

2.5 NAMEPLATES

- A. Equipment nameplates of stainless steel shall be engraved or stamped and fastened to the equipment in an accessible location with No. 4 or larger oval head stainless steel screws or drive pins. Name plates shall indicate clearly the following information:
 - 1. Manufacturer
 - 2. Date of manufacture
 - 3. Model and size
 - 4. Serial number
 - 5. Design flow, gpm, and design TDH, feet
 - 6. Feet of head at capacity
 - 7. Speed at rated capacity
 - 8. Motor horsepower and speed
 - 9. Impeller diameter
 - 10. Number of stages
 - 11. Equipment nomenclature to be coordinated with the City

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install pumps and accessories where indicated on Drawings and in accordance with manufacturer's instructions.
- B. Provide and connect piping, accessories, power and control conduit and wiring to make system operational, ready for startup.
- C. Flush piping with clean water.

3.2 FIELD QUALITY CONTROL

- A. Pre-operational Check: Before operating system or components, make the following checks:
 - 1. Check for proper motor rotation.
 - 2. Check pump and drive units for proper lubrication.

- B. Verify pump performance by performing time/draw down test or time/fill test.
- C. Check pump and motor for high bearing temperature and excessive vibration. Check for motor overload by taking ampere readings.
- D. Equipment Acceptance:
 - 1. Adjust, repair, modify or replace system components that fail to perform as specified and rerun tests. Make final adjustments to equipment under direction of manufacturer's representative.
 - 2. Document adjustments, repairs and replacements in manufacturer's field services certification.

3.3 MANUFACTURER'S SERVICES

- A. The CONTRACTOR is responsible for obtaining manufacturer's services required to perform the Work and services specified herein. No additional compensation shall be provided for these services.
- B. The manufacturers/supplier's representative shall be present at the job site for a minimum of 2 man days, travel time excluded, for assistance during installation, inspection, equipment start-up and field testing, and instructing Owner's personnel in operation and maintenance of equipment.

3.4 MANUFACTURER'S CERTIFICATE

- A. A manufacturer's certificate of satisfactory installation is required for WORK under this Section. CONTRACTOR is responsible for obtaining manufacturer's services to provide such certificate.

3.5 FACTORY TESTING

- A. Equipment specified in this Section shall be factory-tested at the manufacturer's expense and the test results and actual test data submitted to the CITY or his/her designated representative. Such equipment shall not be shipped until the CITY or his/her designated representative has reviewed the test results and advised the manufacturer in writing that the equipment is approved for shipment. If test results are acceptable, the CITY or his/her designated representative will give approval of test results. Such approval, however, shall not be considered as final acceptance, which will only be made on the basis of the results of field tests of the equipment after it is installed.
- B. Factory test shall be performed in accordance with the test code of the Hydraulic Institute, except as modified herein. All pumps shall be tested fully assembled. Hydrostatic testing of the casing shall be at a minimum of 125 percent of the shut-off head or 150 percent of the design head, whichever is greater, for 20 minutes.
- C. The pumps shall be tested to verify that performance requirements are met. Tests shall be made to permit plotting head-capacity, brake horsepower, and efficiency curves from minimum head to shut-off head. All curves shall be plotted against flow on the abscissa (horizontal axis).
- D. Tests shall be performed between no less than three-quarter full speed and no more than 120 percent full speed for the specified motor speed. If the tests are performed at less or greater than either speed, the laws for hydraulic similarity shall be used to establish curves for the design speed and 75 percent of the design speed.

- E. Motors shall have tests performed at the factory, including no-load current and speed, winding resistance, locked rotor current, and high potential tests, in accordance with NEMA MG-1, and IEEE 112.
- F. A written quality assurance record confirming the above testing/inspections shall be supplied with each pump at the time of shipment.
- G. The Owner shall be permitted to witness the performance test at the factory upon request. The pump manufacturer shall provide a 2 week notice prior to the factory performance test.

3.6 FIELD TESTING

- A. CONTRACTOR shall prepare and submit a test plan and schedule, and shall coordinate with the Construction Manager on activities necessary to support the test. Indicate test start time and duration, equipment to be tested, other equipment involved or required; temporary facilities required, number and skill or trade of personnel involved; safety issues and planned safety contingencies; anticipated effect on Owner's existing equipment and other information relevant to the test.
- B. Prior to testing, verify equipment protective devices and safety devices have been installed, calibrated, and tested.
- C. Field testing and start up shall commence after piping, electrical connections, and electrical inspection have been completed. The CONTRACTOR shall give a minimum of two-weeks' notice to pump Manufacturer and Construction Manager prior to scheduled start up. Field testing shall be witnessed by the City or its representative.
- D. Temporary Facilities and Labor: Provide necessary fluids, calibration equipment, gauges, utilities, temporary piping, temporary supports, temporary access platforms or access means and other temporary facilities and labor necessary to safely operate the equipment and accomplish the specified testing. With Owner's permission, some utilities may be provided by fully tested permanently installed utilities that are part of the Work.
- E. All pumping units shall be field tested after installation, in accordance with the Contract Documents, to demonstrate satisfactory operation, without causing excessive noise, vibration, cavitation, or overheating of the bearings. The field testing shall be performed in the presence of an experienced field representative of the manufacturer, who shall supervise the following tasks and shall certify in writing that the equipment and controls have been properly installed, aligned, lubricated, adjusted, and readied for operation:
 - 1. Startup, check and operate the equipment over the entire speed range. The vibration shall be within the amplitude limits recommended in the Hydraulic Institute Standards and shall be within the specified limits for each piece of equipment as noted in the applicable Section of these Specifications. Vibration shall be recorded at a minimum of 4 pumping conditions defined by the ENGINEER. No value less than 0.3 IPS will be accepted.
 - 2. Pump performance shall be documented by obtaining concurrent readings, showing motor voltage, amperage, pump suction head, and pump discharge head, for at least 4 pumping conditions at each pump rpm. Each power lead to the motor shall be checked for proper current balance.
 - 3. Bearing temperatures shall be determined by a contact-type thermometer. A running time of at least 20 minutes shall be maintained for this test, unless liquid volume available is insufficient for a complete test. The equipment shall run a minimum of two hours prior to testing.
 - 4. Electrical and instrumentation testing shall conform to applicable sections of these Specifications.

5. In the event any of the pumping equipment fails to meet the above test requirements, it shall be modified and retested in accordance with the requirements of these Specifications. The CONTRACTOR shall then certify in writing that the equipment has been satisfactorily tested, and that all final adjustments thereto have been made. Certification shall include date of final acceptance test, as well as a listing of all persons present during tests, and resulting test data. The costs of all work performed in this Paragraph by factory-trained representatives shall be borne by the CONTRACTOR. The City will pay for costs of power and water. When available, the City operating personnel will provide assistance in the field testing.
- F. Field test reports for each test shall be prepared by the CONTRACTOR and submitted to the CITY.
- G. All expenses for conducting the field testing shall be paid by the Contractor.

3.7 OPERATIONAL TESTING

- A. Contractor shall perform a field operational "simulated" test of the entire pumping system in manual mode, including instruments, controls, motor, pump, and valves, to ensure compliance with the performance specified herein. It shall include, but not limited to, testing the pumps' set points.
- B. Other modes of operation relying on programming shall be conducted and commissioned by the SCADA Master Plan Contractor following installation of the SCADA cabinets and associated appurtenances. Contractor shall coordinate with the SCADA Master Plan Contractor.
- C. The operational manual mode test shall demonstrate that the equipment has been properly installed, aligned, and connected, is free of mechanical defects, electrical defects, excessive vibration from 0-100% speed, overheating, or overloading, and that the control system performs as specified and meets all operating criteria. Proper operation of control devices, limit switches, level switches, and alarm devices shall be demonstrated. If process conditions cannot be manipulated to demonstrate operation of alarm or control switches, then they shall be actuated artificially to effect the required demonstration. Demonstration shall include verification that all indicators and read-outs are functioning as required. All parts shall operate satisfactorily in all respects and in accordance with the specified requirements for the full duration of the test. If any part of a unit shows evidence of unsatisfactory or improper operation during the test period, correction or repairs shall be made by the CONTRACTOR at no expense to the City and the test shall be redone until all components operate satisfactorily.
- D. CONTRACTOR shall prepare and submit a test plan and schedule, and shall coordinate with the City on activities necessary to support the test. In the course of testing, the CONTRACTOR shall expand the conditions and transitions tested as additional causes and circumstances arise during the test.

3.8 TRAINING OF OWNER PERSONNEL

- A. The MANUFACTURER shall train Owner personnel at the Owner's facility on the proper maintenance and operation of the products. The MANUFACTURER shall provide training for Owner personnel on all products being supplied (motor, cable, pump, valves, etc.). The provided training at the Owner's facility shall consist of 4 hours minimum. The MANUFACTURER shall be responsible for all expenses associated with this training program.

3.9 PAINTING

- A. Shop painting. After shop testing and before shipment all ferrous surfaces, excluding machine surfaces, nameplates and stainless steel surfaces, shall receive a prime coat as specified in Section 09900, Paints and Coatings.
- B. Field Painting. Contractor is responsible for field painting.
- C. Finish Coat. Finish coat shall be in accordance with Section 09900, Paints and Coatings. Color of finish coat shall be coordinated with City.

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SECTION 11350

BOOSTER PACKAGED PUMP SYSTEM

PART 1 GENERAL

1.1 REQUIREMENT

- A. CONTRACTOR shall furnish and install a single pump variable speed pre-fabricated packaged pumping system to provide water service to the Emergency Operations Center (EOC), complete with pump, motor, variable frequency drive, pump controller and panel, diaphragm tank, isolation valves, check valve, inlet and discharge piping, and all necessary appurtenances completely wired and piped to ensure smooth operation and to maintain constant pressure to the EOC. Booster package pump system shall be complete and operable in accordance with the requirements of this specification.
- B. The pump and all components in contact with potable water shall be designed and fully guaranteed for this use and shall be NSF-61 certified.
- C. The pump shall maintain a constant discharge pressure regardless of varying flow demands and inlet pressure up to the maximum specified capacity rating.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 16, Electrical

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes. The Electrical Code, as referenced herein, shall be the latest edition of the National Electric Code (NEC).
- B. Commercial Standards. All equipment, products, and their installation shall be in accordance with the latest editions of the following standards, as applicable, and as specified in each Section of these Specifications.
 - 1. American Hydraulic Institute (AHI)
 - 2. American National Standards Institute (ANSI)
 - 3. American Society for Testing and Materials (ASTM)
 - 4. Institute of Electrical and Electronics Engineers (IEEE)
 - 5. National Electrical Manufacturers Association (NEMA)
 - 6. International Standards Organization (ISO)
 - 7. Underwriters Laboratory (UL)

1.4 ENVIRONMENTAL CONDITIONS

- A. The equipment furnished under this Section will be installed in a pre-fabricated pre-cast concrete building. External temperatures are expected to range on average between 40 degrees F and 85 degrees F with record low and high of 20 degrees F and 110 degrees F, respectively. Relative humidity varies from 5 to 100 percent (condensing). The site is located at approximately elevation +40 feet mean sea level.

1.5 SUBMITTALS

- A. Submittals shall be in accordance with the Contract Documents.

- B. A copy of this specification section, with any addendum updates included, and all referenced and applicable sections, with any addendum updates included, shall be submitted with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. Check marks (✓) shall denote full compliance with a paragraph as a whole. If deviations from the specifications are indicated, and therefore requested by the CONTRACTOR, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph. The remaining portions of the paragraph not underlined will signify compliance on the part of the CONTRACTOR with the specifications. The submittal shall be accompanied by a detailed, written justification for each deviation. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.
- C. Submittals shall be provided to confirm that material or operations to be used comply with information specified herein.
- D. The following information shall be included in the submittal. Submittals shall show compliance with Contract Documents:
1. Manufacturers' predicted pump performance curves. The curves shall include a plot of head (feet) vs. flow (gpm), horsepower (BHP), efficiency, and NPSHR. Include at each operating point, pump and combined pump and motor efficiencies. Data shall indicate the impeller diameter, pump size, and number of stages, if applicable.
 2. Dimensional layout drawing(s) of the pump system showing arrangement of the pump, piping, control panel, and accessories on the skid.
 3. Specifications for the motor including manufacturer, horsepower, voltage, frequency, phase, RPM, and NEMA insulation and frame classes.
 4. Specifications for the variable frequency drive, system controller, and valves.
 5. Material specification list describing materials used in the manufacture of the equipment and accessories.
 6. Complete wiring circuit diagram and legend with all terminals, components, and wiring identification.
 7. UL file number for packaged pump system.
 8. Motor manufacturer's control and connection drawings and data/electrical schematic showing power and control wiring.
 9. Operation and Maintenance manuals for the pump system, including general arrangement drawings, equipment specifications, electrical power and control schematics prior to completion of the Work.
 10. Spare parts list.
 11. Warranty.
- E. Prior to shipping, submit certified pump curve with hydraulic test data.
- F. Submit recommended installation requirements including foundation, anchor bolt, and support details, and installation instructions prior to installing equipment.

1.6 SEISMIC REQUIREMENTS

- A. All pieces of electrical, mechanical, and instrumentation equipment and appurtenant facilities which are separately mounted or anchored shall be so installed as to be in conformance to all requirements of the Uniform Building Code, latest edition at Notice-to-Proceed, both for vertical and seismic loading. This requirement applies, but is not limited to, such items as electrical and instrumentation equipment, pumps, piping, pipe supports and hangers, motors, and other similar equipment or facilities in excess of 400 pounds.

1.7 QUALITY ASSURANCE

- A. The packaged pump system shall be a standard product of a single pump manufacturer. The entire pump system including pump, motor, variable frequency drive and pump controller, shall be designed and built by the same manufacturer.
- B. The pump shall be capable of operating continuously at the specified operating conditions without cavitation or damaging vibration, as tested in accordance with the American Hydraulic Institute standards for testing.
- C. **Manufacturer Qualifications**
 - 1. Manufacturer shall be responsible for design, manufacture, and testing of the packaged pump system.
 - 2. Shall have a minimum of 5 years of experience in the manufacturing of packaged booster pump systems.

1.8 PRODUCT HANDLING

- A. **Shipment and Delivery**
 - 1. Prepare and load all material and articles for shipment in a manner that shall protect the equipment from damage in transit, shall include a packing list, and shall be responsible for and make good any and all damage. During shipping the rotating elements shall be suitably supported to protect bearings.
 - 2. All accessories and spare parts shall be packed separately in containers plainly marked "ACCESSORIES ONLY" or "SPARE PARTS ONLY". All packing materials shall be fire retardant. A packing list listing the contents of each container shall be placed in a moisture-proof envelope and securely fastened to the outside of the container.
- B. **Protection**
 - 1. Use all means necessary to protect equipment and materials before, during, and after installation, and to protect the installed work and materials of all other trades.
- C. **Replacement**
 - 1. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

1.9 WARRANTY

- A. Packaged pump system manufacturer shall provide a written warranty for the unit against defects in the workmanship and material for a period of two years.
- B. Warranty period shall begin upon project substantial completion as evidenced by issuance of the Certificate of Substantial Completion by the City.
- C. Defective parts shall be provided and installed by the manufacturer at no cost to the City.

PART 2 PRODUCTS

2.1 SUPPLIER

- A. Packaged pump system shall be one of the following:
 - 1. Grundfos CRE-Plus 5-3;
 - 2. Goulds Water Technology AquaBoost VS 1A15;

3. Approved equal.

- B. The listing of manufacturers above in no way constitutes or approves the use of such equipment. All manufacturers shall be required to meet all requirements listed herein or equipment will be subject to rejection.

2.2 DESIGN REQUIREMENTS

- A. All equipment, including but not limited to pump, motor, piping, valves, instrumentation and controls, shall be mounted on a common structural base or skid assembly to support all components and serve as the installation mounting base to form a complete, operating packaged booster pump system.
- B. The Contractor shall be required to tie into the pre-fabricated pump system inlet and discharge pipe and provide power to the controller panel to have a fully operational pump system.
- C. The pump system shall have the following operating characteristics:

<u>Description</u>	<u>Pump System Requirement</u>
Pumps	
Number	1
Design point (DP)	20 gpm @ 26 psi
Pump speed, rpm	1800 (Nominal)
Maximum motor horsepower, Hp	2
Minimum motor efficiency, %	50
Voltage/cycle/phase	460/60/3
Service factor	1.15
Insulation rating	Class F
Motor enclosure	TEFC
NPSH Available at DP, ft.	34
Maximum discharge piping, in.	4

2.3 PUMP CONSTRUCTION

- A. The pump shall be of the in-line vertical multi-stage or centrifugal type rated for 150 psi working pressure.
- B. The head-capacity curve shall have a steady rise in head from maximum to minimum flow within the preferred operating region. The shut-off head shall be a minimum of 20% higher than the head at the best efficiency point.
- C. The pump impellers shall be secured directly to the pump shaft by means of a splined shaft arrangement.
- D. The suction/discharge base shall have ANSI Class 250 flange or internal pipe thread (NPT) connections as determined by the pump system manufacturer.
- E. Pump Materials:
1. Suction/discharge base, pump head, motor stool: Cast iron (Class 30)
 2. Impellers, diffuser chambers, outer sleeve: 304 Stainless Steel

- | | |
|---|-----------------------------|
| 3. Shaft: | 316 or 431 Stainless Steel |
| 4. Impeller wear rings: | 304 Stainless Steel |
| 5. Shaft journals and chamber bearings: | Silicon Carbide |
| 6. O-rings: | EPDM |
| 7. Shaft couplings: | Cast Iron or Sintered Steel |
- F. The shaft seal shall be a balanced o-ring cartridge type with the following features:
- | | |
|-------------------------------|-------------------------------------|
| 1. Collar, Drivers, Spring: | 316 Stainless Steel |
| 2. Shaft Sleeve, Gland Plate: | 316 Stainless Steel |
| 3. Stationary Ring: | Silicon Carbide (Graphite Imbedded) |
| 4. Rotating Ring: | Silicon Carbide (Graphite Imbedded) |
| 5. O-rings: | EPDM |
- G. Shaft seal replacement shall be possible without removal of any pump components other than the coupling guard, shaft coupling and motor.

2.4 PUMP MOTOR CONSTRUCTION

- A. Each motor shall be of the Integrated Variable Frequency Drive design consisting of a motor and a Variable Frequency Drive (VFD) with a built-in pump system controller. The complete VFD/motor assembly shall be built and tested as one unit by the same manufacturer.
- B. The VFD shall be of the PWM (Pulse Width Modulation) design using up to date IGBT (Insulated Gate Bipolar Transistor) technology.
- C. The VFD shall convert incoming fixed frequency single-phase AC power into a variable frequency and voltage for controlling the speed of the motor. The motor current shall closely approximate a sine wave. Motor voltage shall be varied with frequency to maintain desired motor magnetization current suitable for centrifugal pump control and to eliminate the need for motor de-rating.
- D. The VFD shall have, as a standard component, an RFI filter (Radio Frequency Interference) to minimize electrical noise disturbances between the power electronics and the power supply. The VFD/motor shall meet all requirements of the EMC directive concerning residential and light industry equipment (EN 61800-3).
- E. The VFD shall have a minimum of two skip frequency bands which can be field adjustable.
- F. The VFD shall have internal solid-state overload protection designed to trip within the range of 125-150% of rated current.
- G. The VFD/motor shall include protection against input transients, loss of AC line phase, over-voltage, under-voltage, VFD over-temperature, and motor over-temperature. The motor over-temperature protection shall consist of three series connected PTC thermistors, one for each motor phase.
- H. The VFD/motor shall provide full nameplate output capacity (horsepower and speed) within a balanced voltage range of 414 to 528 volts.
- I. Automatic De-Rate Function: The VFD/motor shall reduce speed during periods of overload allowing for reduced capacity pump operation without complete shut-down of the system. Detection of overload shall be based on continuous monitoring of current, voltage and temperature within the VFD/motor assembly.

- J. The VFD/motor shall have, as a minimum, the following input/output capabilities:
 - 1. Speed Reference Signal: 0-10 VDC, 4-20mA
 - 2. Digital remote on/off
 - 3. Fault Signal Relay (NC or NO)
- K. Motor drive end bearings shall be adequately sized so that the minimum L10 bearing life is 17,500 hours at the minimum allowable continuous flow rate for the pump at full rated speed.

2.5 SYSTEM CONSTRUCTION

- A. The packaged system shall be operable under the environmental conditions in Part 1.4.
- B. Isolation Valve: Provide an isolation valve on the suction and discharge of the system piping. Isolation valve sizes 2 inch and smaller shall be nickel plated brass full port ball valves. Isolation valve sizes 3 inch and larger shall be a full lug style butterfly valve. The valve disk shall be of stainless steel. The valve seat material shall be EPDM and the body shall be cast iron, coated internally and externally with fusion-bonded epoxy.
- C. Check Valve: A spring-loaded non-slam type check valve shall be installed on the discharge of the pump. The valve shall be a wafer style type fitted between two flanges. The head loss through the valve shall not exceed 5 psi at the pump design capacity. Check valves 1-1/2" and smaller shall have a POM composite body and poppet, a stainless steel spring with EPDM seats. Check valves 2" and larger shall have a body material of stainless steel or epoxy coated iron (fusion bonded) with an EPDM seat. Spring material shall be stainless steel. Disk shall be of stainless steel or leadless bronze.
- D. Diaphragm Tank: Diaphragm tank shall have minimum 4 gallon capacity and be constructed of materials compatible with potable water. A minimum diaphragm tank connection size of 3/4-inch shall be provided on the discharge piping.
- E. Piping shall be designed and constructed for minimal friction loss and rated for system working pressure.
- F. A pressure transducer shall be factory installed on the discharge manifold (or field installed as specified on plans). Pressure transducers shall be made of 316 stainless steel. Transducer accuracy shall be +/- 1.0% full scale with hysteresis and repeatability of no greater than 0.1% full scale. The output signal shall be 4-20 mA with a supply voltage range of 9-32 VDC.
- G. A bourdon tube pressure gauge, 2.5 inch diameter, shall be placed on the suction and discharge manifolds. The gauge shall be liquid filled and have copper alloy internal parts in a stainless steel case. Gauge accuracy shall be 2/1/2 %. The gauge shall be capable of a pressure of 30% above its maximum span without requiring recalibration.
- H. A factory installed pressure switch shall be installed on the suction manifold for water shortage protection. All wetted parts shall be of stainless steel. The pump shut-down pressure and reset pressure shall be adjustable.
- I. The system shall include a factory installed service disconnect switch mounted in a lockable NEMA 4 enclosure.

2.6 PUMP SYSTEM CONTROLLER

- A. The pump system controller (Proportional-Integral) shall be a standard component of the integrated variable frequency drive motor developed and supported by the pump manufacturer.
- B. The pump system controller shall have an easy to use interface mounted on the VFD/motor enclosure with the ability to start/stop the pump system and adjust set-points.
- C. The VFD/motor shall be capable of receiving a remote analog set-point (4-20mA or 0-10 VDC) as well as a remote on/off (digital) signal.
- D. Pump status and alarm state shall be indicated via LED lights located on the VFD/motor enclosure.
- E. Advanced programming and troubleshooting shall be possible via computer. Pump system programming (field adjustable) shall include as a minimum the following:
 - 1. System Pressure set-point, psig System start pressure, psig
 - 2. System Stop pressure, psig Minimum Pump Speed, %
 - 3. Pressure Transducer supply/range Maximum Pump Speed, %
 - 4. System Time (Proportional Gain) Integral Action Time

2.7 PAINTING

- A. Shop painting. After shop testing and before shipment all ferrous surfaces (excluding stainless steel), including the skid, attached piping and supports but excluding machine surfaces and nameplates, shall be grit-blasted with #50 steel grit per SSPC-10 to a near white metal condition and immediately coated with an aliphatic polyurethane coating to a thickness of no less than 5 mils and applied through an electrostatic method to insure proper adhesion.
- B. Manufacturer shall provide a touch up kit for Owner's use.
- C. Field Painting. Contractor is responsible for field painting.

2.8 SEQUENCE OF OPERATION

- A. The system controller shall receive an analog signal [4-20mA] from the factory installed pressure transducer on the discharge manifold, indicating the actual system pressure. When a flow demand is detected (system pressure drops below the start pressure) the VFD/motor shall start and increase speed until the actual system pressure matches the system set-point. As flow demand changes (increases or decreases), the speed of the pump shall be adjusted to maintain the system set-point pressure.
- B. A bladder type diaphragm tank shall be piped to the discharge manifold or system piping downstream of the pump. When zero flow is detected by the system controller, the pump shall be switched off. When the system pressure drops to the start pressure, (flow begins after shut-down), the pump shall be switched on, increasing speed to maintain the system set-point pressure. Zero flow conditions shall be detected by the system controller/factory installed pressure transmitter without the use of additional flow switches or motor current sensing devices.

2.9 SPARE PARTS

- A. Contractor shall furnish one complete set of manufacturer's recommended spare parts, including but not limited to:
1. 3 sets of wearing rings complete with fasteners.
 2. 3 sets of O-Rings.
 3. 2 lower mechanical seal set.
 4. 1 set of special tools (as required for pumping unit disassembly).
 5. 1 set of VFD rectifiers and transistors.
- B. All spare parts shall be accompanied by a packing list and be in a condition acceptable to the ENGINEER or his/her designated representative. The packing list shall include a detailed listing of each item, including name of equipment, name of part, manufacturer's name, and cost of item. All spare parts shall be adequately packaged in rigid containers for prolonged storage and the containers clearly labeled for quick, easy identification.

2.10 NAMEPLATES

- A. Equipment nameplates of stainless steel shall be engraved or stamped and fastened to the equipment in an accessible. Name plates shall indicate clearly the following information:
1. Manufacturer
 2. Date of manufacture
 3. Model and size
 4. Serial number
 5. Rating in capacity
 6. Feet of head and speed at rated capacity
 7. Impeller diameter
 8. Motor horsepower and speed
 9. Number of stages, if applicable
 10. Equipment nomenclature to be coordinated with the City

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install pumps and accessories where indicated on Drawings and in accordance with manufacturer's instructions.
- B. Provide and connect piping, accessories, power and control conduit and wiring to make system operational, ready for startup.
- C. Flush piping with clean water.

3.2 FIELD QUALITY CONTROL

- A. Pre-operational Check: Before operating system or components, make the following checks:
1. Check for proper motor rotation.
 2. Check pump and drive units for proper lubrication.
- B. Verify pump performance by performing time/draw down test or time/fill test.
- C. Check pump and motor for high bearing temperature and excessive vibration. Check for motor overload by taking ampere readings.
- D. Equipment Acceptance:

1. Adjust, repair, modify or replace system components that fail to perform as specified and rerun tests. Make final adjustments to equipment under direction of manufacturer's representative.
2. Document adjustments, repairs and replacements in manufacturer's field services certification.

3.3 MANUFACTURER'S START-UP FIELD SERVICES

- A. CONTRACTOR shall furnish services of MANUFACTURER's service representative experienced in installation of the packaged booster pump system furnished under this specification for not less than one man-day on-site for installation, inspection, and field testing, and instructing Owner's personnel in maintenance of equipment.
- B. Certify that equipment has been properly installed and is ready for start-up and testing.
- C. During this initial inspection, MANUFACTURER's service representative shall review recommended operation and maintenance procedures with the Owner's personnel.

3.4 DEMONSTRATION

- A. Demonstrate equipment startup, shutdown, routine maintenance, alarm condition responses, and emergency repair procedures to Owner's personnel.

3.5 MANUFACTURER'S CERTIFICATE

- A. A manufacturer's certificate of satisfactory installation is required for WORK under this Section. CONTRACTOR is responsible for obtaining manufacturer's services to provide such certificate.

3.6 FACTORY TESTING

- A. The entire pump system shall be factory performance tested as a complete unit prior to shipment. Job-site programming shall be entered into the controller prior to shipment (details of installation requirements shall be communicated to the pump system manufacturer). System manufacturer shall provide a verified performance test report.
- B. The system shall undergo a hydrostatic test of 200 psig for a minimum of 15 minutes prior to shipment.

3.7 FIELD TESTING

- A. CONTRACTOR shall prepare and submit a test plan and schedule, and shall coordinate with the Construction Manager on activities necessary to support the test. Indicate test start time and duration, equipment to be tested, other equipment involved or required; temporary facilities required, number and skill or trade of personnel involved; safety issues and planned safety contingencies; anticipated effect on Owner's existing equipment and other information relevant to the test.
- B. Prior to testing, verify equipment protective devices and safety devices have been installed, calibrated, and tested.
- C. Field testing and start up shall commence after piping, electrical connections, and electrical inspection have been completed. The CONTRACTOR shall give a minimum of

two-weeks' notice to pump station Manufacturer and Construction Manager prior to scheduled start up.

- D. Temporary Facilities and Labor: Provide necessary fluids, utilities, temporary piping, temporary supports, temporary access platforms or access means and other temporary facilities and labor necessary to safely operate the equipment and accomplish the specified testing. With Owner's permission, some utilities may be provided by fully tested permanently installed utilities that are part of the Work.
- E. In the course of testing, the CONTRACTOR shall expand the conditions and transitions tested as additional causes and circumstances arise during the test. Any failure of the test shall result in the test being restarted. No compensation or time extensions will be granted for restarting of the test.
- F. Test Fluid: Potable water.
- G. Field test reports for each test shall be prepared by the CONTRACTOR and submitted to the ENGINEER.

3.8 QUALITY CONTROL TESTS

- A. Performance Test:
 - 1. Test for flow and head at a minimum of three conditions; rated flow, one at 25 percent below the rated flow, and one at 10 percent above the rated flow.
 - 2. Record measured flow, suction pressure, discharge pressure, and observations on bearing temperatures and noise levels at each condition.

3.9 FUNCTIONAL AND OPERATIONAL TESTING OF EQUIPMENT

- A. General Check-out: Prior to operating equipment, inspect, test, and check supporting systems, including but not limited to power systems, control systems, piping systems, lubrication systems, and safety systems.
 - 1. Test and calibrate instrumentation and electrical devices as specified in Division 16.
 - 2. Test and prepare piping as specified in Division 15.
 - 3. Prior to testing, provide signed and dated certificates of calibration for test instrumentation and equipment.
- B. Operation of Related Existing Equipment: Owner will operate related existing equipment or facilities necessary to accomplish the testing.
- C. Acceptable Tests: Demonstrate the equipment performance meets the requirements of this Section and the equipment Section; when the equipment fails to meet the specified requirements, perform additional more detailed testing to determine the cause, correct, repair, or replace the causative components and repeat the testing that revealed the deficiency.

3.10 TRAINING OF OWNER PERSONNEL

- A. The MANUFACTURER shall train Owner personnel at the Owner's facility on the proper maintenance and operation of the products. The MANUFACTURER shall provide training for Owner personnel on all products being supplied (motor, cable, pump, valves, etc.). The provided training at the Owner's facility shall consist of 4 hours minimum. The MANUFACTURER shall be responsible for all expenses associated with this training program.

END OF SECTION

SECTION 13120
PRECAST CONCRETE BUILDING

PART 1 GENERAL

1.1 SCOPE

- A. Contractor to furnish a precast concrete building. Building to be field assembled by manufacturer on contractor's poured-in-place foundation as indicated on contract drawings.
- B. Related Sections:
 - 1. Cast-in-place Concrete Section 03300
 - 2. Gutters and Downspouts Section 07714
 - 3. Overhead Coiling Doors Section 08333
 - 4. Aluminum-Framed Entrances Section 08410
 - 5. Unit Skylights Section 08620
 - 6. Door Hardware Section 08710
 - 7. Paints and Coatings Section 09900
 - 8. Louvers Section 10210

1.2 CODES

- A. ACI 318-11, "Building Code Requirements for Structural Concrete"
- B. ANSI/ASCE 7-10 "Building Code Requirements for Minimum Design Loads in Buildings and Other Structures"
- C. California Building Code 2013
- D. Concrete Reinforcing Institute, "Manual of Standard Practice"

1.3 QUALITY ASSURANCE

- A. Fabricator must be a certified producer/member of The Precast/Prestressed Concrete Institute (PCI), and/or National Precast Concrete Association (NPCA).
- B. Building fabricator to be Smith-Midland Concrete Building, Oldcastle Precast, or approved equal.

1.4 DESIGN REQUIREMENTS

- A. Dimensions – As shown on plans
- B. Structural Design Criteria:
 - 1. Roof Live Load: 20 psf (no reduction allowed)
 - 2. Wind Velocity: 115 miles per hour
 - 3. Snow Load: none
 - 4. Concrete Compressive Strength: 5,000 psi
 - 5. Steel Reinforcing Tensile Strength: 60,000 psi
- C. Seismic Design Criteria:
 - 1. Site Coordinates: 37.36825, -121.95644
 - 2. Site Class: D

3. Risk Category: IV (essential facilities)
4. Spectral Response Acceleration, S_{DS} : 1.00g
5. Spectral Response Acceleration, S_{D1} : 0.60g

1.5 SUBMITTALS

- A. In accordance with Section 01330, submit drawings and structural engineering calculations that are designed and sealed by a structural or professional engineer, with a current license in the State of California, to the Engineer to check for compliance with the drawings and specifications prior to submitting to the Santa Clara Building Department for permit. Design elements to be submitted include:
1. Structural design calculations including seismic and wind loads
 2. Anchorage to foundation details
 3. Wall and roof connections details
 4. Weathertightness details
 5. Concrete mix design
 6. Skylights
 7. Lifting and placing procedures

PART 2 PRODUCTS

2.1 MATERIALS

- A. Concrete: 5,000 PSI minimum 28-day compressive strength,
- B. Reinforcing Steel: ASTM A615, Grade 60
- C. Panel Connections: Securely fastened together with steel brackets. Steel is to be of structural quality, hot-rolled carbon. All embedded connectors shall not be floated in.
- D. Panel connections and anchorage details shall be by manufacturer.

2.2 TESTS AND REPORTS

- A. Mixture Design Report: Design quantities and test results on each mixture shall be submitted for review and shall be accepted before concrete work is started. The report on each tentative concrete mixture and on the proposed concrete mixture shall be submitted to Owner's Representative and shall contain the following information:
1. Aggregate Reports (ASTM C 33)
 - a. Source and type
 - b. Fine and Coarse gradations
 - c. Alkali-aggregate reactivity
 - d. Combined fine and coarse aggregate gradation
 2. Cement Mill Report
 3. Cementitious Material: type, data sheet, and test report
 4. Admixtures
 - a. Data sheets and certifications for each required
 - b. Manufacturer's approval letter
 5. Job-specific laboratory trial mix
 6. Compressive strength at 7 and 28 days
 7. Mixture Proportions
 - a. Slump
 - b. Water content
 - c. Water-cementitious materials ratio
 - d. Brand, type, composition, and quantity of cement

- e. Brand, type, composition and quantity of fly ash
- f. Specific gravity of each aggregate
- g. Ratio of fine to total aggregates
- h. Air content
- i. Temperature
- j. Unit weight
- 8. Water-Soluble Chloride Ion Report
- 9. Field Compression Test Evaluation Reports

2.3 ACCESSORIES

- A. Doors and Frames: See Specification Section 08710, Door Hardware and 08410, Aluminum-Framed Entrances
- B. Rollup Door: See Specification Section 08333, Overhead Coiling Doors
- C. Louvers: See Specification Section 10210, Louvers
- D. Skylights: See Specification Section 08620, Unit Skylights
- E. Gutters: See Specification Section 07714, Gutters and Downspouts

2.4 FINISHES

- A. Interior of building: Smooth steel form finish on all interior panel surfaces. See Section 09900, Paints and Coatings, for interior coatings. Color shall be as selected by the City.
- B. Exterior of building: Exterior as called out by Architect.

PART 3 EXECUTION

3.1 SITE PREPARATION

- A. Submit anchorage details prior to pouring cast-in-place concrete foundation.
- B. Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in. Do not float in any embedded items.
- C. Concrete shall reach minimum 3,000 psi compressive strength prior to erection of precast concrete building.

3.2 DELIVERY AND HANDLING

- A. Contractor shall coordinate with building manufacturer for the delivery and placement of the precast concrete building.
- B. Building shall be installed according to the manufacturer's installation procedures.

END OF SECTION

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SECTION 13210

WELDED STEEL TANK AND APPURTENANCES

PART 1 GENERAL

1.1 DESCRIPTION

- A. Furnish all materials, equipment, tools, and labor necessary for the design, manufacture, erection, painting, testing, cleaning, and disinfection of a 2.0 million gallon welded steel tank for potable water service.
- B. Related work specified elsewhere:
 - 1. Water Storage Tank Testing and Disinfection Section 02620
 - 2. Cast-in-place Concrete Section 03300
 - 3. Paints and Coatings Section 09900
 - 4. Tank Painting Section 09910
 - 5. Cathodic Protection System Section 16640

1.2 QUALITY ASSURANCES

- A. Qualifications of Fabricators:
 - 1. The materials shall be furnished by one supplier who is regularly engaged in the manufacture of steel water storage tanks and has experienced, factory-qualified representatives that can supervise the field assembly.
 - a. Fabricator shall be registered and approved to perform work without special inspection for work performed at the shop. At completion of fabrication, the fabricator shall submit a certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents per IBC Section 1704.2.5.2.
 - 2. All materials shall be new and of current manufacture and shall be guaranteed against defects in workmanship in accordance with other sections of these Specifications.
- B. Qualification of Installers:
 - 1. For the erection and testing of the work in this Section, use only thoroughly trained and experienced personnel who are completely familiar with the requirements for this work and with the installation recommendations of the manufacturer and these Specifications.
 - 2. All welders shall be certified for the particular type of welding required prior to starting welding on the site, including equipment to be used, positions, procedures, base metals and electrodes or base filler wires from the same specifications, classifications, or group number that will be used.
 - 3. Certification testing shall be performed by an approved testing laboratory. Costs of such testing shall be borne by the Contractor. The Contractor shall maintain current records of all welding certifications. A copy of each welding certification shall be submitted to the Construction Manager for approval a minimum of 48 hours in advance of performing any welding.
 - 4. Qualifications of welding procedures, welders and welding operators shall comply with Section 8 of AWWA D100-11.
- C. Inspection and Testing of Welds
 - 1. All inspection and testing of welds shall be completed before application of protective coatings.

2. Welding of each successive shell course on the new tank shall not begin until the previous shell course welds have been completed welded, inspected, and repaired.
3. On joints where radiography is required, the welding of each worker shall be radiographed on the worker's first joint, before work begins on subsequent joints.
4. The Engineer shall be furnished certified copies of all radiography reports. Welds shall be radiographed using the procedures described in Section 11.6 of AWWA D100-11.
 - a. Shell Welds: Butt weld joints shall be radiographed in accordance with Section 11.5 of AWWA D100-11. Welds not meeting the acceptance criteria in AWWA D100-11 shall be repaired and radiographed until the requirements are met.
 - b. Bottom Welds: All welds joining the bottom plates shall be visually inspected per Section 11.4 of AWWA D100-11.
 - c. Shell Reinforcing Plates: After the reinforcing plate is fitted to the shell, but before the pipe or neck fitting is inserted, the reinforcing plate shall be seal welded to the shell at the inner and outer edges. Air pressure shall then be applied to the space between the reinforcing plate and the shell, and the seal welds testing with solution film.

D. Distortion

1. Bottom Distortion: The Contractor shall use a written procedure for fitting and welding the bottom plates. Out-of-plane distortion shall not exceed 0.75 percent of the tank radius.
2. Shell Distortion: Local deviations, such as flat spots, peaked joints, and welding distortion shall be limited as follows:
 - a. Using a horizontal sweep board 36 inches long, the distance from the sweep board to the shell shall not be greater than 1/2-inch. Flat spots shall be measured with an external sweep board. Peaked spots shall be measured with an internal sweep board.
 - b. Using a vertical sweep board 36 inches long, banding of horizontal joints shall not exceed 1/2-inch.
 - c. Measurements shall be taken beginning with the first joints that are welded. Corrections to the fitting and welding procedure shall immediately be made if the joints are not within the above criteria for distortion. The Contractor shall submit corrective procedures for joints that have been welded but are not within the criteria for distortion.

E. Hydrostatic Testing and Disinfection

1. Hydrostatic testing and disinfection shall be furnished in accordance with Section 02620 – Water Storage Tank Testing and Disinfection. The City will furnish enough water for one (1) filling of the tank for testing and disinfection. The Contractor shall continuously monitor the filling operation to control the rate and level to avoid overflow.

1.3 SUBMITTALS

A. General:

1. Make all submittals and resubmittals in strict accordance with the provisions of Section 01300.
2. Make all submittals listed in Part 1.03-B, and any others required to fully describe what is to be furnished and/or installed under this Section.
3. Submit to Engineer to check for compliance with the drawings and specifications prior to submitting to the Santa Clara Building Department for permit.

- B. Required Submittals:
1. Shop drawings: Within 60 days after award of contract and before any of the materials are delivered to the job site, submit complete Shop Drawings for the tank and appurtenances.
 2. Structural calculations: Submit structural calculations of the tank, sloshing, and anchorage stamped and signed by a current structural or professional engineer currently registered in the State of California.
 3. Detailed drawings and structural analyses shall include:
 - a. Plate thickness and width
 - b. Number and size of structural members
 - c. Construction and erection details of all accessories and related work
 - d. Size and spacing of hold-down anchorages
 - e. Adequacy of bearing pressures under the column footings
 - f. All other pertinent data concerning the construction of the tank
 4. Materials list: Submit a complete list of all materials and equipment proposed to be furnished and installed under this portion of the work.
 5. Manufacturer's recommendations: Submit two copies of the manufacturer's current recommended method of installation for the work in this section.
 6. At the conclusion of the tank fabrication and erection work, the Contractor shall submit a written report containing the information outlined in the AWWA D100-11.

PART 2 PRODUCTS

2.1 DESIGN CRITERIA

- A. General:
1. The steel storage tank shall meet the requirements of AWWA Specifications D100-11, including Section 13 for seismic design, and the 2013 California Building Code, and these shall be made a part of this Specification.
 2. Design shall provide for easy painting of structural and appurtenant members after erection. Beams of standard structural shapes with columns shall be used rather than long-span roof trusses. Where design for ease of painting after erection is not feasible, steel shall be shop sand blasted and shall receive shop applied primer, intermediate, and finish coatings.
- B. Tank Criteria:
1. The tank dimensions and capacity (in million U.S. gallons) are as follows: 103 feet inside diameter, flat bottom, 2.0 million gallons nominal capacity.
 2. The minimum shell plate thickness shall be 1/4 inch in accordance with Table 16 of AWWA D100-11.
 3. Provide 1/4-inch thick flat bottom, minimum, unless otherwise shown on the Drawings.
 4. Provide a 3/16-inch thick roof, minimum, with a slope of 1 inch in 12 inches.
 5. The roof shall be cone type with a 3-foot radius knuckle between the roof and shell.
 6. Allowable soil bearing pressure for supporting loads shall be in conformance with the Geotechnical Investigation Report, prepared by Cornerstone Earth Group, dated August 1, 2014, project number 138-6-1.
 7. All shell and bottom fittings shall be flanged.
 8. The tank details shall be designed to eliminate unwelded joints that will promote corrosion, pockets that will accumulate rain water, and attachments to the shell which result in excessive localized stresses due to welding or imposed loads. The roof rafters shall be fully seal welded to the roof plates. Internal roof plate lap joints shall be fully seal welded.

9. All welds joining shell plates and wetted roof plates shall have complete joint penetration and fusion, and shall be double-welded from both sides. The use of low-hydrogen electrodes is mandatory for manual welding of shell plates, for permanent attachments to the shell plates, for fittings, and for welds joining the shell plates to the bottom plates. All shell plates shall be rolled, regardless of material thickness.
- C. Structural Design Criteria:
1. Roof Live Load: 20 psf (no reduction allowed)
 2. Wind Velocity: 115 miles per hour
 3. Snow Load: none
 4. Lowest One-day Mean Temperature: 32°F
 5. Concrete Compressive Strength: 4,000 psi
 6. Steel Reinforcing Tensile Strength: 60,000 psi
- D. Seismic Design Criteria:
1. Site Coordinates: 37.36825, -121.95644
 2. Site Class: D
 3. Risk Category: IV (essential facilities)
 4. Response Modification Coefficient, R: 3 (anchored tank)
 5. Overstrength Factor, Ω_0 : 2
 6. Spectral Response Acceleration, S_{DS} : 1.00g
 7. Spectral Response Acceleration, S_{D1} : 0.60g
 8. Simultaneous combination of horizontal and vertical loads: Yes
 9. Minimum Freeboard: 7.1 feet
 10. Roof Live Load (for Earthquake Design): 20 psf
 11. Seismic Design: Per AWWA D100-11, Section 13
 12. Hoop Stress Combination: Combine impulsive and convective induced stresses by the root mean square method.
 13. Pressure Stability: To be considered for seismic loading.
- E. Accessories: All accessories shall be in accordance with AWWA D100-11, Cal OSHA, and the Division of Industrial Safety, and as shown on the Drawings or described below:
1. General
 - a. Accessories shall have surface preparation and be coated in accordance with Section 09910, Tank Painting.
 2. Ladders:
 - a. For the exterior, Contractor shall furnish and install ASTM A-36 carbon steel ladder, hot dip galvanized after fabrication, with cages around the ladders, along with mid-level and roof-top landing platforms.
 - b. All interior ladders and connections shall be Type 316 stainless steel with stainless steel cages around the ladders, and a stainless steel mid-level diving platform.
 - c. The ladders shall begin at the tank bottom and extend along the height of the tank to the roof top. Ladder rungs shall be one-inch diameter SLIPNOT skid resistant steel or stainless steel, or approved equal. The ladder cage shall have a hinged access guard door with protected padlock on the exterior of the tank as shown on the Contract Drawings.
 - d. Cages shall not extend less than 27 nor more than 28 inches from the centerline of the rungs of the ladder. Cage shall not be less than 27 inches in width. Vertical bars shall be located at a maximum spacing of 40 degrees around the circumference of the cage; this will give a maximum spacing of approximately 9.5 inches, center to center.
 - e. All exterior ladders shall be equipped with fall prevention device as specified for interior ladders except that exterior ladder and device may

be galvanized steel .The minimum ladder design loading shall be 100 psf and 300 pounds concentrated load.

3. Roof Hatch:
 - a. Contractor shall furnish and install weather-tight roof hatches as shown on the Contract Drawings.
 - b. The cover shall have automatic hold-open arm, with compression spring operator for easy opening and closing, with inside and outside handles and locking hasp on the top side.
 - c. The hatch shall be hot dip galvanized after fabrication.
 - d. Rubber gasket sealant shall be installed on roof hatches. The seal material should be safe to use in drinking water tanks and must be NSF 61 approved.
 - e. Roof hatches shall be manufactured by the Bilco Company, New Haven Connecticut, model E-20 Roof Hatch or approved equal.
 - f. Roof hatches shall be welded to tank and completely sealed against any water penetration.

4. Vents:
 - a. Mushroom type vents shall be constructed and installed as shown on the Drawings and fitted with replaceable 2 x 2 (2 openings per linear inch) stainless steel backer mesh and #3 stainless steel insect mesh. The vent assembly shall be hot dip galvanized after fabrication.
 - b. Type 316 stainless steel nuts and bolts shall be used to install roof vents and screens.

5. Tank Inlet, Outlet, Drain, and Overflow Piping:
 - a. Tank piping connections shall be located as shown on the Drawings.
 - b. Steel pipe for connections shall be at least 1/4-inch thick.
 - c. All buried steel piping shall be coated and lined with a fusion-bonded epoxy system.
 - d. All exposed welded steel piping shall be fusion-bonded epoxy lined and shall be shop and field coated in accordance with Section 09910 Tank Painting.

6. Level Indicator:
 - a. Contractor shall furnish and install new water level indicator assembly as shown in the project plans with depths measured in 2-inch increments from empty to full. Water level indicator shall be at half scale.
 - b. The water level indicator assembly shall include a Type 316 stainless steel jacketed foam glass float, bottom anchor, top anchors, stainless steel guide wires and float cable, support brackets and gauge-board assembly, aluminum housing, 316 stainless steel trim, Teflon bearing sheave elbows, cable clamp, stainless steel indicator, cable fastener and gauge board connector.
 - c. Water level indicator shall be installed prior to the exterior coating of the tank.

7. Tie- off points:
 - a. Contractor shall install OSHA compliant tie-off points on the tank roof as shown in the Contract Drawings. Shop drawings and structural calculations are required for the tie-off points and shall be part of the shop drawing submittals per requirements of Section 1.3 of this document.

8. Manways
 - a. Manways shall be 30-inch diameter clear opening and shall be located as shown on the Contract Drawings.
 - b. Manway shall be inward opening with davit arm and include a cover plate and easy lock system.
 - c. Manway shall be installed and furnished per OSHA standards for drinking water storage tanks.
 - d. Nuts and bolts shall be Type 316 stainless steel.
 - e. Provide and install gasket suitable for potable water service.
9. Sampling Ports
 - a. Install sampling ports and fittings on the tank per Contract Drawings.
10. Roof Platform
 - a. A roof platform shall be provided extending from the external ladder past the hinged roof hatch as shown on the Drawings. The platform shall be constructed from structural steel shapes with a steel grate deck, and shall be hot dipped galvanized after fabrication. The minimum platform loading shall be 100 psf.
11. Diving Platform
 - a. A diving platform shall be provided inside the tank as shown on the Contract Drawings. The connections shall be designed by the tank fabricator. The minimum platform design loading shall be 100 psf.
 - b. All structural members, grating, railing, and connections shall be Type 316 stainless steel.
12. Handrail
 - a. Handrail shall be installed on tank roof as shown on Contract Drawings. Handrail assembly shall meet all OSHA, Federal and State regulations. Handrail shall be coated per Section 09910, Tank Painting.
13. Cathodic Protection
 - a. Manholes and appurtenances for cathodic protection system anodes shall be cut into the roof as shown on the Drawings.

2.2 DIELECTRIC BARRIERS:

- A. There shall be a dielectric barrier wherever stainless steel and carbon steel are in contact.
- B. No welding of stainless steel to carbon steel will be permitted below the water level.

PART 3 EXECUTION

3.1 INSTALLATION:

- A. Inspection and Testing shall conform to Section 11 or Section 14 of AWWA D100-11. Testing equipment and cost thereof shall be furnished by the Contractor.
 1. Shell and Roof:
 - a. Welds in the tank shall be tested by the Contractor by means of spot radiographic inspection where required by AWWA D100-11 and as directed by the Construction Manager.
 - b. All radiographs shall be performed by an independent testing laboratory approved by the Construction Manager. The radiographs shall become

- the property of the Owner, and the Construction Manager shall have the right to review all information obtained.
- c. The first 10 feet of each welder's work shall be checked, and then up to 5 percent of all the welding shall be radiographed as directed by the Construction Manager.
 - d. The Contractor shall provide logs of each welder's work through the project.
2. Bottom:
- a. Contractor shall test all welds in the tank bottom by vacuum, using soap suds, linseed oil, or other suitable materials for detection of leaks, and repaired as required by the AWWA Standard Specification. Joints may also be tested by the magnetic-particle method.
 - b. In vacuum testing, the gauge should register partial vacuum of at least 5 inches Hg.
3. When erection and painting of the tank have been completed, the tank shall be tested by filling with water to the overflow level. The completed tank shall show no leaks at the end of a 24-hour test period. Any leaks found shall be repaired by welding and the coating repaired in strict accordance with the paint manufacturer's instructions and at no cost to the Owner.

3.2 PAINTING:

- A. Painting and exterior color shall be in accordance with Section 09910, Tank Painting.

END OF SECTION

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SECTION 13400

PROCESS INSTRUMENTATION

PART 1 GENERAL

1.1 DESCRIPTION

- A. This Section includes the supply and installation of water process instrumentation devices and related equipment.

1.2 SECTION INCLUDES

- A. Level transmitters
- B. Level switches
- C. Limit switch assemblies
- D. Pressure Transmitters
- E. Pressure switch
- F. Magnetic flowmeters

1.3 REFERENCES - CODES AND STANDARDS

- A. NECA (National Electrical Contractors Association) Standard of Installation
- B. NEMA ICS 1 (National Electrical Manufacturers Association) - Industrial Control and Systems: General Requirements.
- C. NEMA ICS 2 (National Electrical Manufacturers Association) - Industrial Control Devices, Controllers and Assemblies.
- D. NEMA ICS 4 (National Electrical Manufacturers Association) - Industrial Control and Systems: Terminal Blocks.
- E. NEMA ICS 5 (National Electrical Manufacturers Association) - Industrial Control and Systems: Control Circuit and Pilot Devices.
- F. NEMA ICS 6 (National Electrical Manufacturers Association) - Industrial Control and Systems: Enclosures.

1.4 SYSTEM DESCRIPTION

- A. Contractor shall provide and install all power and control devices, sensor elements, transmitters, switches, power and control wiring, as indicated on the drawings.
- B. Contractor shall also provide all raceways, conduit, wiring, panel mounting framework and hardware, power circuits, and all appurtenances for monitoring, controlling and alarming of the various functions, for a complete operating system.

- C. Contractor shall provide all raceways, conduits, and wiring between field devices, control panel or cable termination cabinets, and terminate the control and instrumentation cables on suitable termination blocks at the equipment or device and the termination cabinet.

1.5 SUBMITTALS

- A. **Shop Drawings:** Comply with NEMA ICS 1 and submit control panel layouts, point-to-point wiring diagrams, interconnection wiring diagrams, dimensions, and support points, layout of completed assemblies, dimensions, weights, and external power requirements.
- B. **Schematics:** Provide complete elementary and schematic wiring diagrams with wires and terminal block numbered for all control systems. Show all internal and external devices and equipment, control panel devices, etc., in detail on the elementary diagram with all terminal points of such devices and equipment indicated.
- C. **Product Data:**
 - 1. Submit catalog data for each component being furnished showing control characteristics and connection requirements including supply voltage, frequency, electrical load, accuracy, and description of operation, operating instructions, and calibration procedure.
 - 2. For measuring instruments and devices, submit completed ISA S20 forms for each device including physical dimensions manufacturer's recommended upstream and downstream straight piping lengths, recommended location of any pressure taps and estimates of pressure losses through the device.
- D. **Installation Method:** The proposed method of mounting sensors and instruments shall accompany all shop drawings.
- E. **Parts List:** Submit a Parts List with current net prices and a list of recommended spares. **Test Reports:** Indicate procedures and results for field calibration and functionality test results of each assembly and component.
- F. Coordinate and identify all interconnection wiring between motor control panel, field devices, control panels and other devices. Identification tag designations for each wire shall match those shown on the wiring diagrams.
- G. **Factory Testing and Calibration:** All measuring devices and meters shall be factory tested. Provide a certification of calibration from an independent test laboratory. Calibration curves based on factory and/or laboratory testing (see option below) shall be provided for the Engineer's review. Furnish calibration curves in units of output (inches or rpm / gpm) versus measured flow. Upon receipt of the Engineer's review, Contractor may release the meter(s) for shipment to the job site.
 - 1. As an option to laboratory testing each meter, the calibration curves of six (6) "like devices" may be substituted provided the calibration data is available from at least one identical device (pipe size, flow range, and type plus accessories such as extension registers).
- H. **O&M Manuals:** Furnish manufacturer's installation, lubrication, operation and maintenance manuals, bulletins, and spare parts lists.
- I. **Affidavits:** Furnish affidavits from the manufacturers stating that the meters have been properly installed and tested and each is ready for full time operation.

1.6 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Include interconnection wire and cabling information.
- B. Operation and Maintenance Date: Submit bound copies of O&M manuals for each device, including instructions for adjustments, calibration and preventative maintenance.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three (3) years' experience.

1.8 COORDINATION

- A. Coordinate work with installation of systems being controlled.

PART 2 PRODUCTS

2.1 LEVEL TRANSMITTER

- A. Manufacturer:
 - 1. Druck PTX 1290
 - 2. Or approved equivalent.
- B. Product Description: Submersible pressure transmitter calibrated to read fluid column pressure in feet of submergence. Vented polyurethane cable with Kevlar strain relief. IP68 rating to 2,000 feet of submergence.
- C. Sensing element:
 - 1. Titanium body, resistant to corrosive and hazardous chemicals.
 - 2. Flush, PTFE coated elastomeric sensing diaphragm.
 - 3. Micro-machined, piezoresistive sensing element.
- D. Measurement Range: 0-49 feet of water column.
- E. Measurement Accuracy: plus or minus 0.25 percent full scale.
- F. Operating Temperature: minus 20 to plus 60 degrees C.
- G. Electrical Characteristics:
 - 1. Loop powered (2-wire).
 - 2. Current Output: 4-20mA.
- H. Accessories: Druck STE 110 Sensor Termination Enclosure.
 - 1. NEMA 4X enclosure specifically designed for field termination of pressure sensors.
 - 2. Made from PVC with halogen-free, self-extinguishing polycarbonate cover plate.
 - 3. Two (2) integral strain relief cable glands capable of supporting manufacturer's cable with diameter of 0.23 to 0.39 inch.
 - 4. 2-inch pipe mounting kit manufactured from zinc-plated mild steel.
 - 5. Field-replaceable desiccant module with externally visible and desiccant status indicator.

2.2 FLOAT AND LEVEL SWITCHES

- A. Manufacturers:
 - 1. Anchor Scientific - Type SE
 - 2. Flygt - ENM-10
 - 3. Approved equal

- B. General Description:
 - 1. Mercury-free float-type switch, with either an internal magnetic or mechanical switching action
 - 2. All wetted parts of float shall be constructed from non-corrodible material, hermetically sealed and suitable for Class I, Division 1 hazardous environment.
 - 3. Sensing unit housing must be acceptable for mounting in a Class I, Div. 1 hazardous location.
 - 4. Operate in environment temperatures from -15 to +250 degrees Fahrenheit (-25 to 120°C).
 - 5. Output switch shall be capable of conducting a minimum of 5-Amp of current at 120-VAC. Provide two (2) normally open and two (2) normally closed contacts.

2.3 LIMIT SWITCH ASSEMBLIES

- A. Manufacturers:
 - 1. CLA-VAL X105LCW
 - 2. Or approved equal

- B. Contacts shall be rated for 5 Amps at 120-VAC. Provide two (2) normally open and two (2) normally closed contacts.

2.4 PRESSURE TRANSMITTERS

- A. Manufacturers:
 - 1. Rosemount 3051CD
 - 2. Or approved equal

- B. General Description:
 - 1. Pressure transmitter with gage pressure measurement, range 0 to 150 psi, 4-20 mA output, stainless steel flange and drain, stainless steel mounting bracket, LCD display with local operator interface, transient protection terminal block, and high & low level alarms.
 - 2. Certifications: Calibration, material traceability, quality certification for safety, hydrostatic pressure testing.
 - 3. NSF and FM approved.

2.5 PRESSURE SWITCH

- A. Manufacturers:
 - 1. Ashcroft 1279
 - 2. Or approved equal

- B. General Description:
 - 1. Pressure switch with pressure gage, range 96 to 128 psi, 4-20mA output, stainless steel mounting bracket.
 - 2. Gage shall be stem mounted with 4-1/2-inch diameter dial and pulsation damper.
 - 3. Accuracy: +/- 0.5%
 - 4. Adjustable High and Low set point contacts for pump control

5. Contacts shall be rated for 5 Amps at 120-VAC. Provide two (2) normally open and two (2) normally closed contacts.
6. Certifications: Calibration, material traceability, quality certification for safety, hydrostatic pressure testing.
7. NSF and FM approved.

2.6 MAGNETIC FLOWMETERS

- A. Manufacturers:
 1. Rosemount 8705, with 8712 remote transmitter
 2. Or approved equal
- B. General Description:
 1. Flanged flow tube sensor and remote mount transmitter. Neoprene liner, carbon steel flange, two 316 stainless steel measurement electrodes and grounding as required, stainless steel junction box, 316 stainless steel grounding rings. Meter shall be grounded per manufacturer's recommendations.
 2. NSF and FM approved.
 3. Input Voltage: 120-VAC, 60 HZ.
 4. Output: 4-20mA. Suitable for forward and reverse flow indication and totalizing via PLC.

2.7 NAMEPLATES

- A. Instrumentation nameplates of stainless steel shall be engraved or stamped and fastened to the equipment in an accessible location with No. 4 or larger oval head stainless steel screws or drive pins. Name plates shall indicate clearly the following information:
 1. Manufacturer
 2. Date of manufacture
 3. Model and size
 4. Serial number
 5. Equipment nomenclature to be coordinated with the City

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install in accordance with NECA "Standard of Installation" and manufacturer's instructions.
- B. Install enclosures and boxes plumb. Anchor securely to wall and structural supports at each corner.
- C. Install individual control devices and relays in enclosures.
- D. Make electrical wiring interconnections.
- E. Install engraved plastic nameplates.
- F. Provide grounding and bonding of devices.

3.2 ADJUSTING

- A. Each device shall be factory calibrated over its operating range.

- B. Each device shall be field tested, adjusted and tuned to operate with the process loop. Field test results shall be recorded and submitted to the Owner for their records.

3.3 FIELD TESTING

- A. All flow devices shall be field tested against a secondary standard at the normal (or expected) process flow rates.
- B. The Contractor may select, at his option, to either install a second flow device of known calibration in the line to verify flow device calibration or perform fluid capacity tests such as volumetric measurement per unit time.

END OF SECTION

SECTION 15050

COMMON WORK RESULTS FOR PLUMBING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Identification for Plumbing Piping and Equipment.
 - 2. Sleeves.
 - 3. Mechanical sleeve seals.
 - 4. Formed steel channel.

1.2 SUBMITTALS

- A. Shop Drawings: Submit for piping and equipment identification list of wording, symbols, letter size, and color coding for pipe identification and valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
- B. Product Data for Pipe and Equipment Identification: Submit for mechanical identification manufacturers catalog literature for each product required.

PART 2 PRODUCTS

2.1 IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

- A. Plastic Nameplates: Laminated three-layer plastic with engraved black letters on light background color.
- B. Plastic Tags: Laminated three-layer plastic with engraved black letters on light background color, minimum 1-1/2 inches diameter.
- C. Plastic Pipe Markers: Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener. Color and Lettering: Conform to ASME A13.1.
- D. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings. Color and Lettering: Conform to ASME A13.1.
- E. Plastic Underground Pipe Markers: Bright colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4-mil thick, manufactured for direct burial service.

2.2 SLEEVES

- A. Sleeves for Pipes through Non-fire Rated Floors: 18 gage thick galvanized steel.
- B. Sleeves for Pipes through Non-fire Walls and Footings: Steel pipe or 18 gage thick galvanized steel.
- C. Sealant: Acrylic

2.3 FORMED STEEL CHANNEL

- A. Product Description: Galvanized 12 gage thick steel. With holes 1-1/2 inches on center.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings are ready to receive sleeves.

3.2 INSTALLATION - PIPING AND EQUIPMENT IDENTIFICATION

- A. Install plastic nameplates with adhesive.
- B. Install plastic tags with corrosion resistant metal chain.

3.3 INSTALLATION - SLEEVES

- A. Set sleeves in position in forms. Provide reinforcing around sleeves.
- B. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- C. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- D. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with stuffing insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- E. Install stainless steel escutcheons at finished surfaces.

END OF SECTION

SECTION 15051

COMMON WORK RESULTS FOR HVAC

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Identification for HVAC Equipment.
 - 2. Sleeves.
 - 3. Mechanical sleeve seals.
 - 4. Formed steel channel.

1.2 SUBMITTALS

- A. Shop Drawings: Submit for piping and equipment identification list of wording, symbols, letter size, and color coding for pipe identification and valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
- B. Product Data for Pipe and Equipment Identification: Submit for mechanical identification manufacturers catalog literature for each product required.

PART 2 PRODUCTS

2.1 IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

- A. Plastic Nameplates: Laminated three-layer plastic with engraved black letters on light background color.
- B. Plastic Tags: Laminated three-layer plastic with engraved black letters on light background color, minimum 1-1/2 inches diameter.
- C. Plastic Pipe Markers: Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener. Color and Lettering: Conform to ASME A13.1.
- D. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings. Color and Lettering: Conform to ASME A13.1.
- E. Plastic Underground Pipe Markers: Bright colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4-mil thick, manufactured for direct burial service.

2.2 SLEEVES

- A. Sleeves for Pipes through Non-fire Walls: Steel pipe or 18 gage thick galvanized steel.
- B. Sleeves for Rectangular Ductwork: Galvanized steel or wood.
- C. Sealant: Acrylic

2.3 FORMED STEEL CHANNEL

- A. Product Description: Galvanized 12 gage thick steel. With holes 1-1/2 inches on center.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings are ready to receive sleeves.

3.2 INSTALLATION - PIPING AND EQUIPMENT IDENTIFICATION

- A. Install plastic nameplates with adhesive.
- B. Install plastic tags with corrosion resistant metal chain.

3.3 INSTALLATION - SLEEVES

- A. Set sleeves in position in forms. Provide reinforcing around sleeves.
- B. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- C. Where piping or ductwork penetrates wall, close off space between pipe or duct and adjacent work with stuffing insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.

END OF SECTION

SECTION 15060

HANGERS AND SUPPORTS FOR PLUMBING PIPING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Pipe hangers and supports.
 - 2. Hanger rods.
 - 3. Inserts.
 - 4. Flashing.
 - 5. Sleeves.
 - 6. Mechanical sleeve seals.
 - 7. Formed steel channel.

1.2 REFERENCES

- A. American Society of Mechanical Engineers:
 - 1. ASME B31.9 - Building Services Piping.
- B. ASTM International:
 - 1. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers.
- C. American Welding Society:
 - 1. AWS D1.1 - Structural Welding Code - Steel.
- D. FM Global:
 - 1. FM - Approval Guide, A Guide to Equipment, Materials & Services Approved By Factory Mutual Research For Property Conservation.
- E. Manufacturers Standardization Society of the Valve and Fittings Industry:
 - 1. MSS SP 58 - Pipe Hangers and Supports - Materials, Design and Manufacturer.
 - 2. MSS SP 69 - Pipe Hangers and Supports - Selection and Application.
 - 3. MSS SP 89 - Pipe Hangers and Supports - Fabrication and Installation Practices.
- F. Intertek Testing Services (Warnock Hersey Listed):
 - 1. WH - Certification Listings.

1.3 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Shop Drawings: Indicate system layout with location including critical dimensions, sizes, and pipe hanger and support locations and detail of trapeze hangers.
- C. Product Data:
 - 1. Hangers and Supports: Submit manufacturers catalog data including load capacity.

- D. Design Data: Indicate load carrying capacity of trapeze, multiple pipe, and riser support hangers. Indicate calculations used to determine load carrying capacity of trapeze, multiple pipe, and riser support hangers.
- E. Manufacturer's Installation Instructions:
 - 1. Hangers and Supports: Submit special procedures and assembly of components.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years of experience.
- B. Installer: Company specializing in performing Work of this section.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- B. Protect from weather and construction traffic, dirt, water, chemical, and damage, by storing in original packaging.

1.6 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.7 WARRANTY

- A. Furnish five- year manufacturer warranty for pipe hangers and supports.

PART 2 PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

- A. Plumbing Piping - Water:
 - 1. Conform to ASME B31.9.
 - 2. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
 - 3. Hangers for Cold Pipe Sizes 2 inches and Larger: Carbon steel, adjustable, clevis.
 - 4. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hook.
 - 5. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
 - 6. Floor Support for Hot Pipe Sizes 4 inches and Smaller: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
 - 7. Copper Pipe Support: Copper-plated, Carbon-steel ring.

2.2 ACCESSORIES

- A. Hanger Rods: Mild steel threaded both ends, threaded on one end, or continuous threaded.

2.3 INSERTS

- A. Inserts: Malleable iron case of galvanized steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms; size inserts to suit threaded hanger rods.

2.4 FLASHING

- A. Metal Flashing: 26 gage thick galvanized steel.
- B. Metal Counter-flashing: 22 gage thick galvanized steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings are ready to receive sleeves.

3.2 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter affecting bond of sealant material.
- B. Remove incompatible materials affecting bond.
- C. Install backing materials to arrest liquid material leakage.
- D. Do not drill or cut structural members.

3.3 INSTALLATION - INSERTS

- A. Install inserts for placement in concrete forms.
- B. Install inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
- C. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
- D. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut recessed into and grouted flush with slab.

3.4 INSTALLATION - PIPE HANGERS AND SUPPORTS

- A. Install in accordance with ASME 31.9.
- B. Support horizontal piping as scheduled.
- C. Install hangers with minimum 1/2 inch space between finished covering and adjacent work.
- D. Place hangers within 12 inches of each horizontal elbow.
- E. Use hangers with 1-1/2 inch minimum vertical adjustment.

- F. Support riser piping independently of connected horizontal piping.
- G. Provide copper plated hangers and supports for copper piping.
- H. Design hangers for pipe movement without disengagement of supported pipe.
- I. Prime coat exposed steel hangers and supports. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.
- J. Provide clearance in hangers and from structure and other equipment for installation of insulation.

3.5 INSTALLATION - FLASHING

- A. Provide flexible flashing and metal counter-flashing where piping penetrates weather or waterproofed walls, floors, and roofs.
- B. For pipes through outside walls, turn flanges back into wall and caulk, metal counter-flash, and seal.
- C. Adjust storm collars tight to pipe with bolts; caulk around top edge. Use storm collars above roof jacks. Screw vertical flange section to face of curb.

3.6 FIELD QUALITY CONTROL

- A. Section 01450 Testing and Inspection.

3.7 CLEANING

- A. Section 01740: Requirements for cleaning.

3.8 PROTECTION OF FINISHED WORK

- A. Protect adjacent surfaces from damage by material installation.

3.9 SCHEDULES

PIPE HANGER SPACING		
PIPE MATERIAL	MAXIMUM HANGER SPACING Feet	HANGER ROD DIAMETER Inches
Copper Tube, 1-1/4 inches and smaller	6	1/2
Copper Tube, 1-1/2 inches and larger	10	1/2

END OF SECTION

SECTION 15080

PLUMBING INSULATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Plumbing piping insulation, jackets and accessories.
 2. Plumbing equipment insulation, jackets and accessories.

1.2 REFERENCES

- A. ASTM International:
1. ASTM A240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 2. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 3. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 4. ASTM C195 - Standard Specification for Mineral Fiber Thermal Insulating Cement.
 5. ASTM C449 - Standard Specification for Mineral Fiber Hydraulic-Setting Thermal Insulating and Finishing Cement.
 6. ASTM C450 - Standard Practice for Fabrication of Thermal Insulating Fitting Covers for NPS Piping, and Vessel Lagging.
 7. ASTM C534 - Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form.
 8. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation.
 9. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications.
 10. ASTM C585 - Standard Practice for Inner and Outer Diameters of Rigid Thermal Insulation for Nominal Sizes of Pipe and Tubing (NPS System).
 11. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
 12. ASTM C795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel.
 13. ASTM C921 - Standard Practice for Determining the Properties of Jacketing Materials for Thermal Insulation.
 14. ASTM C1136 - Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation.
 15. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 16. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.

1.3 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Product Data: Submit product description, thermal characteristics and list of materials and thickness for each service, and location.
- C. Manufacturer's Installation Instructions: Submit manufacturers published literature indicating proper installation procedures.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Pipe insulation to have documented a maximum flame spread index of 25 and maximum smoke developed index of not exceeding 50 in accordance with ASTM E84.
- B. Pipe insulation manufactured in accordance with ASTM C585 for inner and outer diameters.
- C. Factory fabricated fitting covers manufactured in accordance with ASTM C450.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years of experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years of experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labeled with manufacturer's identification, including product density and thickness.
- B. Protect insulation from weather and construction traffic, dirt, water, chemical, and damage, by storing in original wrapping.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Install insulation only when ambient temperature and humidity conditions are within range recommended by manufacturer.
- B. Maintain temperature before, during, and after installation for minimum period of 24 hours.

1.8 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.9 WARRANTY

- A. Furnish five year manufacturer warranty for man-made fiber.

PART 2 PRODUCTS

2.1 PIPE INSULATION

- A. TYPE P-1: ASTM C547, molded glass fiber pipe insulation.
 - 1. Thermal Conductivity: 0.23 at 75 degrees F
 - 2. Operating Temperature Range: 0 to 850 degrees F
 - 3. Vapor Barrier Jacket: ASTM C1136, Type I, factory applied reinforced foil kraft with self-sealing adhesive joints.
 - 4. Jacket Temperature Limit: minus 20 to 150 degrees F
- B. TYPE P-5: ASTM C534, Type I, flexible, closed cell elastomeric insulation, tubular.
 - 1. Thermal Conductivity: 0.27 at 75 degrees F
 - 2. Operating Temperature Range: Range: Minus 70 to 180 degrees F.

2.2 PIPE INSULATION JACKETS

- A. Stainless Steel Pipe Jacket:
 - 1. ASTM A240 OR ASTM 666 Type 304 stainless steel.
 - 2. Thickness: 0.018 inch thick.
 - 3. Finish: Corrugated.
 - 4. Metal Jacket Bands: 1/2 inch wide; 0.020 inch thick stainless steel.

2.3 PIPE INSULATION ACCESSORIES

- A. Vapor Retarder Lap Adhesive: Compatible with insulation.
- B. Piping 2 inches diameter and larger: Wood insulation saddle, hard maple. Inserts length: not less than 6 inches long, matching thickness and contour of adjoining insulation.
- C. Closed Cell Elastomeric Insulation Pipe Hanger: Polyurethane insert with stainless steel jacket single piece construction with self-adhesive closure. Thickness to match pipe insulation.
- D. Adhesives: Compatible with insulation.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01450 Testing and Inspection: Coordination and project conditions.
- B. Verify piping has been tested before applying insulation materials.
- C. Verify surfaces are clean and dry, with foreign material removed.

3.2 INSTALLATION - PIPING SYSTEMS

- A. Piping Exposed to View in Finished Spaces: Locate insulation and cover seams in least visible locations.
- B. Continue insulation through penetrations of building assemblies or portions of assemblies having fire resistance rating of one hour or less. Provide intumescent firestopping when continuing insulation through assembly. Finish at supports, protrusions, and interruptions.
- C. Piping Systems Conveying Fluids Below Ambient Temperature:
 - 1. Insulate entire system including fittings, valves, unions, flanges, strainers, flexible connections and expansion joints.
 - 2. Furnish factory-applied or field-applied vapor retarder jackets. Secure factory-applied jackets with pressure sensitive adhesive self-sealing longitudinal laps and butt strips. Secure field-applied jackets with outward clinch expanding staples and seal staple penetrations with vapor retarder mastic.
 - 3. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor retarder adhesive or PVC fitting covers.
- D. Hot Piping Systems less than 140 degrees F
 - 1. Furnish factory-applied or field-applied standard jackets. Secure with outward clinch expanding staples or pressure sensitive adhesive system on standard factory-applied jacket and butt strips or both.
 - 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with PVC fitting covers.

3. Do not insulate unions and flanges at equipment, but bevel and seal ends of insulation at such locations.
- E. Inserts and Shields:
1. Piping 2 inches Diameter and Smaller: Install galvanized steel shield between pipe hanger and insulation.
- F. Closed Cell Elastomeric Insulation:
1. Push insulation on to piping.
 2. Miter joints at elbows.
 3. Seal seams and butt joints with manufacturer's recommended adhesive.
 4. When application requires multiple layers, apply with joints staggered.
 5. Insulate fittings and valves with insulation of like material and thickness as adjacent pipe.
- G. Pipe Exposed in Mechanical Equipment Rooms or Finished Spaces: Finish with stainless steel jacket.
- H. Piping Exterior to Building: Provide vapor retarder jacket. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe, and finish with glass mesh reinforced vapor retarder cement. Cover with stainless steel jacket with seams located at 3 or 9 o'clock position on side of horizontal piping with overlap facing down to shed water or on bottom side of horizontal piping.
- I. Heat Traced Piping Interior to Building: Insulate fittings, joints, and valves with insulation of like material, thickness, and finish as adjoining pipe. Size large enough to enclose pipe and heat tracer.
- J. Prepare pipe insulation cover for finish painting.

3.3 SCHEDULES

PIPING SYSTEM	INSULATION TYPE	PIPE SIZE	INSULATION THICKNESS inches
Domestic Hot Water Supply and Recirculation	P-1, P-5	2 inches and smaller	1.0

END OF SECTION

SECTION 15100

WATER UTILITY FITTINGS AND APPURTENANCES

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work included: This Section includes the supply and installation of valves, fittings and related equipment for site water distribution that is not otherwise specified in Section 02071 – Water Mains and Services or 02071SP – Water Mains and Services Special Provisions. These items are generally not included in typical domestic water distribution. All parts shall be domestic, not imported.
- B. Related work described elsewhere:
 - 1. Section 02071 – Water Mains and Services
 - 2. Section 02071SP – Water Mains and Services Special Provisions

1.2 SECTION INCLUDES

- A. Flanged coupling adapters
- B. Dismantling joints
- C. Mechanical-joint tapping sleeves
- D. Cutting-in sleeves
- E. Flexible-expansion joints
- F. Sleeve-type flexible couplings
- G. Flow control and pressure relief valve
- H. Air- Vacuum And Release Valves
- I. Flexible joint
- J. Ductile iron pipe spools
- K. Brass and bronze components
- L. Bolts, gaskets, glands, nuts

1.3 REFERENCES

The materials and work performed in this Section shall conform to the applicable standards (latest version) of:

- A. ANSI - The American National Standards Institute
- B. ASTM - The American Society for Testing and Materials

- C. AWWA - American Water Works Association
- D. NSF – National Sanitation Foundation
- E. MSS - Manufacturers Standardization Society

1.4 QUALITY ASSURANCE

- A. Qualifications of manufacturers:
 - 1. The material shall be the product of a supplier regularly engaged in the manufacturing of pipe and plumbing products.
 - 2. All materials shall be new and of current manufacture and shall be guaranteed against defects of workmanship in accordance with the General Conditions.
- B. Qualification of installers:
 - 1. For the actual assembly, installation, and testing of the Work of this Section, uses only thoroughly trained and experienced personnel who are completely familiar with the requirements for this Work and with the installation recommendations of the manufacturers of the specified items.
 - 2. In acceptance or rejection of installed materials, no allowance will be made for lack of skill on the part of installers.

1.5 SUBMITTALS

- A. Shop drawings: In accordance with the provisions of Section 01330 of these Specifications, submit complete shop drawings including layouts, elevations and details.
- B. Material list: In accordance with the provisions of Section 01330 of the Specifications, submit with the shop drawings a complete list of all materials and equipment proposed to be furnished and installed under this portion of the work, giving manufacturer's name, catalog number, dimensions, manufacturing standards, product data, specifications, and catalog cuts for each item where applicable.
- C. Manufacturer's recommendations: Accompanying the materials list and shop drawings, submit copies of the manufacturers' current recommended method of installation.

1.6 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the installed work and materials of all other trades.
- B. The Contractor shall provide and use proper implements, tools and facilities for the safe and proper handling and protection of the material.
- C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the City and at no additional cost to the City.
- D. When damaged material cannot be repaired to the satisfaction of the City, it shall be removed from the job.
- E. Material shall be stored in a safe location, protected from the elements where damage therefrom could result.

PART 2 PRODUCTS

2.1 GENERAL

- A. All materials shall conform to sizes, capacity, quality and quantities as shown on the drawings or described in these Specifications. Materials shall be from new stock, delivered in good condition, no damaged stock shall be used.
- B. Where no method of tests for materials is specified, the latest test specified by ASTM shall be followed.
- C. After delivery to the site, all materials shall be carefully unloaded, protected against breakage, rusting, and accumulation of foreign matter, disintegration and injury. The Contractor shall be responsible for all lost or damaged material supplied and work done under this contract.
- D. Rubber component gasket material shall be EPDM.
- E. All parts shall be domestic, not imported.
- F. Lining and coating shall be in accordance with Section 09900 Paints and Coatings unless specified otherwise. Lining shall be NSF 61 certified.

2.2 FLANGED COUPLING ADAPTERS

- A. Flanged coupling adapters shall have ASTM A536 ductile-iron flange bodies, with flanges complying with ANSI Class 125 and 150 bolt circles.
- B. Compression ends shall have wedge gasket for efficient sealing. Gasket material shall be EPDM.
- C. Miscellaneous metalwork items shall be Type 316 stainless steel.
- D. Pipe ends shall be properly prepared for accepting the flange adapter in accordance with manufacturer's recommendations. The outside diameter and pipe type shall be verified prior to ordering adapters.
- E. Flange adapters shall be lined and coated with fusion bonded epoxy.
- F. Flange coupling adapters shall be restrained. Use of tie rods is not acceptable.
- G. Manufacturers:
 - 1. ROMAC Industries Inc., Model RFCA
 - 2. Krausz Hymax Grip Flange Adaptor
 - 3. Or approved equal

2.3 DISMANTLING JOINTS

- A. Dismantling joints shall have ASTM A536 ductile-iron flange bodies, with flanges complying with ANSI Class 125 and 150 bolt circles, and telescoping spool piece with up to 5 inches of travel.
- B. Compression ends shall have wedge gasket for efficient sealing. Gasket material shall be EPDM.

- C. Miscellaneous metalwork items shall be Type 316 stainless steel.
- D. Dismantling joint shall be lined and coated with fusion bonded epoxy.
- E. Dismantling joint shall be restrained. Use of tie rods is not acceptable.
- F. Manufacturers:
 - 1. ROMAC Industries Inc., Model DJ405
 - 2. JCM Industries, Model 309
 - 3. Or approved equal

2.4 MECHANICAL-JOINT TAPPING SLEEVES

- A. Ductile-iron properties shall be in accordance with ASTM A536 and AWWA C153. Coatings shall comply with NSF-61, NSF-372, and AWWA C104. Tapping sleeve shall comply with MSS SP-111.
- B. Manufacturers:
 - 1. Mueller
 - 2. Tyler-Union Waterworks
 - 3. Or approved equal

2.5 CUTTING-IN SLEEVES

- A. Cutting-in sleeves shall be ductile-iron. Flanges shall comply with AWWA C110. Mechanical joint ends shall comply with AWWA C111 and shall be designed to receive oversize gray or ductile iron pipe. Provide ductile iron retainer glands to restrain the mechanical joint ends.
- B. Manufacturers:
 - 1. Mueller
 - 2. Tyler-Union Waterworks
 - 3. Or approved equal

2.6 FLEXIBLE-EXPANSION JOINTS

- A. Flexible expansion joints shall consist of an expansion joint designed and cast as an integral part of a ball and socket type flexible joint, having a minimum per ball deflection of 20°. The flexible expansion fitting shall not expand or exert an axial imparting thrust under internal water pressure. The flexible expansion fitting shall not increase or decrease the internal water volume as the unit expands or contracts.
- B. Flexible expansion joints shall be force-balanced, have flanged ends, and shall be fusion bonded epoxy coated inside and outside.
- C. Each flexible expansion joint shall have a 6-inch minimum expansion. Vertical offset capability shall be minimum of 16.5-inches.
- D. Polyethylene sleeves, meeting ANSI/AWWA C105/A21.5, shall be included for direct buried applications.
- E. Manufacturers:
 - 1. EBAA-IRON Flex -Tend Force Balanced
 - 2. Or approved equal

2.7 SLEEVE-TYPE FLEXIBLE COUPLINGS

- A. Sleeve-type flexible couplings shall be provided where shown on the Contract Documents. Sleeve-type flexible couplings shall be of steel, without pipe stop, and shall be of sizes to fit the pipe and fittings shown. The middle ring shall be not less than 1/4-inch in thickness and shall be a minimum of 7 inches long. The followers shall be single-piece contoured mill section welded and cold-expanded as required for the middle rings. They shall be of sufficient strength to accommodate the number of bolts necessary to obtain adequate gasket pressures without excessive rolling. The shape of the follower shall be of such design as to provide positive confinement of the gasket.
- B. Sleeve-type flexible couplings shall be lined and coated with fusion bonded epoxy, minimum 12 mils.
- C. Pipe Preparation. The ends of the pipe, where specified or shown, shall be prepared for flexible steel couplings. Plain ends for use with couplings shall be smooth and round for a distance of 12 inches from the ends of the pipe, with outside diameter not more than 1/64-inch smaller than the nominal outside diameter of the pipe. The middle ring shall be tested by cold-expanding a minimum of one percent beyond the yield point, to proof-test the weld to the strength of the parent metal. The weld of the middle ring shall be subjected to air test for porosity.
- D. Gaskets. Gaskets for sleeve-type couplings shall be rubber-compound material that will not deteriorate from age or exposure to air under normal storage or use conditions. The gaskets shall be immune to attack by impurities normally found in water, wastewater, and wet well ventilation air, and shall be suitable for use with temperatures at 180 degrees F. Gaskets for potable water use shall be EPDM. All gaskets shall meet the requirements of ASTM D2000, AA709Z, meeting Suffix B13 Grade 3, except as noted above.
- E. Sleeve-type flexible couplings shall be restrained. Tie rods shall be provided only when other restraint systems are not available. Tie rods for all sleeve-type flexible couplings and rated to sustain the force developed by 1 1/2 times the test pressure. Tie rods shall be sized and provided in accordance with AWWA M11. All tie rods shall be Type 316 stainless steel.
- F. Buried couplings shall include stainless steel nuts, bolts, washers, and tie rods.
- G. Sleeve-type couplings shall be sized for specific pipe material indicated.
- H. Reducing and/or transition couplings shall be used to join new pipe to existing pipe where shown on the Drawings and shall be restrained. CONTRACTOR shall field verify existing pipe dimensions prior to ordering materials.
- I. Where cement mortar coated pipe is to be provided with couplings, cement mortar coatings shall be left back for coupling. Pipe shall be coated with amine cured epoxy at location of coupling and cement mortar coating intersection. Pipe lining shall be repaired due to welding of tie rods to piping.
- J. For storm drain service, sleeve-type flexible couplings shall be manufactured by, or approved equal:
 - 1. Dresser, Style 38 or 138
 - 2. Smith-Blair, Style 411

- K. For other services, sleeve-type flexible couplings shall be manufactured by Krausz, Model Hymax Grip; EBAA Mega Coupling Series 3800.

2.8 FLOW CONTROL AND PRESSURE RELIEF VALVE

- A. The valve shall modulate to maintain upstream pressure above a preset minimum when activated by a solenoid control. The valve shall energize to open. The solenoid shall also close the valve tight. The valve shall also have a pressure relief override function.
- B. The valve shall be hydraulically operated, single diaphragm-actuated, and globe or angle pattern. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure. Packing glands and/or stuffing boxes are not permitted and there shall be no pistons operating the main valve or pilot controls. The diaphragm assembly shall contain a non-magnetic 303 stainless steel stem of sufficient diameter to withstand high hydraulic pressures shall be fully guided at both ends by a bearing in the valve cover and an integral bearing in the valve seat. The seat shall be a solid, one-piece design and shall have a minimum of a five-degree taper on the seating surface for a positive, drip-tight shut off. No center guides shall be permitted. The stem shall be drilled and tapped in the cover end to receive and affix such accessories as may be deemed necessary.
- C. Main valve body and cover shall be made of ductile iron and main valve trim shall be stainless steel. The valve shall contain a resilient, synthetic rubber disc constructed of EPDM, with a rectangular cross-section contained on three and one-half sides by a disc retainer and forming a tight seal against a single removable seat insert. No O-ring type discs (circular, square, or quad type) shall be permitted as the seating surface.
- D. The disc guide shall be of the contoured type to permit smooth transition of flow and shall hold the disc firmly in place. The disc retainer shall be of a sturdy one-piece design capable of withstanding opening and closing shocks. It must have straight edge sides and a radius at the top edge to prevent excessive diaphragm wear as the diaphragm flexes across this surface. No hourglass-shaped disc retainers shall be permitted and no V-type or slotted type disc guides shall be used.
- E. The valve shall have Class 150 flanged ends.
- F. The valve shall be rated 150 psi.
- G. The valve shall be fusion bonded epoxy lined and coated.
- H. The main valve seat and the stem bearing in the valve cover shall be removable. All necessary repairs and/or modifications other than replacement of the main valve body shall be possible without removing the valve from the pipeline.
- I. The diaphragm shall consist of nylon fabric bonded with synthetic rubber compatible with the operating fluid. The center hole for the main valve stem must be sealed by the vulcanized process or a rubber grommet sealing the center stem hole from the operating pressure. The diaphragm must withstand a Mullins Burst Test of a minimum of 600 psi per layer of nylon fabric and shall be cycle tested 100,000 times to insure longevity.
- J. The pressure relief pilot shall be a direct-acting, adjustable and spring-loaded diaphragm valve designed to permit flow when controlling pressure exceeds the adjustable spring setting. Pilot control sensing shall be upstream of the pilot system strainer so accurate control may be maintained if the strainer is partially blocked. A full range of spring settings

shall be available in ranges from 0-450 psi. Pressure relief pilot shall have stainless steel trim, pressure rating of 400psi, cooper tube and brass fittings, with best pressure adjustment range of 20-200psi.

- K. Valve shall also include an altitude valve to control the high water level in the tank without the use of floats or other devices. The altitude valve shall have a position indicator and allow for one-way flow and be hydraulically operated and pilot controlled. It shall be non-throttling and remain fully open until the shut-off point is reached.
- L. Solenoid enclosure shall be NEMA 4 (watertight). Solenoids shall be 120 VAC.
- M. Flow control and pressure relief valve shall be Cla-Val Co. Model No.610-CU BKCX where X=pressure relief override to be solenoid controlled. No substitution allowed.

2.9 COMBINATION AIR- VACUUM AND AIR-RELEASE VALVES

- A. Air and vacuum valves shall be capable of venting large quantities of air while pipelines are being filled, and allowing air to re-enter while pipelines are being drained. They shall be of the size indicated, with flanged or screwed ends to match piping. Bodies shall be of high-strength cast iron and coated in accordance with Section 09900. The float, seat, and moving parts shall be constructed of Type 316 stainless steel. Seat washers and gaskets shall be of a material insuring water tightness with a minimum of maintenance. Rubber materials shall be EPDM. Valves shall be designed for minimum 150 psi water working pressure, unless otherwise indicated.
- B. Manufacturers, or Equal
 1. APCO (Valve and Primer Corporation)
 2. Val-Matic (Valve and Manufacturing Corporation)

2.10 FLEXIBLE JOINT

- A. The flexible joint shall be installed adjacent to mechanical equipment to isolate mechanical vibration, compensate for alignment/offset, and absorb pipe movement/stress.
- B. The flexible joint shall be of a single open arch spool type design with molded integral flanges. It shall be constructed of woven nylon fabric and nylon tire cord in a fabric matrix bonded with elastomer and reinforced with wire.
- C. Elastomer shall be EPDM.
- D. Control unit configuration shall be control rods made of carbon steel with backing rings. Provide 4 control rods per expansion joint.
- E. Flexible joint shall be suitable for 150 psi operating pressure.
- F. Flexible joint shall have 8" neutral length.
- G. Manufacturer shall be Proco Series 230, Style 231 or approved equal

2.11 DUCTILE IRON PIPE SPOOLS

- A. Ductile iron pipe spools shall have the same lining, coating, and pressure rating as the adjoining pipe. Spools shall be provided in accordance with the same ANSI and AWWA

standards as ductile-iron-pipe as specified in Section 02071. Joints and flanges shall be the same bolt pattern and have the same pressure rating as the adjoining joints.

- B. Ductile iron pipe spools may be epoxy lined and coated, subject to prior approval from the City. Epoxy coating shall be provided in accordance with 2.14 EPOXY COATINGS of Section 02071 – Water Mains and Services.
- C. Manufacturers:
 - 1. US Pipe
 - 2. Tyler-Union
 - 3. Or approved equal

2.12 BRASS AND BRONZE COMPONENTS

- A. Brass and bronze components of valves and appurtenances that have surfaces in contact with the water shall be alloys containing less than 16 percent zinc and 2 percent aluminum.
- B. Approved alloys are ASTM B61, B62, B98 (alloy A, B, or D), B139 (alloy A), B143 (alloy 1-B), B164, B194, B292 (alloy A), and B127.
- C. Stainless steel alloy 18-8 may be substituted for bronze at the option of the manufacturer and with the approval of the City.

2.13 BOLTS, GASKETS, GLANDS, NUTS

- A. Use type-316 stainless steel bolts, nuts, and washers for all bolted connections. Bolts shall be Type 316 stainless steel, Class 2, conforming to ASTM A193 for bolts and ASTM A194 for nuts. All rubber gaskets and rings shall be ethylene-propylene-diene -monomer (EPDM). Gaskets for flanged connections shall be suitable for the pressure, temperature, and chemical characteristics of the fluid handled. Flange gaskets shall be full-face rubber.
- B. Bolts, nuts, washers, and any other metallic elements exposed to the soil shall be coated with bitumastic in accordance with Section 02071, Part 2.16, entitled "Bitumastic".

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
 - 2. Verify that all materials may be installed in accordance with all pertinent codes and regulations, the original design, and the referenced standards.
- B. Discrepancies:
 - 1. In the event of discrepancy, immediately notify the Engineer.
 - 2. Do not proceed with installation in area of discrepancy until all such discrepancies have been fully resolved.

3.2 INSTALLATION

- A. General: Install all materials in strict accordance with the manufacturer's recommendations as approved by the Engineer.
- B. Before installation, carefully clean valves and fittings of all foreign material, adjust stuffing boxes, and inspect valves in open and closed positions. Install valves in accordance with the applicable portions of these Specifications. Unless otherwise indicated, install valves with the stem vertical. Mount horizontal valves in such a manner that adequate clearance is provided for operation. Installation practices shall conform to manufacturer's recommendations.
- C. Prior to installing flanged valves or fittings, the flange faces shall be thoroughly cleaned. After cleaning, insert the gasket and tighten the nuts progressively and uniformly. If flanges leak under pressure, loosen the nuts, reseal or replace the gasket, retighten the nuts, and retest the joint. Joints must be watertight at test pressures before acceptance.
- D. Thoroughly clean threads of screwed joints by wire brushing, swabbing, or other approved method. Apply approved joint compound to threads prior to making joint. Joints shall be watertight at test pressures before acceptance.
- E. Anchor bolts: Anchor bolts shall be used for floor stands, stem guides, etc., and shall be cast in place during concrete placement. Threads shall be protected and shall be cleaned before the nuts are attached and tightened.
- F. Buried valves shall have a loose polyethylene encasement.

3.3 TESTS

- A. General: Upon completion of this portion of the Work, and prior to its acceptance by the City, make all required tests and secure all required approvals from agencies having jurisdiction.
- B. Testing: Valves and fittings and related materials will be tested at the same time that the adjacent pipeline is tested. Joints shall show no visible leakage under test. Repair joints that show signs of leakage prior to final acceptance. If there are any special parts of control systems or operators that might be damaged by the pipeline test, they shall be properly protected. The Contractor will be held responsible for any damage caused by the testing.

3.4 INSTRUCTIONS

- A. Instruction of City's personnel shall be in accordance with Division 1.

END OF SECTION

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SECTION 15105

PIPES AND TUBES FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Pipe and pipe fittings for the following systems:
1. Domestic water piping, within 5 feet of building.
 2. Unions and flanges.
 3. Underground pipe markers.
 4. Bedding and cover materials.

1.2 REFERENCES

- A. American Society of Mechanical Engineers:
1. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings.
 2. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.
 3. ASME B16.23 - Cast Copper Alloy Solder Joint Drainage Fittings (DWV).
 4. ASME B16.26 - Cast Copper Alloy Fittings for Flared Copper Tubes.
 5. ASME B16.29 - Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV.
 6. ASME B31.9 - Building Services Piping.
- B. ASTM International:
1. ASTM B32 - Standard Specification for Solder Metal.
 2. ASTM B42 - Standard Specification for Seamless Copper Pipe, Standard Sizes.
 3. ASTM B43 - Standard Specification for Seamless Red Brass Pipe, Standard Sizes.
 4. ASTM B75 - Standard Specification for Seamless Copper Tube.
 5. ASTM B88 - Standard Specification for Seamless Copper Water Tube. ASTM B251 - Standard Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube.
 6. ASTM B280 - Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service.
 7. ASTM B302 - Standard Specification for Threadless Copper Pipe, Standard Sizes.
 8. ASTM B584 - Standard Specification for Copper Alloy Sand Castings for General Applications.

1.3 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Shop Drawings: Indicate layout of piping systems, including equipment, critical dimensions, and sizes.
- C. Product Data: Submit data on pipe materials and fittings. Submit manufacturers catalog information.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ASME B31.9 code for installation of piping systems and ASME Section IX for welding materials and procedures.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years of experience.
- B. Installer: Company specializing in performing work of this section.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Furnish temporary end caps and closures on piping and fittings. Maintain in place until installation.
- B. Protect piping from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Do not install underground piping when bedding is wet or frozen.

1.8 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.9 COORDINATION

- A. Coordinate installation of buried piping with trenching.

PART 2 PRODUCTS

2.1 DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING

- A. Copper Tubing: ASTM B88, Type L, annealed.
 - 1. Fittings: ASME B16.18, cast copper, or ASME B16.22, wrought copper.
 - 2. Joints: Compression connection or Brazed, AWS A5.8 BCuP silver/phosphorus/copper alloy with melting range 1190 to 1480 degrees F.

2.2 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tubing: ASTM B88, Type L, drawn.
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints: ASTM B32, Alloy Grade Sb5 tin-antimony, or Alloy Grade Sn95 tin-silver, lead free solder

2.3 UNIONS AND FLANGES

- A. Unions for Pipe 2 inches and Smaller:
 - 1. Copper Piping: Class 150, bronze unions with soldered.
 - 2. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify excavations are to required grade, dry, and not over-excavated.
- B. Verify trenches are ready to receive piping.

3.2 PREPARATION

- A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and dirt on inside and outside before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

3.3 INSTALLATION - BURIED PIPING SYSTEMS

- A. Verify connection size, location, and invert are as indicated on Drawings.
- B. Establish elevations of buried piping with not less than two ftof cover.
- C. Excavate pipe trench in accordance with Specifications.
- D. Install pipe to elevation as indicated on Drawings.
- E. Route pipe in straight line.
- F. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- G. Install plastic ribbon tape continuous over top of pipe
- H. Install trace wire continuous over top of pipe.

3.4 INSTALLATION - ABOVE GROUND PIPING

- A. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- B. Install piping to maintain headroom without interfering with use of space or taking more space than necessary.
- C. Group piping whenever practical at common elevations.
- D. Sleeve pipe passing through partitions, walls and floors.
- E. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- F. Provide access where valves and fittings are not accessible.
- G. Install non-conducting dielectric connections wherever jointing dissimilar metals.

- H. Slope piping and arrange systems to drain at low points.
- I. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.
- J. Insulate exterior piping.
- K. Install pipe identification.

3.5 FIELD QUALITY CONTROL

- A. Test domestic water piping system in accordance with local authority having jurisdiction.

3.6 CLEANING

- A. Section 01740: Requirements for cleaning.
- B. Clean and disinfect domestic water distribution system.

END OF SECTION

SECTION 15410
PLUMBING FIXTURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Emergency Combination Shower with Eye and Face Wash.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ANSI Z358.1 - Emergency Eyewash and Shower Equipment.

1.3 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Product Data: Submit catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.
- C. Manufacturer's Installation Instructions: Submit installation methods and procedures.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit fixture, trim, exploded view and replacement parts lists.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. ANSI Standard: Comply with ANSI Z358.1, "Emergency Eyewash and Shower Equipment."
- C. NSF Standard: Comply with NSF 61, "Drinking Water System Components - Health Effects," for fixture materials that will be in contact with potable water.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years' experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Accept fixtures on site in factory packaging. Inspect for damage.
- B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.8 WARRANTY

- A. Furnish five year manufacturer warranty for plumbing fixtures.

PART 2 PRODUCTS

2.1 MANUFACTURERS:

- A. Bradley S19-314BFSS
- B. Guardian GBF 1994
- C. Substitutions: Permitted, Approved Equal.

2.2 EMERGENCY COMBINATION SHOWER WITH EYE AND FACE WASH

- A. All Stainless Steel construction
- B. Shower: ANSI Z358.1; free standing, self-cleaning, non-clogging stainless steel deluge shower head, instant action stay open valve actuated by rigid stainless steel pull rod.
- C. Eyewash/Facewash: ANSI Z358.1; stainless steel bowl with elbow, 1-1/4 inch pipe pedestal with floor flange, instant action stay open valve actuated by push flag and foot pedal, spray head, dust cover assembly, and tailpiece and P-trap.
- D. Supply and Waste Piping: 1-1/4 inch supply water connection. Drain to grade.
- E. Thermostatic tempering valve - Rated for emergency shower and eyewash water flow. Lead free construction with mixed water temperature factory set at 85 degrees F (adjustable).
- F. Furnish universal emergency sign.
- G. Barrier Free Configuration

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify walls and floor finishes are prepared and ready for installation of fixtures.
- B. Verify electric power is available and of correct characteristics.

3.2 PREPARATION

- A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.3 INSTALLATION

- A. Install components level and plumb.
- B. Install and secure fixtures in place with bolts per manufacturer's recommendations..
- C. Seal fixtures to floor surfaces with sealant, color to match fixture.

3.4 INTERFACE WITH OTHER PRODUCTS

- A. Review millwork shop-drawings. Confirm location and size of fixtures and openings before rough in and installation.

3.5 CLEANING

- A. Section 01740: Final cleaning.
- B. Clean plumbing fixtures and equipment.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Do not permit use of fixtures before final acceptance.

3.7 SCHEDULES

- 1. Emergency Eye and Face Wash: Standard: 38 inches to receptor rim.
- 2. Emergency Shower: Standard: 84 inches to bottom of head.

END OF SECTION

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SECTION 15480
ELECTRIC DOMESTIC WATER HEATERS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Commercial electric water heaters.

1.2 REFERENCES

- A. American Society of Heating, Refrigerating and Air-Conditioning Engineers:
 - 1. ASHRAE 90.1 - Energy Standard for Buildings Except Low-Rise Residential Buildings.
- B. American Society of Mechanical Engineers:
 - 1. ASME PTC 25 - Pressure Relief Devices.
 - 2. ASME Section VIII - Boiler and Pressure Vessel Code - Pressure Vessels.

1.3 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Product Data: Submit dimensioned drawings of water heaters indicating components and connections to other equipment and piping. Submit electrical characteristics and connection locations.
- C. Manufacturer's Installation Instructions: Submit mounting and support requirements.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit replacement part numbers and availability.

1.5 QUALITY ASSURANCE

- A. Conform to ASME Section VIII for construction of water heaters. Provide boilers registered with National Board of Boiler and Pressure Vessel Inspectors.
- B. Water Heater Performance Requirements: Equipment efficiency not less than prescribed by ASHRAE 90.1.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years of experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years of experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Accept water heaters on site in original labeled cartons. Inspect for damage.
- B. Protect tanks with temporary inlet and outlet caps. Maintain caps in place until installation.

1.8 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.9 WARRANTY

- A. Furnish ten year manufacturer warranty for water storage tanks.

PART 2 PRODUCTS

2.1 Manufacturers:

- A. State PCE 82 20RTA
- B. A O Smith ECT-80
- C. Substitutions: Permitted, Approved Equal.

2.2 COMMERCIAL ELECTRIC WATER HEATERS

- A. Type: Factory-assembled and wired, electric, vertical storage.
- B. Capacity:
 - 1. As indicated on Plans.
- C. Tank: Glass lined welded steel, thermally insulated with minimum 2 inches glass fiber or polyurethane encased in corrosion-resistant steel jacket; baked-on enamel finish. Insulation to R value to meet current California Energy Code requirements.
- D. Controls: Automatic immersion water thermostat; externally adjustable temperature range from 60 to 180 degrees F, flanged or screw-in nichrome elements, high temperature limit thermostat.
- E. Accessories: Brass water connections and dip tube, drain valve, magnesium anode, and ASME rated temperature and pressure relief valve.
- F. Heating Elements: Flange-mounted immersion elements; individual elements sheathed with corrosion-resistant metal alloy, rated less than 75 Watts per square inch.

2.3 ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Disconnect Switch: Factory mount disconnect switch adjacent to equipment.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Maintain manufacturer's recommended clearances around and over water heaters.
- B. Install water heater on concrete housekeeping pad, see detail on plan sheet S-501 for pad construction requirements.
- C. Install the following piping accessories.
 - 1. On cold water in connection:
 - a. Strainer.
 - b. Pressure gage.
 - c. Shutoff valve.
 - 2. On hot water out connection:
 - a. Thermometer well and thermometer.
 - b. Pressure gage.
 - c. Shutoff valve.
- D. Install discharge piping from relief valves and drain valves to terminate outside building six inches above grade.
- E. Install water heater trim and accessories furnished loose for field mounting.
- F. Install electrical devices furnished loose for field mounting.

END OF SECTION

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SECTION 15800
HVAC AIR DISTRIBUTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fans.
 - 2. No ductwork or ductwork accessories.

1.2 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Shop Drawings: Submit drawings, drawn to scale not smaller than 1/8-inch equals 1 foot, on drawing sheets same size as Contract Documents, indicating:
 - 1. Fabrication, assembly, and installation details, including plans, elevations, sections, details of components, and attachments to other work.
 - 2. Equipment.
 - 3. Penetrations through walls.
 - 4. Supports, including methods for building attachment.
- C. Product Data:
 - 1. Submit sizes, capacities, materials, controls and connections to other work.
 - 2. Submit catalog performance ratings, construction, electric and duct connections, flashing and dimensions for fans and exhausters.
- D. Operation and Maintenance Data: Submit instructions for lubrication, motor and drive replacement, spare parts lists, and wiring diagrams.
- E. Field Quality Control Reports
- F. Manufacturer's Installation Instructions: Submit relevant instructions.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit instructions for filter replacement, spare parts lists, and wiring diagrams.

PART 2 PRODUCTS

2.1 PROPELLER WALL FANS

- A. Manufacturers:
 - 1. Greenheck
 - 2. Loren Cook
 - 3. Substitutions: Permitted, Approved Equal.
- B. Impeller: Shaped steel or steel reinforced aluminum blade with hubs, statically and dynamically balanced, locked to shaft, directly connected to motor.

- C. Frame: One piece, square steel with die formed venturi orifice, mounting flanges and supports, with baked enamel finish.
- D. Motors: Type: Open drip proof
- E. Back-draft Damper: Multiple blade with offset hinge pin, blades linked.
- F. Fan Housing: Through wall housing with safety screen at air intake to comply with OSHA regulations.
- G. Hood: Weather shield, to exclude rain and snow.
- H. Fan Speed controller
- I. Electrical Disconnect.
- J. Line voltage thermostat, 40F to 120F range, wall mounted
- K. Override timer, manual, 0 to 90 minutes, with contactors rated for motor amperage load

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify sizes of equipment connections before fabricating transitions.
- B. Verify equipment installations are ready for accessories.

3.2 INSTALLATION

- A. Install back-draft dampers on exhaust fans.
- B. During construction install temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.
- C. Do not operate fans until ductwork is clean, bearings lubricated, and fan has been test run under observation.
- D. Install fans with resilient mountings and flexible electrical leads.

END OF SECTION

SECTION 15950

TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Testing of air systems.

1.2 SUBMITTALS

- A. Section 01330: Submittal procedures.
- B. Draft Reports: Submit for review prior to final acceptance of Project.
- C. Test Reports: Submit prior to final acceptance of Project and for inclusion in operating and maintenance manuals. Assemble in soft cover, letter size, 3-ring binder, with table of contents page and tabs, and cover identification. Include reduced scale drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.

1.3 QUALITY ASSURANCE

- A. Report Forms: AABC MN-1 National Standards for Total System Balance forms or NEBB forms.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

- A. Before starting work, verify systems are complete and operable.
- B. Report defects, deficiencies, or abnormal conditions in mechanical systems preventing system balance.
- C. Beginning of work means acceptance of existing conditions.

3.2 INSTALLATION TOLERANCES

- A. Air Handling Systems: Adjust to within plus or minus 10 percent of design for exhaust systems.

3.3 AIR SYSTEM PROCEDURE

- A. Adjust fans to deliver design exhaust air quantities within previously stated tolerances.
- B. Make air flow rate measurements.
- C. Measure static and total air pressure across fan.

3.4 FIELD QUALITY CONTROL

- A. Verify recorded data represents actually measured or observed conditions.
- B. Permanently mark settings of adjustment devices. Set and lock memory stops.

END OF SECTION

SECTION 16050

GENERAL ELECTRICAL PROVISIONS

PART 1 GENERAL

1.1 INTENT

- A. It is the intent of these specifications that all electrical work specified herein, be coordinated as required with the work of all other trades identified in other divisions of the specifications and the drawings, so that all installations shall operate as designed. All systems shall be completely assembled, tested, adjusted, and demonstrated to be ready for operation in compliance with the requirements of the Contract Documents before acceptance by the Owner and Engineer.
- B. Electrical system layout indicated on the drawings is generally diagrammatic. Locations of outlets and equipment shall be governed by architectural, structural and mechanical conditions and obstructions. Any reasonable change in location of outlets and equipment prior to the rough in shall be done without additional expense to the Owner. This does not apply to equipment, which is located by dimensions on the drawings. Equipment shall be located within 1/8 inch of the dimensional location indicated on the drawings unless otherwise permitted by the Owner or Engineer. The Contractor shall verify in the field all dimensions and clearances affecting the installation of his work in relation to established datum, to building openings and clearances, and to the work of other trades. Should interferences occur which will necessitate any deviation from the layout or dimensions indicated, the Owner or Engineer shall be notified and any changes approved before proceeding with the work.
- C. Rigid components such as bus, bus duct, throat connection, and enclosures shall be aligned and connected with special care to prevent excessive stress in joints, supports, and connections. Installations of all equipment shall be straight and plumb to building structures.
- D. Equipment with moving parts such as switches, circuit breakers, and switch operating mechanisms shall be carefully aligned to ensure free mechanical operation.

1.2 SUMMARY

- A. The work included under these specifications shall include furnishing and the installation of new, specified materials and equipment and the providing of engineering data, accessories, and field services as stipulated herein and in accordance with the Contract Documents.

1.3 ELECTRICAL INTERFACE

- A. Electrical Contractor shall furnish all conduit wiring and electrical devices to interconnect all mechanical systems, fire alarm systems and controls including, but not limited to, duct mounted smoke detectors, power supplies, interconnecting wiring, and interlocks. Electrical Contractor shall also provide all conduit, wire, and terminations for the Instrumentation and Controls equipment specified in Section 40 91 23.

1.4 HAZARDOUS WASTE

- A. Electrical Contractor shall be responsible for effecting and coordinating safe disposal of all electrical equipment removed or renovated under this contract that contains recognized hazardous materials including, but not limited to, the following list:
 - 1. Fluorescent lamps.
 - 2. Fluorescent lamp ballasts.
 - 3. Oil-filled transformers and equipment containing PCBs.
- B. Electrical Contractor shall submit all documents, chain of custody and receipts confirming proof of proper disposal of the hazardous materials indicated above to the Owner and/or Engineer.

1.5 REFERENCES - CODES AND STANDARDS

- A. Applicable codes and standards will be referred to in other sections of this division by acronyms as defined below:
 - 1. NECA National Electrical Contractor's Association
 - 2. AFBMA Antifriction Bearing Manufacturers Association
 - 3. ANSI American National Standards Institute
 - 4. ASME American Society of Mechanical Engineers
 - 5. ASTM American Society for Testing and Materials
 - 6. AWS American Welding Society
 - 7. DEMA Diesel Engine Manufacturers Association
 - 8. Fed Specs Federal Specifications
 - 9. EIA Electronic Industries Association
 - 10. ICEA Insulated Cable Engineers Association
 - 11. IEEE Institute of Electrical and Electronic Engineers
 - 12. IES Illuminating Engineering Society
 - 13. NEC National Electrical Code
 - 14. NEMA National Electrical Manufacturers Association
 - 15. NFPA National Fire Protection Association
 - 16. UL Underwriters' Laboratories
 - 17. CAL OSHA California Occupational Safety and Health Act
 - 18. BAAQM Bay Area Air Quality Management District regulations
- B. The edition of referenced codes and standards, in effect as of the date of contract, shall constitute minimum requirements and shall be strictly complied with unless supplemented or modified by more stringent requirements of the Contract Documents.

1.6 REGULATORY REQUIREMENTS

- A. Electrical equipment and materials shall be installed in conformance with all applicable requirements of NFPA, local power company, federal, state, and local codes, including California Energy Codes (CEC Title 24).
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, acceptable testing and listing agencies as suitable for the purpose specified and shown. The Contractor shall immediately notify the Owner and Engineer of any provision in the contract document that are contrary to any applicable codes.

1.7 SAFETY

- A. All work shall be performed in a safe manner in accordance with all federal, state and local codes and regulations including any Owner safety regulations or procedures. In addition, the following special electrical precautions as a minimum shall be observed.
- B. Shutdowns
 - 1. Prior to any work on any electrical circuits, circuits shall be de-energized, tested for absence of voltages, residual voltage discharged and the circuit properly tagged and locked out.
 - 2. Circuits above 600-volts shall also have properly sized grounds installed for personnel ground protection.
 - 3. All electrical shutdowns shall be coordinated and scheduled with Owner and/or Engineer to minimize effect on adjacent areas.
 - 4. Electrical shutdowns are required for all tie-in connections and/or modifications to electrical panels and equipment including power centers, switchgear, motor control centers, 480/277-volt lighting and distribution panels, and 208-volt panels with bolt-on breakers.
- C. Shutdowns are not required for:
 - 1. Installation and/or removal of 120/208-volt plug-in modules for bus duct units on 400-Amp or lower rated bus ducts.
 - 2. Load measurements, monitoring, and testing/debugging of low voltage circuits.
 - 3. Hot phasing of medium voltage cable selector switches. Work to be done by qualified personnel only.
 - 4. Connections of conductors to the load side of spare circuit breakers of 120/208-volt panels.
- D. Hot Phase Work
 - 1. Hot panel work may be requested for work on 120/208-volt panels if and only if panel cannot otherwise be shutdown. Request shall be made to the Owner and shall include panel identification, panel schedule, building area and/or equipment affected, scope of work to be performed and reasons why panel cannot be shutdown. The following shall, as a minimum, be observed:
 - a. Use buddy system. Person shall not be involved in actual installation.
 - b. All hot circuits shall be adequately protected with temporary shields while work is occurring.
 - c. The removal of knockouts (KO's), insertion of conduit into boxes, installation of locknuts and bushings, and use of non-metallic fish shall be allowed to take place when the temporary shield is in place.
 - d. The removal and installation of circuit breakers shall only be performed with tools having insulated handles.
 - e. The connection of wires shall be performed in the order of ground, neutral and hot.
- E. Lockout / Tag out Procedure:
 - 1. Contractor shall use the District's standard Lockout/Tag out procedure. A copy of the program will be provided to the Contractor prior to start of work.
 - 2. Contractor shall have a recognized Lockout/Tag out program that complies with OSHA Standard 29, CFR 1910.47, and/or California Code of Regulations, Title 8, Electrical Safety Orders 2329.4. This program shall be submitted to the Owner and/or Engineer for approval prior to start of work.
- F. Electrical Equipment Rooms:
 - 1. Fabrication, construction, or storage of tools, equipment and/or liquids shall not be permitted in electrical rooms.

1.8 COORDINATION WITH OTHER TRADES

- A. The Contractor shall be responsible for coordinating with other trades or subcontractors working on the project so that all work shall be completed without interruption of the schedule. This shall include all installations necessary to support the structural, architectural, and mechanical conditions.
- B. Any changes in construction or coordination requirements that deviate from the intent or requirements of the specifications and/or drawings must be described and detailed in writing and submitted to the Owner and/or Engineer for approval.
- C. The Contractor shall provide for all contingencies where required to operate any equipment prior to completion of electrical work.
- D. The Contractor shall be responsible for checking all contract drawings and coordinating his work accordingly. This coordination shall include the clearance of all ducts, supports, ventilation, and process equipment. No additional payments will be made for work and/or materials necessary to resolve interferences. Start of construction work means Contractor accepts unconditionally the existing conditions and contractor waives any related expenses relative to it.

1.9 RECEIVING, HANDLING, AND STORAGE

- A. The Contractor shall provide for receiving, handling, and storage of all material and equipment in accordance with Division 1 requirements of these specifications.
 - 1. Materials and equipment stored on the Owner's premises shall be moved by the Contractor without additional cost, if requested by the Owner and/or Engineer.
 - 2. The Contractor shall be responsible for the safe keeping of all materials and equipment stored on the Owner's premises.
- B. Cleaning:
 - 1. The exterior and interior surfaces of each equipment item shall be cleaned of sand, dirt, and other foreign materials after its removal from storage and immediately before its movement to its final location.
 - 2. Before initial operation of individual items of equipment, the Contractor shall remove all dirt, mortar, and other material, which has been spilled, misplaced, or has been allowed to mar the finished surfaces.
 - 3. The interior of all electrical equipment, including relays and electrical contacts, shall be thoroughly wiped and vacuumed clean before the equipment is energized.
- C. Debris Removal:
 - 1. All debris generated by or as a result of the work of the electrical contractor shall be removed from the site and disposed of as directed by the Owner and/or Engineer, but not less than once each work day.

1.10 EQUIPMENT FOUNDATIONS AND CONCRETE WORK

- A. Concrete pads for mounting switchgear, motor control centers, and secondary unit substations etc. shall be provided as indicated on the drawings and in accordance with other sections of these Specifications.
- B. The Contractor shall provide anchor bolts for floor-mounted equipment as required by California Title 24 for seismic bracing of equipment.

- C. Equipment shall be leveled and grouted in accordance with Division 3 of these specifications. Concrete materials, placing methods, and general workmanship shall conform to applicable sections of DIVISION 3. The Contractor shall utilize concrete mixes and sources of supply approved by the Engineer.

1.11 MISCELLANEOUS MATERIAL

- A. Contractor shall furnish all wire, raceway, monitoring hardware and accessories for equipment interconnections as necessary to obtain a complete operable system, in accordance with the Contract Documents.
- B. Miscellaneous materials, except those specified to be furnished by the Owner or other contractors, shall be furnished as required for the complete erection of the equipment. These materials shall include, but shall not be limited to, grout, shims, wedges, dowels, anchors, supports, equipment mounting sill channels, bolting, gaskets, packing, welding rod, and consumable gases.

1.12 MATERIAL SUBSTITUTION

- A. If equipment manufacturers are identified by name, and it is indicated that equipment of equal quality and performance will be accepted, the Contractor may submit alternate items to the Engineer for approval.
- B. If only one manufacturer is indicated, no alternate equipment will be accepted.
- C. Re-design of electrical or any other trade's work that is required due to the Contractor's use of an approved alternate item; arrangement of equipment; and/or layout other than specified herein, shall be done by the Contractor at his expense. Redesign and detailed plans shall be subject to approval by the Engineer.
- D. Engineer's approval of redesigned or altered drawings submitted by Contractor, shall not relieve the Contractor of his responsibility to provide a complete and operable installation.
- E. Equipment and materials installed without approval of the Owner and/or Engineer shall be subject to removal and replacement at the Contractor's expense with approved materials.
- F. Equipment and/or materials identified on the drawings or in these specifications by manufacturer's name and/or part number are so identified for the sole purpose of establishing the type and quality of the equipment and/or materials. Such specific, non-generic callouts are not in any way intended to rule out or establish preemptory qualifications relative to manufacturers not identified specifically by name.

1.13 TERMINATIONS

- A. All electrical equipment shall be suitable for connection to 75 degree C rated cable and/or wire loaded to its 75 degree C ampacity.

1.14 AREA CLASSIFICATIONS

- A. Electrical equipment shall be suitable and rated for the areas in which it is installed. Special areas will be identified and indicated on the drawings.
- B. The following NEMA type devices shall be installed, unless otherwise noted, as described below:

1. Indoor-dry: NEMA 3R. See the drawings for detailed information.
2. Indoor-wet or non-hazardous dust: NEMA 4 or 4X.
3. Outdoor: NEMA 3R, 4, or 4X, as required by the drawings.
4. Hazardous gas or vapor producing areas - indoor: NEMA 7 (Class I, Division 1), group as required by the drawings, suitable for wet locations.
5. Hazardous gas or vapor producing areas - outdoor: NEMA 7 (Class I, Division 1), group as required by the drawings, suitable for wet locations.
6. Hazardous dust areas - indoor: NEMA 9 (Class II, Division 1), group as required by the drawings.
7. Hazardous dust areas - outdoor: NEMA 9 (Class II, Division 1), group as required by the drawings, suitable for wet locations.
8. Equipment utilizing a water spray, oil, or non-corrosive coolant, or emitting a non-hazardous dust shall be equipped with NEMA 13 devices.
9. Corrosive areas, dust, or vapor: NEMA 4X, gasketed, PVC (outlet boxes), fiberglass (control stations, enclosures, and junction boxes), or stainless steel (large cabinets or enclosures), as required by the drawings.

1.15 EXCAVATION AND BACKFILL

- A. Excavation and backfill required for the installation of electrical work shall be as indicated on civil, structural or electrical drawings and in accordance with other sections of these specifications.

1.16 PAINTING AND FINISHING

- A. Unless otherwise noted, electrical equipment shall be shop finished with one or more coats of primer and two coats of high-grade oil-resistant enamel. The finish color shall be manufacturer's ANSI color standard. Shop primer shall be manufacturer's standard phosphatized coating compatible with the finish enamel.
- B. Furnish at least two (2) quarts of touchup paint of the same type and color as the factory applied paint for all different paints used.
- C. Finishes marred during shipping, handling, or installation shall be touched up to match the original factory finish. Finish painting of conduit, hangers, and other installation materials will be performed along with general painting of the structure. All painting shall be done in accordance with the Bay Area Air Quality Management District Regulations (Ref. 16010.04.B).
- D. All galvanized surfaces on which the galvanizing is removed by cutting, drilling, or by any other operation shall be re-galvanized with "Galvanizing Powder M-321" as manufactured by the American Solder and Flux Company of Philadelphia, Pennsylvania; with "Zincilate 810" as manufactured by Industrial Metal Protective, Inc., of Dayton, Ohio; with "Zinc Rich" coating as manufactured by ZRC Chemical Products Company, Quincy, Massachusetts; or acceptable equal. The Contractor shall furnish this protective material and shall apply it in the field to any surface where the galvanized coating is broken or removed either intentionally or unintentionally.

1.17 FASTENING TO BUILDING STRUCTURES

- A. The methods of attaching or fastening equipment supports or hangers to the building structure shall meet or exceed UBC Seismic Zone 4 requirements (latest edition), and be subject to approval by the Engineer at all times. Shop drawings or samples shall be submitted for approval before proceeding with the work. Drilling, welding, or the use of

explosive driven fasteners on building structures shall require written prior approval by the Engineer for each type of application except where so detailed on the drawings.

- B. Clamps, straps, bands and other mechanical devices shall be used as the standard methods of fastening equipment supports or hangers.
- C. Fireproofing material shall be removed to allow for attachment of support clamps and devices and subsequently replaced with material having the same qualities as the removed fireproofing.

1.18 SLEEVES AND OPENINGS

- A. The Contractor shall be responsible for all required sleeves and openings for electrical raceways, cables and equipment. Contractor shall provide required sleeves and openings, not provided during structure fabrication, using a hacksaw, a hole saw, or a core drill subject to approval by the Owner and/or Engineer.
- B. Engineer shall verify the location of openings to be cut through structural concrete (floors, columns, etc) prior to cutting or drilling by Contractor. Use existing spare openings if at all possible, even if it requires a longer conduit run.
- C. All openings in fire rated device structures shall be sealed using a fire resistant caulking, sealant material or approved system to obtain a fire rating equal to or greater than the structure, which is being penetrated.
- D. Contractor shall submit proposed fire-sealing methods/systems to the Engineer for prior written approval before installation.
- E. Roof Penetrations. Conduit roof penetrations shall be flashed and hot patched using a method compatible with existing roof system by a qualified contractor. Electrical contractor shall coordinate with appropriate trades.
- F. Openings through Structural Steel. Conduit shall not be routed through building steel unless such routing is approved by the Owner and/or Engineer. Holes required for conduit passages shall be drilled or sawed, not burned.
- G. Openings through Grating. Alternate routing of raceways should be used to avoid conflict with grating. If field cutting is necessary, the openings shall be made at divisions or ends of grating sections. These openings shall be square and shall be neatly finished. All rough spots shall be ground until smooth and re-galvanized as required.
- H. Finishing Box-outs. Openings that have been cut through walls and floors of masonry or concrete for the passage of raceways shall be finished either by grouting around the conduit or by grouting 3/16-inch (5 mm) thick steel bands around the periphery of the openings. Where sleeves or bands are installed in floors, they shall project 4 inches (100 mm) above the finished floors.
- I. Openings beneath Equipment. Where the cables are in conduits and the conduit projects through the opening, opening beneath equipment shall be closed with grout. Closure plates of transite, micarta, or similar material shall be used to close openings beneath equipment where the cables entering the equipment are not in enclosing raceways. The plates shall not be less than 3/8-inch (5 mm) thick and shall be cut to fit closely around the outside surfaces of the cable where the cable passes through the plates. Edges of the holes in these plates shall be rounded and smoothed to prevent damage to the cable. The plates shall be securely fastened to the floor or to the equipment, and all openings

around the plates shall be caulked with an effective putty seal or acceptable equal method.

- J. Unused openings beneath equipment shall be covered with solid plates of the same material as closure plates for those openings through which conduit or cable enter the equipment. These plates shall be securely fastened to the floor or to the equipment and caulked as indicated above.

1.19 WELDING

- A. Welding shall completely fuse the welded member to the supporting steel and shall be neat in appearance. All workmen performing ferrous welding of any kind shall be qualified according to the procedures for qualification tests for fillet welders described in American Welding Society Publication AWS-D1.1, Structural Welding Code. Documentation of approved qualification testing shall be available upon request of the Engineer.

1.20 INSULATION

- A. All supports for raceways connected to equipment, piping, and raceways that have been electrically insulated from contact with other structures, shall be properly installed to prevent shunting of the insulation.

1.21 NAMEPLATES

- A. All nameplates for electrical equipment shall be permanently attached to the front of the equipment.

1.22 STARTUP

- A. The Contractor shall, at a minimum, perform the following tests as applicable for each item of equipment or system installed under this Contract:
 1. Check for correct direction of rotation of all motors.
 2. Check that motor starter overload heaters are in place and properly sized.
 3. Check polarity and phase rotation at transfer switches, bus ties, uninterruptible power supply systems, etc.
 4. Verify correctness of all wiring installed under this contract.
 5. Check wiring for shorts, continuity and grounds.
 6. All ground fault interrupt devices shall be tested individually.
- B. For large systems, verify correct operation of small sections of the system before operating the entire system.
 1. All insulation and continuity tests shall have been completed before startup of any item of equipment or system.
- C. The Contractor shall be responsible for operation and maintenance, including all costs thereof, for systems or equipment temporarily placed in operation for testing and adjusting purposes.
- D. Complete all testing and startup procedures.

1.23 INSPECTIONS AND TESTS

- A. Tests shall be performed on all electrical equipment and complete systems as required under the various sections of these specifications prior to being placed in operation.

- B. All tests shall be made after notification, and in the presence of, the Owner and/or Engineer and authorities having jurisdiction. Operational and performance tests on equipment which normally operates only during certain seasons of the year shall be made during the appropriate season, and at such time when ability of equipment to perform at design capacity can be demonstrated.
- C. Contractor shall supply all labor, materials, instruments, and supplies of any kind, required for testing. Material and equipment damaged or shown to be defective during tests or unable to perform at design or rated capacity, shall be repaired or replaced by the Contractor at no additional expense, to the satisfaction of the Owner and/or Engineer.
- D. Six (6) copies of all test results and/or reports shall be submitted to the Engineer following completion of tests. Submittals shall be bound in standard three-ring binders, tabbed and indexed throughout for easy readability.

1.24 MAINTENANCE TOOLS

- A. Any special tools furnished with equipment for maintenance and/or adjustment of equipment shall be stored and maintained by the contractor during installation and testing, and shall be turned over to the Owner's maintenance department following final acceptance of the equipment by the Owner and/or Engineer.

1.25 MANUFACTURER'S INSPECTION AND SUPERVISION

- A. Contractor shall provide the services of a trained manufacturer's representative, to inspect and advise during the installation of the electrical equipment.
- B. The service described above shall be provided as determined necessary by the Contractor for proper installation of the equipment. Availability of these services shall not relieve the Contractor of responsibility for technical supervision of his construction personnel.
- C. The presence of a manufacturer's representative shall not relieve the Contractor of responsibility for the work under these specifications.

1.26 BOLTED ELECTRICAL CONNECTIONS

- A. Where bolted electrical current-carrying connections are made, the metal surfaces shall be thoroughly cleaned and coated with an oxide inhibitor such as Penetrox A or No-Oxide A compound.
- B. The tightness of each bolt in each factory-made bolted electrical connection shall be validated during erection and connection of the equipment.
- C. It shall be the Contractor's responsibility to certify that the tightness of each bolt in all bolted electrical connections, factory or field, is in accordance with the manufacturer's recommendations.
- D. Bolted electrical connections shall be tightened with manual torque wrenches. Torque wrenches shall be so constructed that they will visually or audibly indicate when the proper torque is reached. The Contractor is responsible for the accuracy of each torque wrench and shall provide documentation of testing by an acceptable laboratory or testing agency when requested by the Engineer.

- E. Torque Values. If the equipment manufacturer's erection instructions do not include recommended torque values for bolt tightening or specify an alternate method for tightening bolted electrical connections, torque values shall be in accordance with UL Std 486A and/or those listed in the table below.

TORQUE VALUES FOR DRY, NON-PLATED, NON-LUBRICATED BOLTS					
Bolt Size	18-8 Stainless Steel (Inch-lbs)	Brass (Inch-lbs)	Silicon Bronze (Inch-lbs)	Aluminum 24ST-4 (Inch-lbs)	316 Stainless Steel (Inch-lbs)
1/4"-20	75.2	61.5	68.8	45.6	78.8
1/4"-28	94.0	77.0	87.0	57.0	99.0
5/16"-18	132	107	123	80	138
5/16"-24	142	116	131	86	147
3/8"-16	236	192	219	143	247
3/8"-24	259	212	240	157	271
7/16"-15	376	317	349	228	393
7/16"-20	400	327	371	242	418
1/2"-13	517	422	480	313	542
1/2"-20	541	443	502	328	565
9/16"-12	682	558	632	413	713
9/16"-18	752	615	697	456	787
5/8"-11	1,110	907	1,030	715	1,160
5/8"-18	1,244	1,016	1,154	798	1,301
3/4"-10	1,530	1,249	1,416	980	1,582
3/4"-16	1,490	1,220	1,382	958	1,558
7/8"-9	2,328	1,905	2,140	1,495	2,430
7/8"-14	2,318	1,895	2,130	1,490	2,420
1"-8	3,440	2,815	3,185	2,205	3,595
1"-14	3,110	2,545	2,885	1,995	3,250

- F. Connection Bolt Tightness Check:
- The tightened bolts in electrical connections shall be checked at random as selected by, and in the presence of, the Engineer. The Contractor shall provide calibrated hand torque wrenches and the necessary platforms, equipment, and personnel for the random check.
 - The number of bolts checked shall be acceptable to the Engineer based upon observance of the quality and completeness of the tightening operations. A minimum of 10 percent of the bolts in each connection, but not less than two bolts in each connection, shall be checked.
 - The Contractor shall be responsible for coordinating the checking of bolt tightness so that minimum interference with equipment erection and connection will be experienced. Removal of covers and similar dismantling of equipment to permit the Engineer to witness the testing of bolt tightness of enclosed connections shall be part of the work included under these specifications.
 - Checking of tightness of electrical connections in the presence of the Engineer is intended to assist the Contractor in avoiding the expense of repairing costly connection failures. This check shall not relieve the Contractor of complete responsibility for the integrity of the electrical connections.

1.27 LUBRICATION

- A. The Contractor will furnish all oils, greases, and other lubricants required to place equipment in operation. The Contractor shall apply lubricants in accordance with the manufacturer's recommendations. The lubricants used shall be acceptable to the Owner and/or Engineer. Furnish Material Safety Data Sheets (MSDS) identifying all classified hazardous materials proposed for usage to the Engineer with submittals.

1.28 SPECIAL SHIPPING REQUIREMENTS

- A. Where specified, the manufacturer shall mount and ship impact recorders on each rail car transporting the specified equipment. The impact recorders shall be mounted at the factory to provide a permanent record of the magnitude of axial, transverse, and vertical forces to which the equipment will be subjected while in transit. The custody of the impact recorders upon arrival at the plant site shall be the responsibility of the manufacturer's field representative. The recorder impact charts shall be delivered to the Engineer and shall become part of the furnished equipment documentation records.

1.29 WIRING

- A. In general, all devices furnished under these specifications and requiring electrical connections shall be designed for wiring into electrical enclosures with terminal blocks.
 - 1. Terminal blocks shall be furnished for:
 - a. Conductors requiring connection to circuits external to the specified equipment
 - b. Internal circuits crossing shipping splits
 - c. Equipment where parts replacement and maintenance will be facilitated. Splices will not be permitted in control wiring or instrument leads.
 - 2. All wiring leaving an enclosure shall leave from terminal blocks and not from other devices in the enclosure.
 - 3. Terminal blocks shall not be mounted in compartments containing cables or busses operating at voltages above 600-volts.
 - 4. Each terminal block, terminal, conductor, relay, breaker, fuse block, and other auxiliary devices, shall be permanently labeled to coincide with the identification indicated on the drawings.
- B. A shorting type terminal block shall be installed at an accessible location for each set of current transformers supplied with the equipment furnished under these specifications. The shorting terminal block shall be the one nearest the current transformers. No other shorting type terminal blocks are required unless specified otherwise.
- C. All connections requiring disconnect plug and receptacle type devices shall be provided with factory-terminated conductors on each plug and receptacle. Plugs and receptacles shall be factory-wired into junction boxes containing terminal blocks for external connections. All conductors on the disconnect portion of plug-receptacle assemblies shall be in a common jacket.
- D. Combining Circuits
 - 1. The electrical circuitry is laid out in generally diagrammatic fashion, subject to the physical obstructions of the project and the equipment constraints present in the final purchase items.
 - 2. The Contractor may elect to conserve physical space by combining certain "home runs" into the same conduit.
 - 3. If the Contractor elects to do so, detailed shop drawings must be submitted for review and approval by the Engineer, prior to any conduit or wiring installation. The Contractor will then be advised of any combinations that will be allowed. The

submittals must be complete with physical layouts and electrical calculations indicating de-rating for temperature or number of conductors for each proposed recombination.

4. Any proposed combining of circuits must comply fully with the NFPA 70 – National Electrical Code.
5. Approved combining of circuits shall be designed and constructed at no additional cost to the Owner for changes from the contract documents.

1.30 ELECTRICAL WIRING DIAGRAMS

- A. Connection and interconnection wiring diagrams furnished by the Contractor shall have indicated at each termination, conductor identification consisting of the opposite end destination. The wiring diagrams shall be drawn with all devices indicated in their relative physical locations and shall represent the equipment and terminals arrangement, as they would appear to a person wiring the equipment.
- B. Where interconnecting wiring from different items of equipment or sectional wiring diagrams of the same item of equipment appear on different wiring diagram sheets, all interconnections shall be clearly identified. Where sectional wiring diagrams are required for a single item of equipment, such as a relay panel or control panel, that section of the panel which is represented by each individual wiring diagram sheet shall be keyed on that sheet in a manner acceptable to the Engineer.
- C. Information indicated on the Contractor's shop drawings shall include wiring of the individual panel items, as they actually will appear in the panel, contact arrangements of switches, and internal wiring of relays and instruments.
- D. Elementary diagrams shall be cross-referenced to terminal markings on the connection and interconnection diagrams, but need not indicate complete details of circuits external to the panels. Each item of panel-mounted equipment indicated on the diagrams shall be identified by item number and name.
- E. Wiring Diagrams. Schematic, connection, and interconnection diagrams furnished by the Contractor shall be based on schematic (elementary) and connection diagrams furnished by the manufacturers of the equipment.
 1. After receiving the manufacturer's diagrams, the Contractor shall prepare his schematic (elementary), connection, and interconnection diagrams, which shall indicate the same terminal designations and the same terminal arrangement as indicated on the manufacturer's diagrams.
 2. The complete connection diagram of each section or unit of an equipment lineup shall be on an individual sheet. Information on each connection diagram sheet shall include point-to-point wiring of the entire unit, as it would appear to the person wiring the unit, including wiring for components. Elementary diagrams of control and instrument circuits, contact arrangement of switches, and internal wiring of relays and instruments for each unit shall be on additional sheets as required. Interconnection diagrams shall be on separate sheets. All sheets shall be the same size.
 3. Each item of equipment, indicated on the diagrams, shall be identified by item number and name.
 4. When the Contractor's standard terminal designations differ from those required by the schematic and connection diagrams furnished by the manufacturer, or from those marked on the Contractor's connection drawings submitted for acceptance and returned by the Engineer, the Contractor shall revise terminal designations in accordance with the Engineer's requirements on both the Contractor's drawings and the terminal blocks.

5. Sufficient space shall be left on the "customer's" side of outgoing terminal blocks for adding cable color codes and circuit numbers.
6. At the time the Contractor's connection drawings are submitted for review, the Engineer will mark thereon all external circuit and wire designations required, and such designations shall be added to the connection drawings by the Contractor. Except as marked on the drawings submitted by the Contractor and returned by the Engineer, no external circuit and wire designations shall be indicated on the Contractor's drawings.

1.31 TERMINAL BLOCKS

- A. Terminal blocks shall be furnished with white marking strips and, where permitted by the safety codes and standards, shall be without covers. Not less than 25 percent spare, unused terminals shall be furnished on each terminal block for circuit modifications and for termination of all conductors in a multi-conductor control cable.
- B. Fuses shall not be mounted on terminal blocks. Neither step type terminal blocks nor angle mounted terminal blocks will be acceptable.
- C. All terminal blocks, except internal terminal blocks in factory pre-wired electronic systems cabinets, shall be rated 600-volts minimum and shall have strap screw terminals. Terminal blocks for 10 AWG and smaller 600-volt insulated conductors shall be Marathon 1500 series, or acceptable equal. Terminal blocks shall be appropriately sized for larger wire size or higher voltage insulated incoming conductors as necessary.

1.32 CONTROL POWER

- A. Electrical power for control and instrumentation will be a nominal 120-volt, single-phase, 60 Hz. The Contractor shall provide any devices required for proper operation and protection of the equipment during electrical power supply and ambient temperature fluctuations described in the following paragraphs.
- B. All AC electrical control devices shall, unless otherwise specified, be designed for continuous operation at any voltage from 102 to 132-volts. The dropout voltage shall be less than 75-volts for relays and 90-volts for contactors and starters. The AC electrical control devices operating at nominal voltages other than 120-volt AC shall be designed for continuous operation over proportional voltage variations.
- C. All devices shall be guaranteed to operate satisfactorily under voltage conditions specified in the above paragraphs and at a range of ambient temperatures from 50° degrees C to 30° degrees C outdoors and from 50° degrees C to 10° degrees C indoors.

1.33 ELECTRICAL INSTRUMENTS

- A. All indicating instruments for electrical quantities shall be as indicated elsewhere in these specifications. All AC instruments shall be designed for operation through 5-Ampere current transformer secondary and 120-volt potential transformer secondary.

1.34 SWITCHBOARD CONTROL DEVICES

- A. Control switches, push buttons, selector switches, and indicating lights shall be as listed below:
- B. Control Switches. Control switches shall be 600-volt, 20 ampere, multi-stage, rotary type with a minimum of 10 contacts. Switches shall have black, fixed, pistol-grip type handles

and engraved black plastic escutcheon plates with targets. Switches shall be Westinghouse Type W, General Electrical Type SB-1, General Electric Type SB-10, Electro Switch Type 20K or acceptable equal.

- C. Push Buttons and Selector Switches. Push buttons and selector switches shall be heavy-duty oil-tight, Allen-Bradley Bulletin 800H, Square D Class 9001 Type K, or acceptable equal. Toggle switches shall be Honeywell Micro Switch Type TL or acceptable equal.
- D. Indicating Lights. Status indicating lights shall be cluster Light Emitting Diode (LED) type Allen-Bradley, Square D, General Electric or approved equal, lamp color as specified and appropriately sized resistors, 120-volt AC full voltage.
- E. LED indicating light colors shall be coordinated with indicated conditions as specified in the following table. Indicating lights shall be energized when the condition exists and shall be de-energized when the condition does not exist.

LED Color	Status and Alarm Condition Indication
Amber	Equipment Control in "Auto" Mode. Controlled by Internal or External Control or Sensing Device(s). Equipment Abnormality - Circuit Breaker Trip.
Blue	Equipment Control in "Remote" Mode. Controlled by Remote device such as Level Switches or PLC or Remote Panel.
Red	Equipment De-Energized - Motor Stopped, Valve Closed, Circuit Breaker Open.
Green	Equipment Energized - Motor Running, Valve Open or Circuit Breaker Closed. Alarm Indication – Abnormal Condition.
White	Equipment Power On Indication

1.35 RODENT PROOFING

- A. The Contractor shall make all pad-mounted transformers, switchgear, secondary unit substations, motor control centers, control panels, and relay panels rodent proof by closing all exterior openings using metal plates or metal screens. This shall be accomplished either by the manufacturer in the fabrication of the equipment, or by the Contractor after installation of the equipment.

1.36 RECORD DRAWINGS

- A. Contractor shall designate a set of project drawings as the job "Record Drawings". This set shall be located at the jobsite and maintained in a clean undamaged state. This set shall be continually updated to accurately reflect all construction field deviation change orders and any additional work authorized by Owner and/or Engineer. During construction the record set shall be available to any representative of the Owner and/or Engineer for review and inspection, and the final completed for-record set delivered to the Owner and/or Engineer within 10 working days following acceptance of Work-in-Place.

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION – Not Used

END OF SECTION

SECTION 16060

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.1 SUMMARY

- A. This section includes grounding electrodes and conductors; equipment grounding conductors; bonding methods and materials; conduit and equipment supports; anchors and fasteners; sealing and fireproofing of sleeves and openings between conduits and wall.

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. The standards referred to, except as modified in the Contract Documents, shall have full force and effect as though printed in these Specifications. These standards are not furnished to the Contactor since manufacturers and trades involved are assumed to be familiar with their requirements. The Contractor shall obtain copies of reference standards direct from publication sources as needed for proper performance and completion of the work.
- B. ASTM B 187 - Specifications for Copper Bus, Rod, and Shapes.
- C. IEEE 142 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.
- D. IEEE 1100 - Recommended Practice for Powering and Grounding Electronic Equipment.
- E. NECA - Standard of Installation.
- F. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- G. NFPA 70 - National Electrical Code (NEC). Latest edition.
- H. UL 467 - Electrical Grounding and Bonding Equipment.

1.3 SYSTEM DESCRIPTION

- A. Grounding electrode system consists of the following elements:
 - 1. Metal underground water pipe
 - 2. Metal frame of the building
 - 3. Concrete encased electrode
 - 4. Metal underground gas piping system
 - 5. Rod electrodes
 - 6. Service equipment
 - 7. Enclosures
 - 8. Separately derived systems.
- B. Anchor and fasten electrical products to building elements and finishes as follows:
 - 1. Concrete Structural Elements: Provide preset inserts.
 - 2. Concrete Surfaces: Provide expansion anchors.
 - 3. Interior Structural Steel: Provide appropriate size beam clamps.
 - 4. Solid Masonry Walls: Use expansion anchors and preset inserts.

5. Sheet Metal: Provide sheet metal screws.

1.4 DESIGN REQUIREMENTS

- A. Furnish products listed and classified by Underwriters Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, acceptable testing and listing agencies as suitable for purpose specified and shown.
- B. Grounding shall be in accordance with the National Electrical Code (NEC). Where size, type, rating and quantities indicated or specified are in excess of NEC requirements, the more stringent requirements and the greater size, rating, and quantity indications govern.
- C. Select materials, sizes, and types of anchors, fasteners, and supports to carry at least twice the loads of equipment and raceway, including weight of wire and cable in raceway.

1.5 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Product Data: Submit grounding electrodes and connections for fastening components.
- C. Test Report: Measure overall resistance to ground. Provide certified test report for Engineer's Review.

1.6 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Project Record Documents: Record actual locations of components and grounding electrodes.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years' experience.
- B. Installer: A firm with at least five years of successful installation experience on projects with electrical grounding work similar to that required for this project.

1.8 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

PART 2 PRODUCTS

2.1 GROUNDING SYSTEM

- A. Except as otherwise indicated, provide for each electrical grounding indicated, an assembly of materials, including, but not necessarily limited to, cable/wire, connectors, terminals (solderless lugs), grounding rods/electrodes, bonding jumper braid, and other items and accessories needed for a complete installation. Where more than one type meets indicated requirements, selection is Installer's option. Where materials or components are not otherwise indicated, provide products as recommended by the accessories manufacturers and in compliance with the NEC, and established industry standards.

- B. All grounding materials required shall be furnished new and undamaged in accordance with the following requirements:

2.2 WIRE

- A. Service Equipment Grounding Electrode Conductor: Bare, soft-drawn copper, Class AA stranding, ASTM B 8. Size per the NEC, Article 250, unless otherwise noted.
- B. Electrical Equipment Grounding Conductor: Insulated, soft-drawn copper, Class B stranding or solid, with green-colored polyvinyl chloride insulation, UL 83, sized according to the NEC, unless otherwise noted.

2.3 BUS AND BARS

- A. Soft copper, cross section not less than 1/4-inch thick by 1-inch wide, ASTM B 187.

2.4 MECHANICAL CONNECTORS

- A. Description: Bolt-on bronze connectors, suitable for grounding and bonding applications in configurations required for the particular installation.
- B. Manufacturer
 - 1. Burndy Corp.
 - 2. Anderson
 - 3. Thomas & Betts
 - 4. 3-M Co.

2.5 CONTROL DEVICES

- A. Selector Switches and Push Buttons:
 - 1. Product Description: NEMA ICS 5, heavy-duty oil-tight.
 - 2. Contact Ratings: Class A150 or minimum 10 amperes continuous.
 - 3. Selector switches: Rotary type. Allen-Bradley Bulletin 800H, Square D Class 9001 Type K, or approved equal.
 - 4. Toggle switches: Honeywell Micro Switch Type TL or approved equal.
 - 5. Each switch shall have a legend plate - "Hand-Off-Auto", "Local- Remote", "Start - Stop", etc. as required to describe the control mode or function.
- B. Indicating Lights:
 - 1. Cluster type Light Emitting Diode (LED) suitable for operation at 120-Volt AC control voltage, or as required. The LED color shall be coordinated with the alarm or indicated function.

Lens Color	Status and Alarm Condition Indication
Amber	Equipment Control in "Auto" Mode. Controlled by Internal or External Control or Sensing Device(s). Equipment Abnormality - Circuit Breaker Trip.
Blue	Equipment Control in "Remote" Mode. Controlled by Remote device such as Level Switches or PLC or Remote Panel.
Red	Equipment De-Energized - Motor Stopped, Valve Closed, Circuit Breaker Open.

Lens Color	Status and Alarm Condition Indication
Green	Equipment Energized - Motor Running, Valve Open or Circuit Breaker Closed. Alarm Indication – Abnormal Condition.
White	Equipment Power On Indication

C. Magnetic Relays

1. Product Description: NEMA ICS 5, Class A300 magnetic control relay.
2. Contacts: Form A or B (normally open / normally closed or both) as required.
3. Contact Ratings: Class A150 or minimum 10 amperes continuous.
4. Coil Voltage: 120-volts, 60 Hz or as required.
5. Enclosure: NEMA ICS 6, Type 1 as required to meet conditions of installation.

D. Solid State Relays

1. Product Description: NEMA ICS 5, solid-state electronic relay.
2. Contacts: Form A or B (normally open / normally closed or both) as required.
3. Contact Ratings: Class A150 or minimum 10 amperes continuous.
4. Coil Voltage: 120-volts, 60 Hz or as required.
5. Enclosure: NEMA ICS 6, Type 1 as required to meet conditions of installation.

E. Time Delay Relays (On-Time Delay and Off-Time Delay)

1. Product Description: NEMA ICS 5, solid-state time delay relay - time delay after Energization or after De-Energization as specified or shown on drawings.
2. Contacts: Form A or B (normally open / normally closed or both) as required.
3. Contact Ratings: Class A150 or minimum 10 amperes continuous.
4. Coil Voltage: 120-volts, 60 Hz. or as required.
5. Enclosure: NEMA ICS 6, Type 1 as required to meet conditions of installation.

F. Plug-in Relays

1. Product Description: NEMA ICS 5, miniature, hermetically sealed relay.
2. Contacts: 4 pole double throw (4PDT) Form A or B (normally open / normally closed).
3. Contact Ratings: Class A150 or minimum 5 amperes continuous.
4. Coil Voltage: 120-volts, 60 Hz. or as required.
5. Enclosure: Hermetically sealed, suitable for Class 1, Division 1 and 2 installations.
6. Socket: To match relay and meet conditions of installation.

G. Limit Switch

1. Product Description: NEMA ICS 5, heavy-duty, lever-operated limit switch.
2. Contacts: Form A or B (normally open / normally closed or both) as required.
3. Contact Ratings: Class A150 or minimum 10 amperes continuous.
4. Enclosure: NEMA ICS 6, Type 1 as required to meet conditions of installation.

2.6 EXOTHERMIC CONNECTIONS

- A.** Product Description: Exothermic materials, accessories, and tools for preparing and making permanent field connections between grounding system components. Molds, cartridges, materials, and accessories as recommended by the manufacturer of the molds for the items to be welded.

- B. Manufacturer:
 - 1. Cadweld (Erico Products) "Exolon" Low Emission or acceptable equal. Molds and powder shall be furnished by the same manufacturer.

- 2.7 FLUSH GROUND PLATES
 - A. Cadweld B-162 series, B-164 series, or acceptable equal.

- 2.8 FLEXIBLE JUMPER STRAP
 - A. Flexible flat conductor, 480 strands of 30-gauge, bare copper wire; 3/4-inch width, 9-1/2-inch-long; 48.25 kcMil, minimum. Protect braid with copper bolt-hole ends with holes sized for 3/8-inch diameter bolts.

- 2.9 BONDING PLATES, CONNECTIONS, TERMINALS AND CLAMPS
 - A. Provide electrical bonding plates, connectors, terminals and clamps, and all accessories as recommended by bonding plate, connector, terminal and clamp manufacturer for indicated applications to obtain a complete system. Components shall be high-strength, high-conductivity copper alloy.

- 2.10 UFER GROUND
 - A. In accordance with the latest edition of the National Electrical Code.

- 2.11 ROD ELECTRODES
 - A. Material: Copper
 - B. Diameter: 5/8-inch (16 mm)
 - C. Length: 10 feet (3,000 mm)

- 2.12 GROUNDING WELL COMPONENTS
 - A. Well Pipe: 8 inches NPS (DN200) by maximum 12 inches (300-mm) long, concrete or fiberglass pipe with belled end.
 - B. Well Cover: Cast iron with legend "GROUND" embossed on cover.

- 2.13 ANCHORS AND FASTENERS
 - A. Materials and Finishes: Corrosion resistant, Heavy-duty expansion type.

- 2.14 FORMED STEEL CHANNEL
 - A. Manufacturers:
 - 1. Unistrut
 - 2. Kindorf
 - 3. Superstrut
 - 4. B-Line
 - 5. Approved Equal
 - B. Description: Galvanized steel.

2.15 SEALING AND FIREPROOFING

- A. Fire and Smoke Rated Surfaces:
 - 1. Manufacturers:
 - a. 3M CP 25WB + Caulk
 - b. 3M FS 195 wrap or strip with restricting collar
 - c. 3M CS 195 composite sheets
 - d. Proset Systems fire rated floor and wall penetrations
 - e. Dow Corning Fire Stop System
 - f. Substitutions: Not permitted.
 - 2. Non-Rated Surfaces:
 - a. Use stamped steel, chrome plated, hinged, split ring escutcheons or floor/ceiling plates for covering openings in occupied areas where conduit is exposed.
 - b. In exterior wall openings below grade, use a modular mechanical type seal consisting of interlocking synthetic rubber links shaped to continuously fill the annular space between the conduit and the cored opening or a water-stop type wall sleeve.
 - c. At interior wall or floor openings use Tremco Fyre-Sil, Sika Corp. Sikaflex 1a, Sonneborn Sonolastic NPT, or Mameco Vulkem 116 urethane caulk or approved equal.
 - 3. General:
 - a. Furnish UL listed products or products tested by an independent testing laboratory.
 - b. Select products with rating not less than rating of wall or floor being penetrated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that final backfill and compaction have been completed before driving rod electrodes.
- B. Verify that abandoned wiring and equipment serve only abandoned facilities.

3.2 EXISTING WORK

- A. Modify existing grounding system to maintain continuity to accommodate renovations.
- B. Extend existing grounding system using materials and methods as specified.
- C. Install temporary wiring and connections to maintain existing systems in service during construction.
- D. Perform work on energized equipment or circuits with experienced and trained personnel following all safety rules and procedures.
- E. Remove, relocate, and extend existing installations to accommodate new construction.
- F. Repair adjacent construction and finishes that were damaged during demolition and extension work.
- G. Remove exposed abandoned grounding and bonding components, fasteners, supports and electrical identification components. Cut embedded support elements below surface

of walls and floors. Patch surfaces damaged by removal of existing components to match surrounding finishes.

3.3 GROUNDING AND BONDING INSTALLATION

- A. Verify that final backfill and compaction has been completed before driving rod electrodes.
- B. Installation:
 - 1. Remove paint, rust, mill-oils, and surface contaminants at connection points.
 - 2. Install grounding electrode conductor and connect to reinforcing steel in slab or foundation.
 - 3. Bond together metal siding not attached to grounded structure; bond to ground.
 - 4. Bond together reinforcing steel and metal accessories.
 - 5. Bond together each metallic raceway, pipe, duct and other metal object entering enclosures and exiting slabs. Install minimum # 12 AWG bare copper conductor.
 - 6. Install isolated grounding conductor for circuits supplying electronic equipment in accordance with IEEE 1100.
 - 7. Equipment Grounding Conductor: Install separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.
 - 8. Connect to site grounding system.
 - 9. Bond to lightning protection system.
 - 10. Install continuous grounding using underground cold water system and building steel as grounding electrode. Where water piping is not available, install artificial station ground by means of driven rods or buried electrodes.
 - 11. Permanently ground entire light and power system in accordance with NEC, including service equipment, distribution panels, lighting panel boards, switch and starter enclosures, motor frames, grounding type receptacles, and other exposed non-current carrying metal parts of electrical equipment.
 - 12. Install branch circuits feeding isolated ground receptacles with separate insulated grounding conductor, connected only at isolated ground receptacle, ground terminals, and at ground bus of serving panel.
 - 13. Accomplish grounding of electrical system by using insulated grounding conductor installed with feeders and branch circuit conductors in conduits. Size grounding conductors in accordance with NEC. Install from grounding bus of serving panel to ground bus of served panel, grounding screw of receptacles, lighting fixture housing, light switch outlet boxes or metal enclosures of service equipment. Ground conduits by means of grounding bushings on terminations at panel boards with installed # 12 AWG conductor to grounding bus.
 - 14. Ground electrical system using continuous metal raceway system enclosing circuit conductors in accordance with NEC.
 - 15. Permanently attach equipment and grounding conductors prior to energizing equipment.

3.4 GROUND CONDUCTORS

- A. Grounding conductors shall be located and connected as indicated on drawings.
- B. Ground conductors under buildings or structures shall be buried with at least 6 inches of earth cover. Buried grounding conductors extending beyond the foundations of buildings or structures shall have at least 18 inches of earth cover.
- C. Exposed conductors shall be installed inconspicuously in vertical or horizontal positions on supporting structures. When located on irregular supporting surfaces or equipment, the conductors shall run parallel to or normal to dominant surfaces.

- D. Conductors routed over concrete, steel, or equipment surfaces shall be kept in close contact with those surfaces by using fasteners located at intervals not to exceed 3 feet.
- E. Conductors passing through floor slabs shall be installed in conduit sleeves that extend above the floor slab, a minimum of 1-1/2 inches to provide protection. Sleeves shall be sealed to maintain fireproof integrity.
- F. Provide isolated grounding conductor for circuits supplying equipment and systems as shown on the drawings.
- G. Provide a separate equipment-grounding conductor for low voltage distribution systems, single or three phase feeder circuit and each branch circuit with single or three phase protective devices. Install a grounding conductor in conduit with phase and neutral conductors. Single-phase branch circuits for 120 and 277 volt lighting, receptacles, and motors shall have a phase, neutral, and ground conductors installed in the common conduit. Provide suitable bonding jumpers and approved grounding type bushings for flexible conduits used for equipment connection utilized in conjunction with the above branch circuits with. Single-phase circuits for equipment and all branch circuits installed in non-metallic or flexible conduits shall be provided with a separate grounding conductor.
- H. Ground the neutral of the various transformers of separately derived systems with a bare copper conductor, installed in conduit, from the neutral directly to the building interior cold water pipe or nearest solidly grounded structural reinforcing steel, in accordance with the provisions of NEC Article 250-24. Use bolted accessible connections to the ground system so that the neutral ground can be disconnected for test. Ground the system ground conduit as detailed on drawing. Size the grounding electrode conductors in accordance with the NEC, Table 250-66, or as indicated.

3.5 CONNECTIONS

- A. All connections shall be made by the exothermic welding process, except where otherwise indicated on the drawings or in these specifications. The manufacturer's instructions on the use of exothermic welding materials shall be followed in all details. All surfaces to be joined by the welds shall be thoroughly cleaned. Paint, scale, and other deleterious substances shall be removed from surfaces of ungalvanized structural steel members by grinding. Galvanized steel surfaces shall be cleaned with emery paper. Powder and molds shall be kept dry and warm until used. Worn or damaged molds shall not be used.
- B. All exothermic welded connections shall successfully resist moderate hammer blows. Any connection which fails such test or which, upon inspection, indicates a porous or deformed weld shall be remade.
- C. All exothermic welds shall encompass 100 percent of the ends of the materials being welded. Welds, which do not meet this requirement, shall be remade.
- D. Worn, damaged, incorrectly sized, or improperly shaped molds which, in the opinion of the Engineer, do not make satisfactory welds, shall be removed from the jobsite after being physically rendered inoperable.
- E. All contact surfaces of bolted and screwed connections shall be thoroughly cleaned and coated with oxide inhibitor before being securely tightened.

3.6 CONDUIT GROUNDING

- A. All grounding bushings within all enclosures, including equipment enclosures, shall be wired together and connected internally to the enclosure grounding lug or grounding bus with a bare copper conductor. Grounding bushings shall be grounded with conductors sized in accordance with NEC, but not smaller than #8 AWG.

3.7 EQUIPMENT GROUNDING

- A. Comply with NEC 250, except where larger sizes or more conductors are indicated.
 - 1. All electrical equipment shall be connected to the grounding system with an insulated, green, stranded or solid copper equipment-grounding conductor.
 - 2. Terminate each end on suitable lug, bus, or bushing. The term "electrical equipment", as used in this article, shall include, but not be limited to, all enclosures containing electrical connections or bare conductors, except that individual devices, such as solenoids, pressure switches, and limit switches, shall be exempt from this requirement, unless the device requires grounding for proper operation.
 - 3. Large equipment, such as metal-clad or metal-enclosed switchgear, will be furnished with a grounding bus that shall be connected to the grounding system.
 - 4. Most other equipment will be furnished with grounding pads and/or grounding lugs which shall be connected to the grounding system. All ground connection surfaces shall be cleaned immediately prior to connection.
 - 5. Contractor shall furnish all grounding material required, but not furnished with the equipment.
- B. Install equipment grounding system such that all metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment and other conductive items in close proximity with electrical circuits will operate continuously at ground potential and provide a low impedance path for possible ground fault currents.
- C. Where grounding system extension stingers are indicated on the drawings to be provided for connection to electrical equipment, the Contractor shall connect the bare grounding conductor to the equipment ground bus, pad, or lug. Except where otherwise indicated on the drawings, all equipment ground conductors that are not an integral part of a cable assembly, shall be sized in accordance with the requirements of NEC. All ground conductors installed in conduit shall be insulated.
- D. Suitable grounding facilities, acceptable to the Engineer, shall be furnished on electrical equipment not so equipped. The grounding facilities shall consist of compression type terminal connectors bolted to the equipment frame or enclosure and providing a minimum of joint resistance.
- E. The conduit system is not considered to be a grounding conductor, except for lighting fixtures. No grounding conductor shall be smaller in size than # 12 AWG, unless it is a part of an acceptable cable assembly.

3.8 GROUND SYSTEM RESISTANCE

- A. All ground resistance measurements shall be made with a three-terminal "Megger" type ground tester which applies alternating current to the electrodes and which gives a reading in direct current ohms. Two reference ground probes shall be used, and all tests shall be made in accordance with the instrument manufacturer's instructions for ground resistance testing. Some of the acceptable instruments are as follows:

1. Megger Null Balance Earth Tester, James G. Biddle and Company.
2. Vibroground, Associated Research, Inc.
3. Ground-Ohmer, Herman H. Sticht Co., Inc.

B. Submit final certified test reports of all grounding tests.

3.9 ANCHORS, FASTENERS AND SUPPORT

A. Installation:

1. Locate and install anchors, fasteners, and supports in accordance with NECA "Standard of Installation".
2. Do not fasten supports to pipes, ducts, mechanical equipment, or conduit.
3. Do not use spring steel clips and clamps.
4. Do not use powder-actuated anchors.
5. Do not drill or cut structural members.

B. Supports:

1. Fabricate supports from structural steel or formed steel members. Rigidly weld members or install hexagon head bolts to present neat appearance with adequate strength and rigidity. Install spring lock washers under nuts.
2. Install surface-mounted cabinets and panel board with minimum of four anchors.
3. In wet and damp locations use steel channel supports to stand cabinets and panel boards 1 inch off wall.
4. Use sheet metal channel to bridge studs above and below cabinets and panel boards recessed in hollow partitions.

3.10 SEALING AND FIREPROOFING

A. Fire-Rated Surface:

1. Seal opening at floor and wall as follows:
 - a. Opening through a fire rated wall, floor, ceiling or roof, must be sealed.
 - b. Install galvanized sheet metal sleeves (minimum 12-gage) through opening and extending beyond minimum of 1 inch on each side of building element.
 - c. Size sleeve allowing minimum of 1-inch void between sleeve and building element.
 - d. Pack void with backing material.
 - e. Seal ends of sleeve with UL listed fire-resistive silicone compound to meet fire rating of structure penetrated.
2. Where conduit penetrates fire-rated surface, install fire-stopping product in accordance with manufacturer's published instructions.

B. Non-Rated Surfaces:

1. Opening through a non-fire rated wall, floor, ceiling or roof must be sealed using an approved type of material.
2. Use galvanized sheet metal sleeves in hollow wall penetrations to provide a backing for the sealant. Grout area around sleeve in masonry construction.
3. Install escutcheons or floor/ceiling plates where raceway, penetrates non-fire rated surfaces in occupied spaces.
4. Install rubber links of mechanical seal tighten in place and sized for the pipe, in exterior wall openings below grade, in accordance with the manufacturer's instructions.
5. All pipe penetrations at interior partitions and/or walls, laboratory spaces, telephone, data and communication rooms and similar spaces where the room pressure or odor transmission must be controlled, shall be sealed. Sealant shall

be applied to both sides of the penetration in such a manner that the annular space between the pipe sleeve and the pipe is completely filled.

3.11 ACCEPTANCE TESTING

- A. In accordance with Division 1 requirements.
- B. Grounding and Bonding: Perform inspections and tests as outlined below (NETA ATS, Section 7.13 – Grounding Systems).
 - 1. Visual and Mechanical Inspection
 - a. Inspect ground system for compliance with drawings and specifications.
 - b. Electrical Tests (Small Systems)
 - 1) Perform ground-impedance measurements utilizing the fall-of-potential method per ANSI/IEEE Standard 81 “IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potential of a Ground System.” Instrumentation utilized shall be as defined in section 12 of the above guide and shall be specifically designed for ground impedance testing. Provide sufficient spacing so that the plotted curves flatten in the 62% area of the distance between the item under test and the current electrode.
 - c. Electrical Tests (Large Systems)
 - 1) When sufficient spacing of electrodes per Electrical Tests (Small Systems) is impractical, perform ground impedance measurements utilizing either the intersecting curves method or the slope method. (Ref. Nos. 40 and 41 in IEEE Std. 81).
 - d. Equipment Grounds
 - 1) Utilize two-point method of IEEE Std. 81. Measure between equipment ground being tested and known low-impedance grounding electrode or system.
 - 2. Test Values
 - a. The main ground electrode system impedance-to-ground shall be no greater than five (5) ohms for commercial or industrial systems and one (1) ohm or less for generating stations, transmission stations, and large industrial systems. Equipment grounds, depending on size and length of grounding conductor, should be only fractionally higher than system ground.

END OF SECTION

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SECTION 16075

ELECTRICAL EQUIPMENT IDENTIFICATION

PART 1 GENERAL

1.1 SUMMARY

- A. The extent of the electrical systems and equipment requiring identification is shown on the drawings, and the extent of identification required is specified herein and in individual sections of work requiring identification. The types of electrical identification specified in this section include the following:
1. Exposed conduit color banding.
 2. Buried cable warnings.
 3. Cable/conductor identification.
 4. Operational instructions and warnings.
 5. Danger signs.
 6. Equipment/system identification signs.

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. NFPA 70 National Electrical Code (NEC). Latest approved edition.
- B. APWA ULCC Uniform Color Code for Buried Utilities.
- C. ANSI Z535.1 Safety Color Code.

1.3 SYSTEM DESCRIPTION:

- A. Identify all electrical equipment as stated below:
1. All transformers shall be identified by 1-inch high block letters cut in stencil and applied with yellow paint on a flat-black background. The transformer number, primary and secondary voltages, and the kVA shall be shown.
 2. All panelboards, distribution or electrical equipment enclosure shall be identified by nameplates. The circuit number, voltage, and phase shall be shown.
 3. Identify by the circuit number shown on the drawings all receptacles and lighting switches by using ¼-inch high white characters on ½-inch wide black stick-on tape placed on the wall directly above the device if the device is wall mounted. Place the tape on the device enclosure if the device is not wall mounted.
 4. All motors, starters, disconnect switches, and control devices shall be identified by circuit number, with ¼-inch high white characters on a ½-inch wide black stick-on tape.
 5. All branch circuits in outlet boxes shall be identified with circuit number using wrap-around labels.
 6. All underground raceway or cable shall be marked with buried warning tape along its entire length.
 7. All exposed raceway longer than 10 feet in length shall be identified.
 8. Furnish all panelboards with a complete 5-inch by 7-inch typewritten directory mounted in the inner door under a clear plastic cover set in a metal frame.

1.4 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Catalog data for nameplates, labels, and markers.

- C. **Manufacturer's Instructions:** Indicate application conditions and limitations of use stipulated by Product testing agency specified under regulatory requirements. Include instructions for storage, handling, protection, examination, preparation and installation of Product.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70 – National Electrical Code.
- B. Furnish products listed and classified by Underwriters' Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, approved testing and listing agencies as suitable for the purpose specified and shown.

PART 2 PRODUCTS

2.1 NAMEPLATES AND LABELS

- A. **Nameplates**
 - 1. Engraved three-layer laminated plastic, white letters on black background for normal power and white letters on red background for emergency power. Communications and control cabinets shall be labeled with white letters on green background.
 - 2. **Locations**
 - a. Each electrical distribution and control equipment enclosure.
 - b. Communication cabinets.
 - c. Motor control centers, including each combination module.
 - 3. **Letter Size**
 - a. Use 1/8-inch letters for identifying individual equipment and loads.
 - b. Use 1/4-inch letters for identifying grouped equipment, loads, panelboards, and transfer switch.
 - c. Use 1/2-inch letters for identifying the main switchboard, motor control centers, and large distribution switchboards.
- B. **Labels**
 - 1. Adhesive tape, with 3/16-inch black letters on clear background. Use only for identification of individual wall switches and receptacles, control device stations, and multi-outlet devices.

2.2 WIRE MARKERS

- A. Vinyl or cloth tape, split sleeve or tubing-type preprinted wire markers, self-adhesive.
- B. **Manufacturers:**
 - 1. Brady
 - 2. Thomas & Betts
 - 3. 3-M Co.
- C. **Locations:** Each conductor at panelboard gutters, pull boxes, outlet and junction boxes, control panels, motor controllers and starters, and each load connection.
- D. **Legend**
 - 1. **Power and Lighting Circuits:** Branch circuit or feeder number indicated on contract drawings.
 - 2. **Control Circuits:** Control wire number indicated on shop drawings.

3. Neutral Conductors: Clearly indicate the branch circuit or feeder number the neutral serves. In multi-wire circuits where the neutral is shared, mark the neutral with the circuit number of the "A" phase.

2.3 CONDUIT MARKERS

- A. Provide manufacturer's standard preprinted, flexible or semi-rigid, permanent, plastic-sheet conduit markers, minimum of 3 mils thick and 1-1/2-inch wide extending 360 degrees around conduits; designed for self-adhesive attachment to conduit. Except as otherwise indicated, provide lettering that indicates the voltage of the conductor(s) in the conduit. Provide 8-inch minimum length for 2-inch and smaller conduit, 12-inch minimum length for larger conduit.
- B. Identify conduits containing conductors above 600-volts with the following alternating markers
 1. DANGER - HIGH VOLTAGE
 2. The voltage, as applicable (i.e. - 12,000, 4,160)
- C. Location: Furnish markers for each conduit longer than 10 feet.
- D. Spacing: 20 feet on center.
- E. Color: Unless otherwise indicated or required by governing regulation, provide orange markers with black letters.
 1. Fire Alarm System: Red w/black letters.
 2. Telephone System: Green w/yellow letters.
 3. Data/Communication. System: White w/black letters.
 4. Emergency System: Yellow w/black letters.
- F. Legend:
 1. 480 Volt System: Normal 480/277-volts.
 2. 208 Volt System: Normal 208/120-volts.
 3. Fire Alarm System: Fire alarm.
 4. Telephone System: Telephone.
 5. Data/Communication System: Data/communications.

2.4 FASTENERS

- A. Secure all labels and nameplates with self-tapping stainless steel screws. Use contact type permanent adhesive where screws cannot or should not penetrate the substrate.

2.5 BAKED ENAMEL DANGER SIGNS

- A. Provide manufacturer's standard "DANGER" signs of baked enamel finish on 20 gage steel; of standard red, black and white graphics; 14-inch by 10-inch size except where 10-inch by 7-inch is the largest size which can be applied where needed, and except where larger size is needed for adequate vision; with recognized standard explanation wording (e.g. HIGH VOLTAGE, KEEP AWAY, BURIED CABLE, DO NOT TOUCH SWITCH).

2.6 LETTERING AND GRAPHICS

- A. Coordinate names, abbreviations and other designations used in the electrical identification work, with the corresponding designations shown, specified or scheduled. Provide numbers, lettering and wording as indicated or, if not otherwise indicated, as

recommended by manufacturers or as required for proper identification and operation/maintenance of the electrical systems and equipment.

2.7 UNDERGROUND WARNING TAPE

- A. Three-inch minimum width, 5 mil thickness, foil bonded polyethylene tape, detectable type, with suitable continuous warning legend describing buried electrical lines. Tape color shall conform to APWA uniform color code using ANSI Z535.1 safety colors. Text shall be black, 2-inch minimum letters.

PART 3 EXECUTION

3.1 PREPARATION

- A. Degrease and clean surfaces to receive nameplates and labels.
- B. Coordination: Where identification is to be applied to surfaces that require finish, install identification after completion of painting.
- C. Regulations: Comply with governing regulations and the requests of governing authorities for the identification of electrical work.

3.2 APPLICATION

- A. Install nameplate and label parallel to equipment lines.
- B. Secure nameplate to equipment front using screws, rivets, or adhesive.
- C. Secure nameplate to outside moveable surface of door on panelboard.
- D. Conduit Identification:
 - 1. Where electrical conduit is exposed in spaces with exposed mechanical piping, which is identified by a color-coded method, apply color-coded identification on the electrical conduit in a manner similar to the piping identification. Except as otherwise indicated, use orange as the coded color for conduit.
 - 2. Paint red band on each fire alarm conduit longer than 10 feet.
 - 3. Paint bands 20 feet on center.
- E. Cable/Conductor Identification:
 - 1. Apply cable/conductor identification on each cable and conductor in each box/enclosure/cabinet where the wires of more than one circuit or communication/signal system are present, except where another form of identification (such as color-coded conductors) is provided.
 - 2. Match identification with marking system used in panelboards, shop drawings, contract documents, and similar previously established identification for project electrical work.
- F. Operational Identification and Warnings
 - 1. Wherever reasonably required to ensure safe and efficient operation and maintenance of the electrical systems, and electrically connected mechanical systems and general systems and equipment, including the prevention of misuse of electrical facilities by unauthorized personnel, install self-adhesive plastic signs or similar equivalent identification, instruction or warnings on switches, outlets and other controls, devices and covers of electrical enclosures. Where detailed

instructions or explanations are needed, provide plasticized tags with clearly written messages adequate for the intended purposes.

- G. **Danger Signs**
 - 1. In addition to the installation of danger signs required by governing regulations and authorities, install appropriate danger signs at the locations indicated and at locations subsequently identified by the Installer of electrical work as constituting similar dangers for persons in or about the project.
 - 2. **High Voltage:** Install danger signs wherever it is possible, under any circumstances, for persons to come into contact with electrical power of voltages higher than 120 volts.
 - 3. **Critical Switches/Controls:** Install danger signs on switches and similar controls, regardless of whether concealed or locked up, where untimely or inadvertent operation (by anyone) could result in significant danger to persons, or damage to or loss of property.

- H. **Equipment/System Identification Signs**
 - 1. Install an engraved plastic-laminate sign on each major unit of electrical equipment in the building; including the central or master unit of each electrical system and the communication/signal systems, unless the unit is specified with its own self-explanatory identification or signal system.
 - 2. Except as otherwise indicated or specified, provide single line of text, ½-inch high lettering on 1-1/2-inch high sign (2-inch high where two lines are required), white lettering in black field.
 - 3. Provide text matching terminology and numbering of the contract documents and shop drawings.
 - 4. Provide signs for each unit of the following categories of electrical work
 - a. Major electrical switchboard
 - b. Electrical substation
 - c. Motor control center
 - d. Fire alarm control panel and annunciators.

- I. Install signs at locations indicated or, where not otherwise indicated, at location for best convenience of viewing without interference with operation and maintenance of equipment. Secure to substrata with fasteners, except use adhesive where fasteners should not or cannot penetrate the substrata.

- J. Identify underground conduits using underground warning tape. Install one tape per trench at 6 inches below finished grade.

END OF SECTION

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SECTION 16123

600-VOLT RATED WIRE AND CABLE

PART 1 GENERAL

1.1 SUMMARY

- A. This section includes covers all labor, material, tools, equipment and services required to install building wire and cable, service entrance cable, control cables, wiring connectors and connections.

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. ASTM B 8 - Specifications for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- B. NECA - Standard of Installation.
- C. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- D. NFPA 70 - National Electrical Code (NEC). Latest approved edition.
- E. UL 83 - Thermoplastic-Insulated Wires and Cables.

1.3 DESCRIPTION OF WORK

- A. The requirements of this section apply to cable and wires specified on the drawings and in these specifications. The extent of electrical wire and cable work is indicated on drawings and schedules and by the requirements of this section. The applications for cable, wire and connectors required, but not limited to, are as follows:
 - 1. Power distribution circuitry.
 - 2. Lighting circuitry.
 - 3. Appliance and equipment circuitry.
 - 4. Wiring for motors of mechanical equipment.
 - 5. Wiring from the motors of mechanical equipment to the disconnect switches or junction boxes, including wiring for pushbuttons, pilot lights, interlocks and similar devices as directed, shown, or specified.
 - 6. Wiring from the motors of mechanical equipment to motor starters, including other auxiliary wiring as may be required, directed, or shown.
 - 7. Line voltage wiring as required by Division 15, and interlocking to motor starters.
 - 8. Control wiring for motors, mechanical equipment, relays and switches, and similar mechanical-electrical devices.
 - 9. Line voltage wiring to thermostats, alarm systems and other miscellaneous equipment.

1.4 PROJECT CONDITIONS

- A. Conductor sizes are based on copper.
- B. Wire and cable routing shown on Drawings is diagrammatic unless dimensioned.
- C. Route wire and cable as required to complement project conditions.

- D. The electrical contractor shall be responsible for any and all raceways and raceway/cable supports in accordance with other sections of these specifications.

1.5 REGULATORY REQUIREMENTS

- A. Furnish products listed and classified by Underwriters Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, acceptable testing and listing agencies as suitable for the purpose specified and shown.

1.6 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Product Data: Submit manufacturer's catalog cuts and technical data for building wire and cables.
- C. Test Report: Measure overall insulation resistance to ground. Provide certified test report for Engineer's Review.

1.7 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Provide project record documents showing actual locations of components and circuits.

1.8 QUALIFICATIONS

- A. Manufacturer shall be a Company specializing in manufacturing products specified in this section with a minimum of five years' experience.

1.9 FIELD MEASUREMENTS

- A. Verify field measurements as indicated on drawings.

1.10 COORDINATION

- A. In accordance with Division 1 requirements.
- B. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.
- C. Wire and cable routing indicated is approximate unless dimensioned. Include wire and cable lengths within 10 feet of length shown.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Domestic manufacturer regularly engaged in the manufacture of Building Wire and Cable products for at least five years as follows:
 1. American Wire and Cable.
 2. Cerro Wire and Cable Co.
 3. General Cable Corp.
 4. Okonite Co.

2.2 BUILDING WIRE AND CABLE

- A. Building wire and cable shall be UL83 compliant, insulated, single conductor, copper, solid or stranded, rated for 600-volts AC. The insulation shall be thermoplastic material rated for 90 degrees Celsius dry locations, 75 or 90 degrees Celsius wet locations, THW, THHN/THWN, RHW or XHHW, per ANSI/NFPA 70.
- B. Use type THW insulation for feeders and branch circuits larger than 8 AWG, unless noted otherwise.
- C. Use type THHN/THWN insulation for feeders and branch circuits 8 AWG smaller.
- D. For Interior Dry Location: Use only building wire, THHN/THWN insulation, in raceway.
- E. For Exterior Wet or Dry Locations: Use only building wire, THHN/THWN insulation, in raceway.
- F. For Underground Dry or Wet Locations: Use only RHW or XHHW insulation rated for 90 degrees Celsius, in raceway.
- G. For connections to electrical equipment, coordinate wire type with equipment manufacturer.

2.3 SERVICE ENTRANCE CABLES

- A. Service entrance cables shall be insulated, single conductor, copper, stranded, rated for 600-volts AC, type XHHW insulation.
- B. Overhead Service entrance cables shall be insulated, single conductor, copper, stranded, rated for 600-volts AC, type SE insulation.

2.4 INSTRUMENTATION AND CONTROL CABLES

- A. Instrumentation cables to field mounted equipment and devices shall be minimum two (2) conductor No. 16 AWG, tin-coated copper, stranded, shielded twisted pair, 80 degree Celsius, PVC insulation foil shield with overall heavy duty polyethylene jacketing, rated for 600-volt AC.
- B. Control cables to field mounted equipment and devices shall be a single conductor, insulated, No. 12 Awg minimum, copper, solid or stranded, rated for 600-volts AC. The insulation shall be thermoplastic material rated for 90 degrees Celsius dry locations, 75 degrees Celsius wet locations, THHN/THWN or XHHW, per ANSI/NFPA 70.
- C. Multi-conductor control cables to field mounted equipment and devices shall consist of several single conductor, insulated No. 12 Awg minimum, copper, solid or stranded, rated for 600-volts AC with an overall protective PVC jacket. The insulation shall be thermoplastic material rated for 90 degrees Celsius dry locations, 75 degrees Celsius wet locations, PVC, THHN/THWN or XHHW, per ANSI/NFPA 70. Circuit identification shall consist of Method 1 - color coding in accordance with ICEA S-66-524, Appendix K Table K-2.
- D. Instrumentation and control cable connected to equipment or devices within control panels shall be sized per requirements of equipment manufacturer (minimum #16 AWG control wire and #18 AWG instrumentation cable).

2.5 WIRING CONNECTORS

- A. Split Bolt Connectors:
 - 1. FCI Burndy Corp.
 - 2. Thomas & Betts Co.
 - 3. Cooper Crouse-Hinds

- B. Solderless Pressure Connectors:
 - 1. FCI Burndy Corp.
 - 2. Ideal Industries Co.
 - 3. Thomas & Betts Co.
 - 4. 3-M Co.

- C. Spring Wire Connectors:
 - 1. Ideal Industries Co.
 - 2. 3-M Co.

- D. Compression Connectors:
 - 1. FCI Burndy Corp.
 - 2. Thomas & Betts Co.
 - 3. 3-M Co.

2.6 WIRE COLOR CODE

- A. Color-code all conductors:
 - 1. Wire sizes 10 AWG and smaller shall have integral color-coded insulation.
 - 2. Wire sizes 8 AWG and larger may have black insulation but shall be identified by color-coded electrical tape at all junction, splice, pull, or termination points.
 - 3. Color tape shall be applied to at least 3 inches of the conductor at the termination ends and in junction or pull boxes or where readily accessible.
 - 4. Conductors for all systems shall not change color at splice points.
 - 5. Where there are two or more neutrals in one conduit, each shall be individually identified with the proper circuit.
 - 6. For 4 AWG and larger ground conductors, identify with green tape at both ends and all visible points, included in all junction boxes.
 - 7. Each phase shall be uniquely color-coded.
 - 8. Color-code wires as indicated below:

	120/240-Volts	120/208-Volts	277/480-Volts
Phase:	a - black	a - black	a - brown
	b - red	b - red	b - orange
	n - white	c - blue	c - yellow
	g - green	n - white	n - white or natural gray
		g - green	

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that interior of building has been protected from weather.

- B. Verify that mechanical work likely to damage wire and cable has been completed.

- C. Verify that raceway installation is complete and supported.

3.2 PREPARATION

- A. Completely and thoroughly clean and swab raceway before installing wire.

3.3 EXISTING WORK

- A. Remove exposed abandoned wire and cable. Patch surfaces where removed cables pass through building finishes.
- B. Disconnect abandoned circuits and remove circuit wire and cable. Remove abandoned boxes if wire and cable servicing them is abandoned and removed. Provide blank cover for abandoned boxes that are not removed.
- C. Ensure access to existing wiring connections which remain active and which require access. Modify installation or provide access panel as appropriate.
- D. Extend existing circuits using materials and methods and compatible with existing electrical installations, or as otherwise specified.
- E. Clean and repair existing wire and cable that remain or is to be reinstalled.

3.4 INSTALLATION

- A. General:
 - 1. Install wire and cable in accordance with manufacturer's instructions and NECA "Standard of Installation".
 - 2. Route wire and cable as required to meet project conditions.
 - 3. Identify and color code wire and cable. Identify each conductor with its circuit number or other designation indicated.
 - 4. Protect exposed cable from damage.
 - 5. Pull all conductors into raceway at same time.
 - 6. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
 - 7. Support cables above accessible ceiling using standard support methods to support cables from structure. Do not rest cable on ceiling panels.
 - 8. Neatly train and lace wiring inside boxes, equipment, and panelboards
- B. Cable and Wire Size:
 - 1. Conductor sizes are based on copper unless indicated as aluminum or "AL".
 - 2. Use 10 AWG conductors for 20 ampere, 120-volt branch circuits longer than 75 feet.
 - 3. Use 10 AWG conductors for 20 ampere, 277-volt branch circuits longer than 200 feet.
 - 4. Use stranded conductor for all feeders, branch and control circuits.
- C. Special Techniques - Wiring Connections:
 - 1. Clean conductor surfaces before installing lugs and connectors. Where an anti-oxidation lubricant is used, apply liberally, coating all exposed conductor surfaces.
 - 2. Use suitable cable fittings and connectors.
 - 3. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
 - 4. Tape un-insulated conductors and connector with two layers of half-lapped rubber insulating compound tape and two layers of half-lapped, 7-mil electrical tape, Scotch 33+, or equal.
 - 5. Use split bolt connectors for copper conductor splices and taps, 8 AWG and larger.

6. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
7. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.
8. Stranded conductors for control circuits shall have fork or ring terminals crimped on for all device terminations. Bare stranded conductors shall not be placed directly under the screws.

3.5 FIELD QUALITY CONTROL

- A. Visual and Mechanical Inspection:
 1. Inspect wire and cable for physical damage and proper connection.
 2. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
 3. Verify continuity of each branch circuit conductor.
 4. Inspect compression-applied connectors for correct cable match and indentation.
- B. Electrical Testing and Verification:
 1. All 600 volt conductors 8 AWG and larger, shall be verified by use of a 500-volt meg-ohm-meter.
 2. Perform continuity test to insure correct cable connection.
 3. Correct malfunctions and/or deficiencies immediately as detected at no additional cost to the District, including additional verification testing.
 4. Compile test report results and submit to Engineer for approval
 5. Subsequent to final wire and cable terminations, energize all circuitry and demonstrate functional adequacy in accordance with system requirements.
- C. Test Values
 1. Compare bolted connection resistance to values of similar connections.
 2. Bolt-torque levels should be in accordance with NETA ATS Table 10.12 unless otherwise specified by the manufacturer.
 3. Minimum insulation-resistance values should not be less than 50 meg-ohms.
 4. Investigate deviations between adjacent phases.

END OF SECTION

SECTION 16130
RACEWAY AND BOXES

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes conduit and tubing, surface and buried raceways, wireways, outlet boxes, pull boxes, junction boxes, hand holes and concrete manholes.

1.2 RELATED SECTIONS

- A. Section 02580 – Precast Concrete Electrical Vaults and Handholes
- B. Section 16060 – Basic Electrical Materials and Methods

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.
- C. NECA - "Standard of Installation."
- D. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- E. NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
- F. NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports.
- G. NEMA RN 1 - Plastic Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
- H. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.
- I. NEMA TC 6 - Non-Metallic Conduit.
- J. NEMA 250 - Enclosures for Electrical Equipment (1,000 Volts Maximum).
- K. NFPA 70 - National Electrical Code (NEC). Latest approved edition
- L. UL 1 – Flexible Metal Conduit
- M. UL 6 - Rigid Metal Conduit
- N. UL 1242 - Intermediate Metal Conduit
- O. UL 797 - Electrical Metallic Tubing
- P. UL 651 - Rigid Non-Metallic Conduit

1.4 SYSTEM DESCRIPTION

- A. Raceway, boxes and manholes located as indicated on drawings and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway, boxes and manholes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring system.
- B. Underground more than 5 feet (1,500 mm) outside foundation wall: Provide thick wall non-metallic conduit.
- C. Underground within 5 feet from foundation wall: Provide rigid steel or thick wall non-metallic conduit as indicated on the drawings.
- D. In or Under Slab on Grade: Provide thick wall non-metallic conduit.
- E. Outdoor Locations, Above Grade: Provide rigid steel conduit. Provide cast metal outlet, pull, and junction boxes.
- F. In Slab above Grade: Provide rigid steel conduit. Provide cast boxes.
- G. Exposed Dry Locations: Provide galvanized rigid steel conduit or intermediate metal conduit. Provide cast boxes.
- H. Concealed Dry Locations: Provide electrical metallic tubing or intermediate metal conduit. Provide cast boxes.
- I. Locations Subject to Corrosive Atmosphere: Provide PVC coated, galvanized rigid steel conduit.

1.5 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Product Data: Submit for the following:
 - 1. Rigid steel conduit.
 - 2. PVC coated galvanized rigid steel conduit.
 - 3. Intermediate metal conduit.
 - 4. Electrical metallic tubing.
 - 5. Flexible metal conduit.
 - 6. Liquid tight flexible metal conduit.
 - 7. Nonmetallic conduit.
 - 8. Raceway fittings.
 - 9. Conduit bodies.
 - 10. Surface raceway.
 - 11. Pull boxes, junction boxes and manholes.
- C. Manufacturer's Installation Instructions: Submit application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.6 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.

- B. Project Record Documents:
 - 1. Record actual routing of conduits.
 - 2. Record actual locations and mounting heights of outlet, pull boxes, junction boxes and manholes.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Division 1 requirements.
- B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- C. Protect PVC conduit from sunlight.

PART 2 PRODUCTS

2.1 CONDUIT

- A. Size raceways per ANSI/NFPA 70, except as follows:
 - 1. All indoor branch circuit raceway shall be a minimum of 3/4" Electrical Metallic Tubing (EMT), unless otherwise noted.
 - 2. All raceway for Control circuits shall be a minimum of 1/2" EMT, unless otherwise noted.
 - 3. All raceway for outdoor above grade circuits, feeder circuits, branch circuits larger than 2" and raceway in hazardous areas shall be Galvanized Rigid Steel Conduit (GRSC or RGS) unless otherwise noted.
- B. Galvanized Rigid Steel Conduit (GRSC or RGS), couplings and elbows shall be hot-dip galvanized, rigid mild steel in accordance with ANSI C80.1 and UL 6. The conduit interior and exterior surfaces shall have a continuous zinc coating with a transparent overcoat of enamel, lacquer, or zinc chromate. Conduit shall be formed with continuous welded seams with a uniform wall thickness, in minimum 10-foot lengths, with threaded ends.
- C. Plastic Coated Rigid Steel Conduit. Coating shall be applied under controlled factory conditions. Prior to coating conduit shall meet requirement of GRSC.
- D. Intermediate Metal Conduit (IMC). Raceway shall be hot-dipped galvanized mild steel in accordance with ANSI C80.6 and UL 1242 and shall bear the UL label. Conduit shall have same characteristics of rigid steel except for thinner wall.
- E. Electrical Metallic Tubing (EMT). Electrical metallic tubing, including elbows and bends, shall be zinc coated, mild steel in accordance with the requirements of ANSI C80.3 and UL 797. The interior and exterior surfaces of the tubing shall have a continuous zinc coating. Conduit shall be formed with a continuous welded seam, with a uniform wall thickness, in minimum 10-foot lengths.
- F. Flexible Metal Conduit shall be galvanized steel or aluminum meeting the requirements of UL 1.
- G. Liquid-Tight Flexible Metal Conduit shall be plastic-jacketed, galvanized steel, "Sealtite" Type EF for general service areas or Type HC for high-temperature when used under raised floor or in air plenums. Conduit shall be UL listed.
- H. Non-Metallic Conduit shall be as follows:

1. Schedule 40 or 80: Conduit shall be 90 C, UL 651 listed, composed of polyvinyl chloride conforming to NEMA Standard TC-2.
2. Type EB: Conduit shall be Type EB for concrete encasement, UL listed, conforming to NEMA Standard TC-6.
3. Type DB: Conduit shall be Type DB for direct burial, UL listed, and conform to NEMA Standards TC-6.
4. Spacers used in duct bank installations shall be high impact plastic, interlocking bases, and intermediate type spacers. Place spacers between 7 and 10 feet apart.

2.2 CONDUIT FITTINGS

- A. Couplings and Thread Protectors. Each length of threaded conduit shall be provided complete from the manufacturer with a coupling on one end and a thread protector on the other. The thread protector shall have sufficient mechanical strength to protect the threads during normal handling and storage.
- B. Metal Conduit Fittings. All metal conduit fittings shall conform to the requirements of UL 514B where this standard applies. Galvanized iron or galvanized steel fittings shall be used with steel conduit. Zinc-coated steel fittings shall be used with steel tubing. EMT fittings shall be compression type, UL approved for rain tight applications, T&B 5X2X series, and setscrew type for indoor applications, T&B HT22X series, insulated throat. Threaded fittings shall engage a minimum of five threads made up wrench-tight and be compatible with conduit.
- C. Liquid-Tight Flexible Conduit Fittings. All liquid-tight flexible conduit fittings shall be galvanized steel, T&B 53XX series insulated throat, and shall bear the UL label.
- D. Flexible Metal Conduit Fittings. Flexible metal conduit fittings shall be galvanized steel, T&B Tite-Bite.
- E. Non-Metallic Conduit Fittings. Fitting shall be of same material and strength characteristics as conduit and shall be solvent welded as recommended by manufacturer. Duct to steel adapters shall be provided as required. End bells shall be plastic, high impact, tapered to fit.
- F. Special Fittings. Conduit sealing, explosion proof, dust proof, and other types of special fittings shall be provided as required by the drawings and these specifications and shall be consistent with the area and equipment with which they are associated. Fittings installed outdoors or in damp locations shall be sealed and gasketed. Outdoor fittings shall be of heavy cast construction. Hazardous area fittings and conduit sealing shall conform to NEC requirements for the area classification.
- G. Bushings. Bushings shall be provided for the termination of all conduits not terminated in hubs, couplings or insulated throat connectors. Grounding type insulated bushings with insulating inserts in metal housings shall be provided for conduit 1-1/4 inches and larger. Standard bushings shall be galvanized steel or malleable iron in all sizes.
- H. Locknuts. One interior and one exterior locknut shall be provided for all conduit terminations not provided with threaded hubs and couplings. Locknuts shall be designed to securely bond with the conduit to the box when tightened. Locknuts shall be so constructed that they will not be loosened by vibration.
- I. Unions. Watertight conduit unions shall not be used on this project.

- J. Raintight Conduit Hubs. Raintight conduit terminating hubs, where indicated on the drawings or required by these specifications, shall be Myer's rigid conduit hubs, or approved equal.

2.3 CONDUIT SUPPORTS

- A. Conduit supports shall be furnished and installed in accordance with the drawings and these specifications. Conduits shall be supported so that fittings are accessible. Support systems shall be limited to electrical conduits only.
- B. Hanger Rods. Hanger rods shall be 3/8-inch diameter galvanized threaded steel rods, minimum. Conduit racks over 18-inch wide, over one level, or supporting 2-inch GRSC or larger, shall be 1/2-inch diameter rod minimum.
- C. Conduit Clamps. Conduits in single runs or groups of two shall be supported by cast metal clamps and clamp backs. They shall be galvanized malleable iron or approved equal cast ferrous metal for steel conduit or tubing.
- D. Support Channels. Supports for banks of three or more conduits shall be constructed of support channels (Unistrut, Kindorf, Superstrut, B-Line or approved equal) with associated conduit or tubing clips. Support channels shall be steel, hot-dip galvanized after fabrication with galvanized steel clips for steel conduit or tubing.

2.4 OUTLET BOXES AND SWITCH BOXES

- A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
- B. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported, per NEC requirements.
- C. Interior Outlet Boxes: Unless otherwise noted or shown, provide galvanized flat rolled sheet steel interior outlet wiring boxes of types, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices.
- D. Outlet boxes used in wet outdoor locations, surface mounted shall be cast metal (FS or FD type) with mounting lugs and gasketed covers.
- E. Interior Outlet Box Accessories: Provide outlet box accessories as required for each installation, including mounting brackets, wallboard hangers, extension rings, fixture studs, cable clamps and metal straps for supporting outlet boxes, which are compatible with outlet boxes being used and meeting requirements of individual wiring situations. Choice of accessories is installer's option.

2.5 MANUFACTURERS

- A. Firms regularly engaged in the manufacturing of electrical raceways of the types and capacities required, whose products have been in satisfactory use in similar service for not less than 3 years.

2.6 CLOSURE FOAM

- A. All conduit, raceways, cables and sleeves penetrations through fire rated and hazardous location walls, shafts, floor, ceilings, etc., shall be sealed with a UL-approved fire stopping system.

2.7 PULL BOXES AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, NEMA rating as indicated on drawings.
 - 1. Material: Minimum 16 gage galvanized steel.
 - 2. Cover: Stainless steel hinged cover with neoprene gasket. Cover to be secured to the body with a continuous, full length, piano type hinge and stainless steel pin on one side and captive screw on the other side. Door to be equipped with padlock hasp with sealing hole provisions.
 - 3. Grounding Lug: Provide #10-32 tapped hole provisions for optional ground lug kit.
 - 4. Collar Studs: Provide 0.375-16 collar studs for mounting optional panel.
 - 5. Mounting: Provide external mounting feet for secure wall mounting.
 - 6. Finish: Wash and phosphate undercoat with ANSI 61 gray polyester power finish.
- B. Surface-Mounted Cast Metal Box: NEMA 250, NEMA rating as indicated on drawings, flat-flanged, surface- mounted junction box:
 - 1. Material: Cast Iron.
 - 2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.
- C. Concrete pull boxes for buried conduits shall be as specified in Section 02580.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify outlet locations and routing and termination locations of raceway prior to rough in.

3.2 EXISTING WORK

- A. Extend existing raceway and box installations using materials and methods compatible with existing electrical installations, or as specified.
- B. Clean and repair existing raceway and boxes to remain or to be reinstalled.

3.3 INSTALLATION OF RACEWAYS

- A. Routing
 - 1. Install raceway and boxes in accordance with NECA "Standard of Installation."
 - 2. Conduit routing shown on drawings is diagrammatic only. Contractor shall field route conduit and raceways between equipment and devices as required to obtain a complete wiring system.
 - 3. Except as otherwise specified all conduit shall be installed in exposed runs parallel or perpendicular to dominant surfaces with right-angle turns made of symmetrical bends or fittings.
 - 4. Conduit shall not be installed on the outside face of exposed columns, but shall be routed on the web or on the inside of a flange of the column.
 - 5. Except where prevented by the location of other work, a single conduit or a conduit group shall be centered on structural members.

6. Conduit shall be located at least 6 inches from hot water or steam pipes and from other hot surfaces
- B. Moisture Pockets
1. Moisture pockets shall be eliminated from conduits. If water cannot drain to the natural opening in the conduit system, a hole shall be drilled in the bottom of a pull box or a "C-type" conduit fitting provided in the low point of the conduit run.
- C. Couplings and Unions
1. Metal conduit shall be joined by threaded conduit couplings, with the conduit ends butted. The use of running threads will not be permitted.
 2. Erickson type couplings or similar unions will not be permitted.
- D. Bends and Offsets
1. Changes in direction of conduits shall be made with fittings or bends.
 2. Conduit bends shall meet the requirements of NEC or the bend radius other cable installed, whichever is more limiting, with no exception.
 3. Bends shall be made using appropriate tools or mechanical equipment. The use of a pipe tee or vise for bending conduit or tubing will not be permitted.
 4. For non-metallic conduit or plastic coated steel, approved factory bends and offsets shall be used.
 5. Conduits or tubing deformed or crushed in any way shall be removed from the job site. Install no more than the equivalent of three 90 degree bends between boxes or outlets
- E. Cutting and Threading
1. The plane of all conduit ends shall be square with the centerline.
 2. Where threads are required, they shall be cut and cleaned prior to conduit reaming.
 3. The ends of all conduit and tubing shall be reamed to remove all rough edges and burrs.
 4. Cutting oil shall be used in threading operations; the dies shall be kept sharp, and provisions shall be made for chip clearance.
 5. Threads on conduits and fittings shall be lubricated with conducting and sealing compound
- F. All steel conduit, exposed to weather or in contact with earth, shall be coated after threading with "Zincilate 810", "Zinc Rich" coating or approved equal. The Contractor shall supply this protective material and shall apply it in the field.
- G. Connections to Boxes and Cabinets
1. Conduit shall be securely fastened to all boxes and cabinets.
 2. Threads on metallic conduit shall project through the wall of the box to allow the bushing to butt against the end of the conduit.
 3. The locknuts, both inside and outside, shall then be tightened sufficiently to bond the conduit securely to the box.
 4. Locknuts on EMT box connectors shall be tightened securely to bond the connectors.
- H. All conduits entering enclosures outdoors or in wet areas shall enter through Myer's hubs, or approved equal, or threaded openings.
- I. Cleaning
1. Precautions shall be taken to prevent the accumulation of water, dirt, or concrete in the conduit.

2. Conduit in which water or other foreign materials have been permitted to accumulate shall be thoroughly cleaned or, where such accumulation cannot be removed by methods acceptable to the District, the conduit shall be replaced.
- J. Empty Conduit
1. All conduits installed for future use shall have a pull line.
- K. Rooftop Conduits
1. Provide redwood sleepers on waterproof mastic base for all conduit runs exposed on roofs.
- L. Above 600-Volts
1. Conduits carrying conductors above 600-volts shall be identified with markers at 10 feet intervals indicating the voltage level and feeder designation.
- M. Ground Wire
1. A solid or stranded bare copper or green insulated copper solid or stranded ground wire shall be provided in all conduits and raceways.
- N. Galvanized Rigid Steel Conduit
1. Galvanized rigid steel conduit shall be installed in areas exposed to weather, vehicle traffic, in hazardous classified areas, for penetrations through foundations, and 10 feet before transition from below grade to 8 feet above grade, unless otherwise noted on the drawings.
 2. Conduit in contact with earth shall be protected by "Scotchwrap" 10 mil tape applied in double thickness using 50% lap turns to 6 inches above grade and 6 inches beyond transition.
 3. Expansion joints shall be used where required.
- O. Plastic-Coated Rigid Steel Conduits
1. Plastic-coated, rigid steel conduit and fittings shall be installed where highly corrosive conditions exist, indoors or outdoors, as shown on the drawings.
 2. The Contractor shall patch any damaged coating according to the manufacturer's instructions and to the satisfaction of the District.
- P. Intermediate Metal Conduit
1. Rigid steel intermediate conduit may be installed in lieu of rigid steel conduit in all above ground areas where rigid steel conduit is permitted, except for wires over 600- volts, unless otherwise specified.
- Q. Electrical Metallic Tubing
1. Electrical metallic tubing shall be installed for all circuits, indoors above concrete slab, where not subject to conditions outlined for rigid galvanized steel conduits.
- R. Flexible Metal Conduit
1. Flexible conduit inserts not greater than 30 inches in length, shall be installed in all conduit runs, which are supported by both building steel and by structures subject to vibration or thermal expansion. This shall include locations where conduit supported by building steel enters or becomes supported by isolated structures on separate foundations.
 2. Flexible conduit shall be installed in conduit runs, which cross expansion joints.
 3. Special areas, such as plant office control rooms in which external noise is to be minimized, shall have flexible conduit in conduit runs where the runs cross from the main building framing to the control room or office framing.

4. Flexible conduit shall be installed adjacent to all equipment and devices, which move in relation to the supply conduit due to vibration, normal operation of the mechanism, or thermal expansion.
 5. Conduit shall be connected to pressure switches, thermocouples, solenoids, and similar devices with flexible conduit. Flexible conduit shall be installed adjacent to the motor terminal housing for motors requiring 4-inch and smaller conduit.
 6. Flexible metal conduit inserts not greater than 6 feet in length shall be installed for light fixture tap conductors.
- S. Liquid-Tight Flexible Metal Conduit
1. Liquid-tight flexible metal conduit shall be used in place of regular flexible conduit for connections to motors and transformers, in areas exposed to weather, moisture or oil, and under raised floors.
- T. Non-Metallic Conduit
1. Schedule 40 or 80 shall be used for all power, signal feeders and branch circuits, in earth or enclosed in concrete, unless otherwise noted on the drawings. Conduits must be buried in earth in accordance with the NEC.
 2. Type EB. May be used in lieu of Schedule 40 or 80 if encased in concrete.
 3. Type DB. May be used in lieu of Schedule 40 or 80 as direct buried.
- U. Conduit Support
1. Support raceway using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
 2. Fasten conduit supports to building structures and surfaces in accordance with Section 16060.
 3. Do not use wire, ceiling support wires or perforated pipe straps to support conduit. Remove any temporary installation support wire.
- V. Spacing of Supports
1. Except where buried in concrete, all conduit runs shall be rigidly supported.
 2. Each conduit shall be supported within 1 foot of junction boxes and fittings.
 3. Support spacing along conduit runs shall be as follows.

Conduit Size	Maximum Distance Between Supports
½ inch through 1-1/4 inch	5 feet
1-1/2 inch and larger	10 feet

- W. Ground and bond raceway and boxes in accordance with Section 16060.

3.4 CABINET AND BOX INSTALLATION

- A. Install electrical boxes as shown on drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- C. Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only. In inaccessible ceiling areas, install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed luminaire.
- D. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices with each other.

- E. Use flush mounting outlet boxes in finished areas.
 - 1. Do not install flush mounting boxes back-to-back in walls.
 - 2. Provide minimum 6-inch separation.
 - 3. Provide minimum 24-inch separation in acoustic rated walls.
 - 4. Secure flush mounting box to interior wall and partition studs.
 - 5. Accurately position to allow for surface finish thickness.
 - 6. Use stamped steel bridges to fasten flush mounting outlet box between studs.
 - 7. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
 - 8. Use adjustable steel channel fasteners for hung ceiling outlet box.
- F. Support boxes independently of conduits.
- G. Use code sized gang box where more than one device is mounted together. Do not use sectional box. Use code sized gang box with plaster ring for single device outlets.
- H. Use cast outlet box in exterior locations where exposed to the weather and wet locations (interior or exterior).
- I. Large Pull Boxes - Boxes larger than 100 cubic inches in volume or 12 inches in any dimension.
 - 1. Interior Dry Locations - Use hinged enclosure.
 - 2. Other Locations - Use surface mounted box of appropriate location classification.
- J. Coordinate installation of electrical boxes and fittings with cable and raceway installation work. Provide knockout closures to cap unused knockout holes where blanks have been removed.
- K. Locate boxes and conduit bodies so as to ensure ready accessibility of electrical wiring.
- L. Avoid using round boxes where conduit must enter box through side of box, which would result in difficult and insecure connections where fastened with a locknut or bushing on rounded surface.
- M. Fasten boxes rigidly to substrate or structural surfaces to which they are being mounted, or solidly embed electrical boxes in concrete or masonry as appropriate.
- N. Cabinets and boxes shall be rigidly mounted.
 - 1. Mounting on concrete shall be secured by self-drilling anchors.
 - 2. Mounting on steel shall be by drilled and tapped screw holes, or by special support channels welded to the steel, or by both.
 - 3. Cabinets shall be leveled and fastened to the mounting surface with not less than ¼-inch air space between the enclosure and mounting surface.
 - 4. All mounting holes in the enclosure shall be used.
- O. Except as prevented by the location of other work, all junction boxes and outlet boxes shall be centered on structures.
- P. Conduit openings in boxes shall be made with a hole saw or shall be punched.

3.5 BRACKETS

- A. Bracket supports shall be used where specifically indicated. Other types of hangers acceptable to the District may also be used.

3.6 ANCHORS

- A. Where supports for raceways, boxes, and cabinets are mounted on concrete surfaces, they shall be fastened with self-drilling tubular expansion shell anchors with externally split expansion shells, single-cone expanders, and annular break-off grooved chucking cones. Anchors shall be Phillips "Red Head" or approved equal.

3.7 ADJUSTING

- A. Install knockout closures in unused openings in boxes.

3.8 CLEANING

- A. In accordance with Division 1 requirements.
- B. Clean interior of boxes to remove dust, debris, and other material.
- C. Clean exposed surfaces and restore finish.

END OF SECTION

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SECTION 16140
WIRING DEVICES

PART 1 GENERAL

1.1 SUMMARY

- A. Wiring devices are defined as single discrete units of electrical distribution systems that are intended to carry but not utilize electric energy. The types of general purpose wiring devices required for the project include, but are not necessarily limited to the following line voltage devices:
 - 1. Receptacles
 - 2. Switches
 - 3. Wall plates
 - 4. Plugs
 - 5. Connectors

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. NEMA WD 1 - General Purpose Wiring Devices
- B. NEMA WD 6 - Wiring Device Configurations.

1.3 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Product Information:
 - 1. Catalog cut of each device showing Manufacturer name, catalog number, voltage and current rating and dimensions.

1.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five years experience.
- B. Installer: A firm with at least five years of successful installation experience on projects with electrical installation work similar to that required for the project.

1.5 REGULATORY REQUIREMENTS

- A. Furnish products listed and classified by Underwriters Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, acceptable testing and listing agencies as suitable for the purpose specified and shown.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide factory fabricated wiring devices in the type, color, electrical rating for service indicated, and/or as shown on the drawings.

2.2 MANUFACTURERS

- A. Provide products produced by one of the following for each type of wiring device, or acceptable alternate:
1. Appleton
 2. Hubbell Wiring Device Division
 3. Pass & Seymour
 4. Bryant Electric Co.
 5. Cooper Crouse-Hinds Co.
 6. Thomas & Betts
 7. Wiremold (multi-outlet assemblies)

2.3 WALL SWITCHES

- A. Provide specification grade, quiet type, flush, 1-pole, 2-pole, three and four-way toggle switches rated 20 ampere, 120/277-volts AC, with mounting yoke insulated from mechanism equipped with plaster ears and side wired screw terminals, ivory plastic body with toggle handle, NEMA WD-1.
1. Manufacturers: Hubbell, Pass & Seymour, Bryant
- B. Provide specification grade, dimmer switches suitable for dimming LED lights rated 20 ampere, 120/277-volts AC, with mounting yoke insulated from mechanism equipped with plaster ears and side wired screw terminals, ivory plastic body with toggle handle, NEMA WD-1.
1. Manufacturers: Hubbell, Pass & Seymour, Bryant

2.4 RECEPTACLES

- A. Provide specification grade, grounding type, heavy-duty receptacles with ivory plastic body, green hexagonal equipment ground screw terminal and grounding poles internally connected to mounting yoke; metal plaster ears; side wiring NEMA WD-6 as follows:
1. Two pole, 3 wire, 20-ampere, 125-volt duplex receptacle, NEMA configuration 5-20R unless otherwise indicated.
 2. GFCI Receptacle: Two pole, 3 wire, 20-ampere, 125-volt duplex receptacle with integral ground fault circuit interrupter to meet regulatory requirements.
 3. Two pole, 3 wire, 20-ampere, 125-volt single receptacle, twist-lock, NEMA configuration L5-20R as indicated.
 4. Two pole, 3 wire, 20-ampere, 250-volt single receptacle, twist-lock, NEMA configuration L6-20R as indicated.
 5. Two pole, 3 wire, 20-ampere, 277-volt single receptacle, twist-lock, NEMA configuration L7-20R as indicated.
 6. Two pole, 3 wire, 30-ampere, 125-volt single receptacle, twist-lock, NEMA configuration L5-30R as indicated.
 7. Two pole, 3 wire, 30-ampere, 250-volt single receptacle, twist-lock, NEMA configuration L6-30R as indicated.
 8. Two pole, 3 wire, 30-ampere, 277-volt single receptacle, twist-lock, NEMA configuration L7-30R as indicated.
 9. Three phase, 4 wire, 20-ampere, 125/250-volt single receptacle, twist-lock, NEMA configuration L14-20R as indicated.
 10. Three phase, 4 wire, 20-ampere, 250-volt single receptacle, twist-lock, NEMA configuration L15-20R as indicated.
 11. Three phase, 4 wire, 20-ampere, 480-volt single receptacle, twist-lock, NEMA configuration L16-20R as indicated.
 12. Three pole, 4 wire, 30-ampere, 125/250-volt single receptacle, twist-lock, NEMA configuration L14-30R as indicated.

13. Three pole, 4 wire, 30-ampere, 250-volt single receptacle, twist-lock, NEMA configuration L15-30R as indicated.
14. Special Purpose Receptacle: Type as required meeting the requirements of this Section and the equipment shown on the drawings and elsewhere specified.

2.5 PLUGS AND CONNECTORS

- A. Comply with NEMA Standards Publication No. WD-1. Provide 20 ampere, 125-volts, bakelite body connectors, 3-wire grounding, parallel blades, double wipe contact, with cord clamp.
- B. Matching Insulgrip, corrosion resistant nylon plugs, IP20, shall be provided for each twist-lock type receptacles unless indicated otherwise.
- C. Manufacturers: Hubbell, Pass & Seymour, Bryant

2.6 WALL PLATES

- A. Decorative Cover Plate: High impact, smooth nylon and smooth satin finish. Color of nylon cover plate shall be ivory unless noted otherwise.
- B. For areas where two separate power sources are provided, each power source receptacle shall have a different color cover plate such as black, gray, or brown. Emergency power source receptacles shall have a red cover plate.
- C. Weatherproof Cover Plate: Gasketed cast metal with hinged gasketed device cover.

2.7 MULTI-OUTLET ASSEMBLIES

- A. Provide fixed multi-outlet assemblies consisting of grounding type, 20 ampere, 125-volt, two poles, three wire receptacles as an integral part, on 12-inch centers, unless otherwise noted.
- B. Where more than one circuit is indicated, do not connect adjacent receptacles to the same circuit. Include raceway snap-on covers with punched holes to accurately align receptacles.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify outlet boxes are installed at proper height.
- B. Verify wall openings are neatly cut and will be completely covered by wall plates.
- C. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.
- D. Inspect each item of materials or equipment immediately prior to installation, and reject damaged and defective items.

3.2 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface, if necessary.

- B. Clean debris from all boxes.

3.3 INSTALLATION

- A. Install wiring devices where indicated, in accordance with the manufacturer's written instructions, the applicable requirements of the NEC and the NECA "Standard of Installation", and in accordance with recognized industry practices to ensure that products serve the intended function.
- B. Where installations include manufacturer's products, comply with the manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in the contract documents.
 1. Install devices plumb and level. Install switches with OFF position down
 2. Install vertically oriented grounded receptacles with grounding pole on bottom
 3. Connect wiring device grounding terminal to metallic outlet box with bonding jumper
 4. Connect isolated ground (IG) receptacle equipment (yoke) grounding terminal only at metallic box with bonding jumper
 5. Install decorative plates on switch, receptacle, and blank outlets in finished areas
 6. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets in utility areas. (Does not include multi-outlet assemblies, other similar locations.)

3.4 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations of outlet boxes to obtain mounting heights compliant with ADA.
- B. Install wall switch at 48 inches to top of the maximum reach above finished floor for forward reach applications, 54 inches to top of reach for side reach applications. The lower reach shall be at or above 15 inches for forward reach and for side reach, unless otherwise noted.
- C. Install convenience receptacle 15 inches to center above finished floor, unless otherwise noted.
- D. Install convenience receptacle 6 inches to center above backsplash of counter, unless otherwise noted.
- E. Install dimmer 48 inches to center above finished floor, unless otherwise noted.
- F. Install telephone and/or data jacks 15 inches to center above finished floor, unless otherwise noted.
- G. Install telephone jack for wall telephone 48 inches to top of reach above finished floor for forward reach applications, and 54 inches above finished floor to top of reach for side reach applications to comply with the ADA. Receiver hook shall not be above 54 inches to its highest point above finished floor.

3.5 FIELD QUALITY CONTROL

- A. Inspect each wiring device for defects.
- B. Operate each wall switch with circuit energized and verify proper operation.

- C. Verify that each receptacle device is energized.
- D. Test each receptacle device for proper polarity.
- E. Test each GFCI receptacle device for proper operation.
- F. Verify that each telephone and data jack is properly connected and circuit is operational.

3.6 ADJUSTING

- A. Adjust devices and wall plates to be flush, plumb and level.

END OF SECTION

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SECTION 16210

ELECTRIC UTILITY SERVICES

PART 1 GENERAL

1.1 SUMMARY

- A. Provide and install new underground 12.5-kV electrical service conduit from the Utility pole to the Utility Transformer. Arrange and coordinate installation of the underground conduits with the Silicon Valley Power (SVP) Utility Company.
- B. Provide and install a concrete pad and grounding grid for the Utility Transformer as indicated on the drawings.
- C. Provide and install 600-volt rated service entrance cables and conduits between the Utility transformer and the Utility Service compartment. Arrange and coordinate installation of the 600-volt Service Cable with Silicon Valley Power (SVC).
- D. Provide and install Utility service metering enclosure and main disconnect switch for service entrance feeder.

1.2 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Submit copy of Service Entrance main switchboard equipment drawings to Utility Company for their review and approval prior to fabrication of the equipment.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with utility company written requirements.
- B. Maintain one copy of each document on site.

1.4 FIELD MEASUREMENTS

- A. Verify field measurements are as indicated.

1.5 COORDINATION

- A. Coordinate routing of the underground service conduits with Silicon Valley Power (Utility Company).
- B. The Utility Company will provide and install the 12.5-kV underground service cable between the existing power pole and the Utility Transformer. Coordinate the routing of the underground duct bank with the utility service representative - Mr. Mike Vitarelli, Electrical Estimator, City of Santa Clara Electric at Tel: (408) 261-5475, E-mail: MVitarelli@santaclaraca.gov
- C. The Utility Company will provide and install the 12.5 kV to 480-volt Service Transformer.
- D. The underground trench, transformer concrete pad and the PVC conduits shall be in accordance with SVP Standard UG1000 requirements.

PART 2 PRODUCTS

2.1 SERVICE DESCRIPTION

- A. Service Entrance: 480-volt, 3-phase underground service entrance from the Silicon Valley Power (SVC) service transformer to the building service entrance equipment as indicated on drawings.
- B. Utility Raceway Connection: Provide and install the secondary service cable between the Utility transformer and the metering and main disconnect circuit breaker compartment.
- C. Utility Service-Entrance Conductor Connection: Provide as indicated on the drawings.

2.2 UTILITY METERS

- A. Utility revenue meter will be provided and installed by the Utility Company in the Metering Compartment.

2.3 UTILITY METER BASE

- A. Provide Utility Meter base as required by the Utility Company.

PART 3 EXECUTION

3.1 EXAMINATION

- A. In accordance with Division 1 requirements.
- B. Verify that service equipment is ready to be connected and energized.

3.2 INSTALLATION

- A. Install new service conduits from Utility service pole to Utility transformer and from the Utility transformer to the service main disconnect circuit breaker.
- B. Utility company will provide and install and connect the 12.5 kV rated primary service cables between the service pole and service transformer after the underground conduits are installed by the contractor.

END OF SECTION

SECTION 16235

ENGINE-GENERATOR UNIT

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes equipment and services necessary for the design, manufacture, factory testing, installation, and site testing of a complete and operable on-site emergency generator unit in a sound attenuated, weatherproof enclosure including radiator, exhaust silencer, sub-base fuel tank, leak-detection system, control panel, battery, charger and control panel.
- B. Related Sections:
 - 1. Section 16050 – General Electrical Provisions
 - 2. Section 16060 – Basic Electrical Materials and Methods
 - 3. Section 16413 – Enclosed Transfer Switch.

1.2 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. IEC 8528 - Control Systems for Generator Sets - Part 4.
- B. IEC – Std. 801.2 for susceptibility, conducted, and radiated electromagnetic emissions.
- C. IEC – Std. 801.3 for susceptibility, conducted, and radiated electromagnetic emissions.
- D. IEC – Std. 801.5 for susceptibility, conducted, and radiated electromagnetic emissions.
- E. IEEE 446 - Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
- F. IEEE 587 - Voltage surge resistance.
- G. NEMA AB 1 - Molded Case Circuit Breakers.
- H. NEMA ICS 10 - AC Generator sets, Industrial Control and Systems: AC Transfer Switch Equipment.
- I. NEMA MG 1 - Motors and Generators.
- J. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum.)
- K. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- L. NFPA 30 - Flammable and Combustible Liquids Code.
- M. NFPA 70 - National Electrical Code. Equipment shall be suitable for use in systems in compliance to Article 700, 701, and 702.
- N. NFPA 110 - Emergency and Standby Power Systems.
- O. UL 508 – Standard for Control Equipment.

- P. UL 142 – Standard for Generator-Base Tanks.
- Q. UL 2085 - Special Purpose Flammable Liquid Secondary-Containment Generator-Base Tank.
- R. UL 2200 - Standard for Stationary Engine Generator Assemblies.

1.3 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Shop Drawings:
 - 1. Electrical characteristics and connection requirements.
 - 2. Plan and elevation views of unit including overall dimensions.
 - 3. Electrical and fuel oil piping interconnection point with dimensions.
 - 4. Fuel consumption rate curves at various loads.
 - 5. Ventilation and combustion air requirements.
 - 6. Electrical schematic and interconnection diagrams.
 - 7. Sub-base fuel tank details and dimensions.
 - 8. Overall unit dimensions and seismic anchoring points with dimensions.
 - 9. Enclosure sound rating.
 - 10. Emissions report.
- C. Product Data:
 - 1. Submit data showing dimensions, weights, ratings, interconnection points, and internal wiring diagrams for engine, generator, control panel, battery, battery rack, battery charger, exhaust silencer, vibration isolators, sub-base fuel tank, and radiator.
 - 2. Submit two (2) sets of product data, certification, test reports and other necessary information, for engine-generator unit and sub-base fuel tank, to the local city Fire Marshall for approval and permit. Obtain Fire Marshal approval for the sub-base fuel tank assembly.
 - 3. Submit calculations and enclosure pad-mount anchoring method (anchor bolt size, embedment and assembly details) to meet California seismic Zone 4 requirements.
- D. Certification and Test Reports:
 - 1. Provide four (4) copies of Certification for the Protected Sub-Base fuel tank.
 - 2. Provide four (4) copies of results of manufacturer's certification of performance testing.
- E. Manufacturer's Field Report:
 - 1. Provide four (4) copies of test and inspection report with detailed findings and recommendations.

1.4 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Operation and Maintenance Data:
 - 1. Submit five copies of bound instructions and service manuals for normal operation, routine maintenance, oil sampling and analysis for engine wear, and engine- maintenance procedures.
 - 2. Submit five copies of source and field quality control reports.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years' experience and with service facilities within 50 miles of project.
- B. Supplier: Authorized distributor of specified manufacturer with minimum three years' experience.

1.6 WARRANTY

- A. In accordance with Division 1 requirements.
- B. Furnish two (2) year manufacturer warranty, from acceptance date, for defective parts and labor to install parts, in accordance with these contract documents.

1.7 MAINTENANCE SERVICE

- A. In accordance with Division 1 requirements.
- B. Provide servicing and maintenance bond for engine-generator unit in accordance with the approved O&M manuals and manufacturer's recommendations, for a period of two (2) years from acceptance date.

1.8 MAINTENANCE MATERIALS

- A. In accordance with Division 1 requirements. - Spare parts and maintenance products.
- B. Furnish one set of tools required for preventive maintenance of engine-generator system. Package tools in adequately sized metal toolbox.
- C. Furnish two of each: fuel, oil and air filter elements.

PART 2 PRODUCTS

2.1 ENGINE

- A. Manufacturers:
 - 1. Cummins/Onan
 - 2. Caterpillar
 - 3. Approved equal.
- B. Emissions Permit: The Owner will be submitting an application to the Bay Area Air Quality Management District based on the Caterpillar Model C15, 400-eKW, 1,800 rpm engine with 928 cu. in. displacement and 619 bhp maximum rated output with EPA Tier 3 emission levels.
 - 1. If another engine generator unit is proposed, submit pertinent information and emissions data to amend the application and procure an operation permit from the Bay Area Air Quality Management District (BAAQMD), at no additional cost to the District.
- C. Product Description: Diesel, 4-cycle, radiator- and fan-cooled, compression-ignition internal combustion engine.
- D. Standby Rating: As indicated on drawings in an ambient of 105 degrees F (40 degrees C) at elevation of 50 feet (15 meters) above mean sea level.

- E. Fuel System: No. 2 diesel oil.
- F. Engine speed: 1,800 rpm.
- G. Safety Devices: Engine shutdown on high water temperature, low oil pressure, over speed, and engine over crank. Limits as selected by manufacturer.
- H. Engine Starting: DC starting system with positive engagement, voltage of starter motors in accordance with manufacturer's instructions. Furnish remote starting control circuit with MANUAL-OFF-REMOTE selector switch on engine-generator control panel.
- I. Engine Jacket Heater: Thermal circulation-type water heater with integral thermostatic control, sized to maintain engine jacket water at 90 degrees F (32 degrees C), and suitable for operation on 120-Volt, single-phase power supply.
- J. Radiator: Radiator using glycol coolant, with blower type fan, sized to maintain safe engine temperature in ambient temperature of 105 degrees F (40 degrees C). Radiator airflow restriction 0.5 inches of water (1.25 Pa) maximum.
- K. Engine Accessories: Fuel filter, lube oil filter, intake air filter, lube oil cooler, fuel transfer pump, fuel priming pump, engine-driven water pump. Furnish fuel pressure gage, water temperature gage, and lube oil pressure gage on engine-generator control panel.
- L. Mounting: Heavy-duty steel base to maintain alignment between components. The base shall incorporate a battery tray with hold-down clamps within the rails. Furnish unit with suitable spring-type vibration isolators. Provide mounting bolts sized for Seismic Zone 4 installation.

2.2 GENERATOR

- A. Product Description: 400-kW, 480-Volt, 60 Hz. NEMA MG1, three-phase, re-connectable, brushless synchronous generator with brushless exciter.
- B. Voltage Rating: As indicated on drawings.
- C. Insulation Class: H.
- D. Temperature Rise: 130 degrees C standby.
- E. Enclosure: NEMA MG1, open drip proof.
- F. The generator shall be rated for delivering output KVA at rated frequency and power factor, at any voltage not more than 5% above or below rated voltage.
- G. A permanent Magnet generator (PMG) shall be included to provide a reliable source of excitation power for optimum motor starting and short circuit performance. The PMG and controls shall be capable of sustaining and regulating current supplied to the single phase or three-phase fault at approximately 300% of rated current for not more than 10 seconds.
- H. The generator set shall meet all requirements for NFPA 110 Level 1 systems. Level 1 prototype tests required by this standard shall have been performed on a complete and functional unit; component level type tests will not substitute for this requirement.

- I. The engine generator unit shall be listed to meet UL 2200 or submit to an independent third party certification process to verify compliance as installed.

2.3 VOLTAGE REGULATION

- A. Furnish generator-mounted volts per hertz exciter-regulator to match engine and generator characteristics, with voltage regulation plus or minus 1 percent from no load to full load. Furnish manual controls to adjust voltage droop, voltage level (plus or minus 5 percent) and voltage gain.

2.4 GOVERNOR

- A. Product Description: Electronic governor to maintain engine speed within 0.5 percent, steady state, and 5 percent, no load to full load, with recovery to steady state within 2 seconds following sudden load changes. Equip governor with means for manual operation and adjustment.

2.5 ENGINE GENERATOR SET CONTROL

- A. Product Description: Microprocessor-based digital control system, designed to provide governing, voltage regulation, metering, protective relaying, automatic starting, monitoring, and control functions for the generator unit.
- B. Control System shall be designed to allow local monitoring and control of the generator unit and remote monitoring and control as described in these specifications.
- C. Control system shall be mounted on the generator unit. The control shall be vibration isolated and prototype tested to verify the durability of all components in the system under the vibration condition encountered. The entire control system of the generator set shall be UL 508 listed and labeled. The entire control shall be tested and meet the requirements of IEEE 587 for voltage surge resistance. Manufacturers utilizing components that have not been tested as a system, as installed, (as demonstrated by a statement of performance on standard published literature) shall conduct RFI/EMI testing on the equipment in the manufacturer's facility prior to shipping the equipment to the project job site. Voltage surge testing shall be performed on an identical prototype unit.
- D. Control voltage shall be 24 volts DC. Generator set governing, voltage regulation, protection, and control equipment shall be capable of proper operation with the battery voltage levels down to 18 VDC, and continuously at voltage levels up to 34 VDC.
- E. All switches, lamps and meters shall be oil-tight and dust-tight, and the enclosure door shall be gasketed.
- F. All switches shall be provided with fully illuminated backlit labels, and all metering shall be individually lighted to allow for easy reading of functions in a completely dark room.
- G. All adjustments to the control system shall be made from the front of the generator set control panel, with the aid of a digital readout display integral to the equipment. No rotary pots shall be acceptable for any function of the control system provided for the generator set.
- H. Control equipment shall contain a system of diagnostic LEDs to assist in analyzing proper system function.

- I. The entire generator set control system as supplied shall be capable of being directly monitored and controlled by a personal computer connected to the control for monitoring, diagnosis, service, and adjustment of the system.
- J. The generator set mounted control shall include the following features and functions:
 1. Three- (3) position selector switch labeled RUN/OFF/AUTO. In the RUN position the generator shall automatically start, and accelerate to rated speed and voltage. In the OFF position the generator shall immediately stop, bypassing all time delays. In the AUTO position the generator set shall be ready to accept a signal from a remote device to start and accelerate to rated speed and voltage.
 2. Red "mushroom-head" push-button EMERGENCY STOP switch. Depressing the emergency stop switch shall cause the generator set to immediately shut down and be locked out from automatic restarting. Reset of the control shall require reset of the emergency stop switch and the control system.
 3. Push-button RESET switch. The RESET switch shall be used to clear a fault and allow restarting the generator set after it has shut down for any fault condition.
 4. Push-button PANEL LAMP switch. Depressing the panel lamp switch shall cause the entire panel to be lighted with DC control power. The panel lamps shall automatically be switched off 10 minutes after the switch is depressed or after the switch is depressed a second time. Lamps shall be LED type.
 5. Push-button LAMP TEST switch. Depressing the lamp test switch shall cause all the alarm and status lamps on the panel to be lighted, and cause the digital display panel to sequentially display all the alarm and status messages in the control system.
- K. Emergency Generator Control Panel shall be NEMA 250, Type 1 generator-mounted control panel enclosure with engine and generator controls and indicators. Furnish provision for padlock and the following equipment features:
 1. Frequency Meter: 45-65 Hz range, digital display preferred (or 3.5-inch dial).
 2. AC Output Voltmeter: digital display preferred (or 3.5-inch dial), 2 percent accuracy, with phase selector switch.
 3. AC Output Ammeter: digital display preferred (or 3.5-inch dial), 2 percent accuracy, with phase selector switch.
 4. Output voltage adjustment.
 5. Push-to-test indicator lamps, one each for low oil pressure, high water temperature, over speed, and over crank.
 6. Engine Start/Stop selector switch.
 7. Engine running time meter.
 8. Oil pressure gage.
 9. Water temperature gage.
 10. Auxiliary Relay: Three Pole Double Throw (3-PDT) operates when engine runs with contact terminals pre-wired to terminal strip.
 11. Additional visual indicators and alarms in accordance with NFPA 110.
 12. Remote Alarm Contacts: Factory-wired SPDT contacts to terminal strip for remote alarm functions in accordance with NFPA 110.
 13. High Battery voltage alarm.
 14. Low Battery voltage alarm.
 15. Low Fuel alarm.
 16. System ready.
 17. Anticipatory high water temperature.
 18. Anticipatory low oil pressure.
 19. Low coolant temperature.
 20. Switch in Off Position alarm.
 21. Over crank alarm.
 22. Emergency Stop alarm.
 23. High Water temperature alarm.

24. Over speed alarm.
 25. Low Oil Pressure alarm.
 26. Line power available.
- L. Alarms: Provide wiring and conduit between PLC, ATS and engine-generator alarm points for a complete operating system. Provide display windows with 3/8-inch engraved black letters on white background for each annunciated alarm. Provide at least one spare blank window for future use.
1. Engine Run.
 2. Engine Trouble.
 3. High Fuel Alarm
 4. Low Fuel Alarm
 5. Engine Over speed shutdown
 6. Fuel Leak in secondary containment tank
 7. All other critical shut down function as recommended by the EG unit manufacturer
 8. Spares
- M. Power Source: 24-Volt DC batteries integral to the engine generator unit.

2.6 GENERATOR SET AND ENGINE CONTROL FUNCTIONS

- A. The control system provides shall include cycle cranking system, which allows for user selected crank time, rest time, and number of cycles. Initial setting shall be 3 cranking periods of 15 seconds each, with 15 second rest period between cranking periods.
- B. The control system shall include an idle mode control, which allows the engine to run in idle mode in the RUN position only. In this mode, the alternator excitation system shall be disabled and the engine protection parameters for engine oil pressure and engine temperature shall be reduced to proper levels to reflect the lower engine operating speed.
- C. The control system shall include the engine governor control, which functions to provide steady state frequency regulation as noted elsewhere in this specification.
- D. The governor control shall include adjustments for gain, damping, and a ramping function to control engine speed and limit the exhaust smoke while the unit is starting. The control system shall automatically adjust governor gain and stability settings to compensate for engine performance variation related to engine temperature.
- E. The control system shall include time delay start (adjustable 0-300 seconds) and time delay stop (adjustable 0-600 seconds) functions. Indicators shall be provided to reflect that the time delays are in operation, and the time remaining for completion of the time delay period.
- F. The starting control logic shall check for engine rotation at each signal for the engine starter to run. If the engine rotation is not present when the starter is operating, a "fail to crank" alarm and shutdown shall be indicated on the generator set control panel.
- G. The control system shall include sender failure monitoring logic for speed sensing, oil pressure, and engine temperature that is capable of discriminating between failed sender or wiring components, and actual engine failure conditions.
- H. Generator set start contacts shall be rated 10 amps at 32 VDC.

- I. Cool down time delay, adjustable 0-600 seconds. The control panel shall indicate the remaining time delay period when the generator set is timing for shutdown.
- J. Start time delay, adjustable 1-300 seconds. The control panel shall indicate the time remaining in the time delay period when the generator set is timing for start.
- K. A battery monitoring system shall be provided which initiates alarms when the DC control and starting voltage is less than 15 VDC or more than 32VDC. During engine starting, the low voltage limit shall be disabled, and the system shall conduct a battery capacity test. A 'weak battery' alarm shall be initiated if the starting/control battery does not pass this test.

2.7 SUB-BASE FUEL TANK

- A. Product Description: Factory-fabricated, protected, secondary contained, sub-base fuel tank with dual integral float-controlled valve and pump, with a minimum capacity of 400 US gallons.
- B. Tank Construction:
 - 1. Dual wall, corrosion resistant steel tank.
 - 2. Internal tank shall be listed and constructed in accordance with UL 142.
 - 3. Inner and outer steel tank shall be constructed of a minimum 3/16-inch thick A-36 Hot Rolled Steel.
 - 4. Tank and anchoring methods shall meet seismic Zone 4.
 - 5. The internal tank shall be pressure tested and pass a test of 5 psi at the factory.
 - 6. The tank shall be designed with an over spill containment.
 - 7. The tank shall include atmospheric and engine-venting nozzles sized to UL requirements.
 - 8. The tank shall have signs and labels to meet applicable codes, including "Flammable", "No Smoking", product content, and tank capacity.
 - 9. Each nozzle on the tank shall be identified for its intended use.
 - 10. The tank shall be designed to meet weight loads of the engine-generator set.
 - 11. The tank shall be designed with earthquake, hurricane, and flood tie down points.
- C. Tank Painting:
 - 1. Tank shall be sand blasted to commercial sandblast standards.
 - 2. Prime coat shall be an industrial primer.
 - 3. Exposed exterior surface finishing coat shall be petroleum-resistant two-part paint, same color as the generator enclosure.
 - 4. Bottom of tank shall be coated with coal-tar epoxy.
- D. Certification: Based on the manufacturer's published literature, the proposed generator based fuel tank shall have the following certifications:
 - 1. The internal and external tank shall be constructed in accordance with UL 142.
 - 2. The tank shall have an identifying UL nameplate attached with the following:
 - a. This tank is intended for installation in accordance with NFPA 30, NFPA 30A, NFPA 31, NFPA 37, NFPA 110
 - b. Tank serial number, manufacturer's name, location and telephone number, date of manufacture, model number of tank, and maximum generator weight.
 - c. Primary tank capacity in gallons, containment percentage.
 - d. "Tank requires emergency relief venting, capacity not less than (to be provided by fuel tank vendor) cubic feet per hour, PRIMARY TANK AND (to be provided by vendor) feet per hour ANNULAR SPACE."
 - e. "Tank is intended for stationary installation only. Tank shall be inspected to determine suitability after fire exposure."
 - f. "For Diesel Fuel Only."

- F. Exhaust silencer shall be installed inside the enclosure. Maximum noise level allowable for the installed unit is 73 dB at 23 feet. Use non-hygroscopic sound insulation materials with enclosure.
- G. Enclosure finish; Polyester powder coat minimum 2 mil thickness. Color shall be selected during the equipment submittal review process.
- H. Provide with integral lifting points for shipping to site without generator set, and field installing using crane.

2.9 ACCESSORIES

- A. Exhaust Silencer: Critical-type silencer, with muffler companion flanges and flexible stainless steel exhaust fitting, sized in accordance with engine manufacturer's instructions. Maximum noise level allowed is 63 dBA at 23 feet.
- B. Radiator Baffle: Sound attenuating baffle designed to reduce transmitted engine noise through the cooling air to no more than 63 dBA at 23 feet from the cooling air outlet. Radiator baffle shall not present a static backpressure in excess of 1/2-inch water column.
- C. Metal Roof Thimble: Where unit is installed indoors, provide ventilated metal roof thimble for all high temperature (greater than 100 degrees C) wall, ceiling and roof penetrations.
- D. Batteries: Heavy-duty, diesel-starting deep cycle gel pack/absorption glass-mat (AGM) type storage batteries, 24 volts, sized as recommended by the engine-generator manufacturer. Match battery voltage to starting system. Furnish cables and clamps.
- E. Battery Tray: Treated for electrolyte resistance; constructed to contain spillage.
- F. Battery Charger: Solid state to operate with type of batteries furnished. Current limiting type designed to float at 2.17 volts for each cell and equalize at 2.33 volts for each cell. Furnish overload protection, full wave rectifier, DC voltmeter and ammeter, and fused input. Furnish enclosure to meet NEMA 250, Type 1 requirements.
- G. Line Circuit Breaker: NEMA AB 1, molded case circuit breaker on generator output with integral thermal and instantaneous magnetic trip in each pole. Furnish battery voltage operated shunt trip, connected to open circuit breaker on engine failure. Unit mount in enclosure to meet NEMA 250, Type 1 requirements.

2.10 SOURCE QUALITY CONTROL

- A. Provide shop inspection and testing of completed assembly.
- B. Make completed engine-generator assembly available for inspection at manufacturer's factory prior to packaging for shipment. Notify Engineer at least seven (7) days before inspection is allowed.
- C. Allow witnessing of factory inspections and tests at manufacturer's test facility. Notify Engineer at least seven (7) days before inspections and tests are scheduled.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install engraved plastic nameplates in accordance with Section 16075.
- B. Ground and bond generator and other electrical system components in accordance with Section 16060.

3.2 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS, Section 7.22.

3.3 MANUFACTURER'S FIELD SERVICES

- A. Engage the services of a factory-authorized service representative to inspect field-assembled components and equipment installation, including piping and electrical connections, and to assist in testing. Report results in writing. Testing of tanks shall be witnessed by the Santa Clara Fire Department.
- B. Testing:
 - 1. Perform field quality control testing under the supervision of the manufacturer's factory-authorized service representative.
 - 2. Provide No. 2 diesel fuel and lubricating oil for all testing.
- C. Tests: Include the following:
 - 1. Tests recommended by manufacturer.
 - 2. Adjust generator output voltage and engine speed to meet specified ratings.
 - 3. International Electrical Testing Association Tests: Perform each visual and mechanical inspection, and electrical and mechanical test stated in NETA ATS for engine-generator sets, except omit vibration baseline test. Certify compliance with test parameters for tests performed.
 - 4. NFPA 110 Acceptance Tests: Perform Single-step full-load pickup test.
 - 5. Exhaust-System Backpressure Test: Use a manometer with a scale exceeding 40 inches water gauge (120 kPa). Connect to exhaust line close to engine exhaust manifold. Verify that backpressure at full-rated load is within manufacturer's written allowable limits for the engine.
 - 6. Exhaust Emissions Test: Comply with applicable government test criteria.
- D. Coordinate tests for engine-generator with tests for automatic transfer switch, and run them concurrently. Run complete electrical test, including, but not limited to, automatic transfer switch and generator control panel to ensure proper automatic Start-Stop operation. Coordinate testing with Automatic Transfer Switch field service representative.
- E. Retest: Correct deficiencies identified by tests and observations, and retest until specified requirements are met.
- F. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component indicating satisfactory completion of tests. Provide certified copies of field tests approved and signed by the authorized service representative.

3.4 DEMONSTRATION AND TRAINING

- A. Provide four (4) hours of training and instruction for at least four persons, to be conducted at project site with manufacturer's certified field service representative. Instruction shall include handouts to all trainees, procedures for the proper operation, adjustments and maintenance of the engine-generator system.
- B. Simulate operation of the engine-generator in manual mode, test mode and automatic mode by interrupting normal power source, and demonstrate that system operates to provide engine generator power.

3.5 CLEANING

- A. In accordance with Division 1 requirements.
- B. Clean engine and generator surfaces. Replace oil and fuel filters with new filters after unit testing and prior to acceptance of the project.
- C. On completion of installation, inspect system components. Remove paint splatters and other spots, dirt, and debris. Repair damaged finish to match original finish. Clean components internally using methods and materials recommended by manufacturer.
- D. Completely fill fuel tank after all testing is complete.

END OF SECTION

SECTION 16265
600-VOLT RATED VARIABLE FREQUENCY DRIVES

PART 1 GENERAL

1.1 SUMMARY

- A. This section covers AC-voltage Variable Frequency Drives (VFDs) for motor equipment listed in other sections of these specifications.
- B. Unless otherwise indicated on the drawings, one (1) VFD, complete with all required control components, shall be furnished for each motor as indicated. All standard and optional features specified shall be included within the VFD enclosure unless otherwise specified. VFD shall be for variable torque load, unless otherwise noted.

1.2 RELATED SECTIONS

- A. Section 16060 – Basic Electrical Materials and Methods
- B. Section 16075 – Electrical Equipment Identification
- C. Section 16443 – Motor Control Center

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. IEEE C62.41– IEEE Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.
- B. IEEE 519 – Recommended Practices and Requirements for Harmonic Control in Electric Power Systems.
- C. NEMA ICS 3.1 – Industrial Control and Systems: Handling, Storage and Installation Guide for AC General-Purpose Medium-Voltage Contactors and Class E Controllers, 50 and 60 Hertz.
- D. NEMA ICS 6 – Industrial Control and Systems: Enclosures.
- E. NEMA ICS 7 – Industrial Control and Systems: Adjustable Speed Drives.
- F. NEMA 250 – Enclosures for Electrical Equipment (1,000 Volts Maximum).
- G. NFPA 70 – National Electrical Code – Latest Edition.
- H. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches, and Circuit Breaker Enclosures.
- I. UL 508C – Power Conversion Equipment.

1.4 SYSTEM DESCRIPTION

- A. The VFD shall convert three-phase, 60 Hz utility power to adjustable voltage and frequency, three-phase, AC power for stepless motor speed control from 10 percent to 100 percent of the motor's 60 Hz speed. Input voltage shall be as indicated on the drawings.
- B. VFD dimensions, including all power factor correction capacitors, harmonic filters, isolation transformers, reactors and equipment required to meet the performance requirements of the project, shall be installed in the Motor Control Center and shall not exceed the dimensions shown on the Drawings.

1.5 CONTRACTOR SUBMITTALS

- A. Shop Drawings:

1. Dimensional Drawings: Show physical size of enclosure and seismic mounting. Information on size and location of space for incoming and outgoing conduit and conductors.
 2. Schematic Diagrams: Show circuits and device elements for each replaceable module. Schematic diagrams of printed circuit boards are permitted to group functional assemblies as devices, provided that sufficient information is provided for government maintenance personnel to verify proper operation of the functional assemblies.
 3. Interconnection Diagrams: Show interconnections between equipment assemblies and external interfaces, including power and signal conductors. Include for enclosures and external devices.
 4. Installation Drawings: Show floor plan of each site with VFDs and motors indicated. Indicate ventilation requirements, adequate clearances, and cable routes. Show layout of controller face, including pushbuttons, switches, instruments, indicating lights, etc.
 5. Harmonic calculations at the point of common coupling, performed by the VFD manufacturer. Provide detailed drawings and information showing how protection is applied to conform with harmonic limits.
- B. Product Data
1. Equipment Schedule: Provide schedule of equipment supplied. Schedule shall provide a cross reference between manufacturer data and identifiers indicated in shop drawings. Schedule shall include the total quantity of each item of equipment supplied. For complete assemblies, such as VFDs, provide the serial numbers of each assembly and a sub-schedule of components within the assembly. Provide recommended spare parts listing for each assembly or component.
 2. List of manufacturer's standard features and options
 - a. Percent efficiency at 60 percent and 100 percent speeds.
 - b. Maximum BTU heat released and verification of VFD cooling requirements.
- C. Certification and Test Reports
1. Certification that the VFD is designed to operate correctly for specific installed cable length between VFD and the motor. Include estimated maximum cable length and manufacturer's maximum design cable length.
 2. Certification indicating compatibility with the motors being driven.
 3. List of fault and failure conditions that the VFD can recognize and indicate for simultaneous occurrence.
 4. List of diagnostic indicators.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Manual
1. Manufacturer's operation and maintenance manual for each size of Adjustable Frequency Drive.
 2. Manufacturer's standard manuals for each size and type of line reactor and filter provided with drive.
 3. Schematics, wiring diagrams, and panel drawings in conformance with construction record.
 4. Troubleshooting procedures, with a cross-reference between symptoms and corrective recommendations.
 5. Connection data to permit removal and installation of recommended smallest field-replaceable parts.
 6. Information on testing of power supplies and printed circuit boards and an explanation of the drive diagnostics.

- B. VFD Tests
 - 1. Operational test
 - 2. Performance verification test
 - 3. Endurance test
 - 4. Harmonic distortion test

1.7 MAINTENANCE MATERIALS

- A. The drive manufacturer shall provide at least one complete set of all plug-in components for each size and type of drive, and shall include the following:
 - 1. Power fuses
 - 2. Control fuses
 - 3. Cluster LED type indicating lights
 - 4. Fans, two (2) of each type and size used.
 - 5. Other field-replaceable component parts
- B. Maintenance materials shall be suitably, with labels indicating the contents of each package, and shall be delivered to the Owner.

PART 2 PRODUCTS

2.1 VARIABLE FREQUENCY DRIVES

- A. Provide frequency drive to control the speed of induction motor(s). The VFD shall include the following minimum functions, features and ratings.
 - 1. Input circuit breaker per UL 489 with a minimum symmetrical interrupting capacity to match source switchboard and door interlocked external operator; or input line high-speed, current limiting fuses rated 200,000 amperes interrupting current specifically designed for solid state applications in conjunction with a solid state instantaneous overcurrent trip unit set at 180 percent of motor full load current rating.
 - 2. A converter stage per UL 508C shall change fixed voltage, fixed frequency, ac line power to a fixed dc voltage. The converter shall utilize a full wave bridge design incorporating diode rectifiers. Silicon Controlled Rectifiers (SCR) are not acceptable. The converter shall be insensitive to three phase rotation of the ac line and shall not cause displacement power factor of less than 0.95 lagging under any speed and load condition.
 - 3. An inverter stage shall change fixed dc voltage to variable frequency, variable voltage, ac for application to a standard NEMA design B squirrel cage motor. The inverter shall be switched in a manner to produce a sine coded pulse width modulated (PWM) output waveform. Other types of inverters such as current source inverter (CSI), voltage source inverter (VSI), and flux vector drive (FVD) units are not acceptable.
 - 4. The size and rating of each Variable Frequency Drive shall be coordinated with the driven equipment. The manufacturer shall be responsible for furnishing the Variable Frequency Drive, for matching the motor and the drive, and for coordinating the collection of data and the design effort to limit harmonics to the levels specified.
 - 5. The VFD shall be capable of supplying 110 percent of rated full load current for one minute at maximum ambient temperature (150 percent for constant torque VFD).
 - 6. The VFD shall be designed to operate from a three phase, 60 Hz (± 2 Hz) supply, and control motors with a corresponding voltage rating, as indicated on drawings.
 - 7. Acceleration and deceleration time shall be independently adjustable from one second to 60 seconds.
 - 8. Adjustable full-time current limiting shall limit the current to a preset value which shall not exceed 110 percent of the controller rated current. The current limiting

- action shall maintain the V/Hz ratio constant so that variable torque can be maintained. Short time starting override shall allow starting current to reach 175 percent of controller rated current to maximum starting torque.
9. The controllers shall be capable of producing an output frequency over the range of 6 Hz to 60 Hz (10 to one speed range), without low speed cogging. Over-frequency protection shall be included such that a failure in the controller electronic circuitry shall not cause frequency to exceed 110 percent of the maximum controller output frequency selected.
 10. Minimum and maximum output frequency shall be adjustable over the following ranges:
 - a. Minimum frequency 6 Hz to 50 percent of maximum selected frequency;
 - b. Maximum frequency 40 Hz to 60 Hz.
 11. The controller efficiency shall not be less than 95 percent at 100 percent speed, and not less than 85 percent at 80 percent speed.
 12. The VFD shall be capable of sustaining continued operation with an input voltage dip of 30 percent of normal operating voltage. The VFD shall automatically ride through a power loss for up to two cycles.
 13. The controllers shall be capable of being restarted into a motor coasting in the forward direction without tripping. The controllers shall be capable of flux braking at start, to stop a motor coasting in the reverse direction before starting speed ramp-up.
 14. The controller shall be rated for continuous operation at no less than the full load current of the driven load, as indicated on the equipment nameplate, and capable of intermittent or occasional overloads not to exceed 1.15 service factor for one minute duration which may be imposed on a driven pump motor operating within its specified speed range.
 15. Protection of power semiconductor components shall be accomplished without the use of fast acting semiconductor output fuses. Subjecting the controllers to any of the following conditions shall not result in component failure or the need for fuse replacement:
 - a. Short circuit at controller output
 - b. Ground fault at controller output
 - c. Open circuit at controller output
 - d. Input undervoltage
 - e. Input overvoltage
 - f. Loss of input phase
 - g. AC line switching transients
 - h. Instantaneous overload
 - i. Sustained overload exceeding 115 percent of controller rated current
 - j. Over temperature
 - k. Phase reversal
 16. Solid state motor protection unit shall be included as specified herein.
 17. A slip compensation circuit shall be included which will sense changing motor load conditions and adjust output frequency to provide speed regulation of NEMA B motors to within + / - 0.5 percent of maximum speed without the necessity of a tachometer generator.
 18. The VFD shall include external fault reset capability. All the necessary logic to accept an external fault reset contact shall be included.
 19. Provide critical speed lockout circuitry to prevent operating at frequencies with critical harmonics that cause resonant vibrations. The VFD shall have a minimum of three user selectable bandwidths.
 20. Environment: VFD shall be capable of operation in an ambient environment of +10 to +40 degrees C, 0 to 95 percent con-condensing humidity.
 21. Power Factor: The VFD shall have a displacement power factor of 95 percent or higher throughout the entire operating speed range, measured at VFD input terminals.

22. Service Factor: 1.0.
23. Internal Protection
 - a. Power device snubber
 - b. Power devices rated 2.5 times line voltage
 - c. Instantaneous over-current
 - d. Static over-speed (over-frequency) protection
 - e. DC bus over-voltage trip
 - f. De-saturation circuit to drive inverter section transistor base current to zero during a controller fault
 - g. DC bus discharge circuit with an indicator lamp, for protection of personnel
 - h. Control logic circuit malfunction indication.
24. Output Protection
 - a. Over-voltage protection
 - b. Over-frequency protection
 - c. Static over-speed protection
 - d. Stall protection on overload with inverse time over-current trip, variable current limit from 10 percent to 110 percent.

2.2 MANUFACTURERS

- A. Toshiba Electronic
- B. Or Approved Equal.

2.3 ENCLOSURE

- A. The drive shall consist of factory mounted and wired components within a NEMA 3R rated Motor Control Center as indicated on the drawings. The complete drive package, including accessories, shall fit into the space indicated on the Drawings.
- B. The VFD components shall be front access only. No rear or side access shall be provided. Rear panel cover shall not be used for mounting of internals.
- C. Input line reactors, fuses, circuit breakers, and filters required based on the harmonic calculations shall be mounted within the drive enclosure, without exception.
- D. The Motor Control Center freestanding enclosures shall be suitable for mounting on a concrete floor and shall include provisions for anchoring to the supporting structure. Suitable lifting facilities shall be provided for handling and shipment
- E. It shall be the responsibility of the VFD manufacturer to provide cooling or heating of the internal components of the VFD in order for it to operate satisfactorily without breakdown.
- F. Air cooling with long-life, low-noise, cooling fans. Each individual fan shall be sized to provide 100 percent of the cooling required. Cooling system shall be self-contained within the enclosure.
- G. Relays, terminals, and special devices inside the control enclosure shall have permanent markings to match the identification on the manufacturer's wiring diagrams.
- H. Painting
 1. All iron and steel surfaces, except machined surfaces and stainless steel, shall be cleaned in accordance with the coating manufacturer's recommendations, and finished with the drive manufacturer's standard coating
 2. Finish color shall be manufacturer's standard color. Dry film thickness of the finish coat shall be at least 4 mils. Field painting, other than touchup, will not be allowed.
 3. A sufficient quantity of additional coating material and thinner shall be furnished for field touchup of damaged coatings.

2.4 WIRING

- A. Internal cabinet wiring shall be neatly installed in wireway or with wire ties where wireways are not practical. If wire ties are used, the wire bundles shall be held at the back panel with a screw-mounted mounting base.
- B. Power entry and exit shall be through the top or bottom of each drive.
- C. Terminal blocks shall be provided in accordance with requirements specified elsewhere. Eight inches of clearance shall be provided between terminals and the panel. Terminals shall be labeled to agree with the identification on the submittal drawings. Each control loop or system shall be individually fused, clearly labeled, and located for ease of maintenance.
- D. All grounding wires shall be attached to the sheet metal enclosure with a ring tongue terminal. The surface of the sheet metal shall be prepared to ensure good conductivity and corrosion protection.
- E. Wires shall not be kinked or spliced and shall be color-coded or marked on both ends. The markings or color coding shall agree with the submittal drawings.

2.5 CONTROLS

- A. Each Variable Frequency Drive shall be equipped with a communications card for communicating with a PLC using MODBUS TCP/IP protocol over Cat 5e Ethernet cable, as well as all discrete I/O as shown on the drawings and specified herein.
- B. Each Variable Frequency Drive shall include the following operator control and monitoring devices mounted on the front panel of the VFD.
 - 1. A membrane keypad with integral display that is capable of controlling the VFD and setting drive parameters. The keypad module shall be programmed with factory set drive parameters in nonvolatile memory and shall be resettable in the field through the keypad. The keypad module shall contain a self-test software program which can be activated to verify proper keypad operations. Nonvolatile memory modules shall have a useful life of at least 7 years without requiring battery or module replacement.
 - 2. Manual control shall include the following operator functions:
 - a. Start (when in HAND mode)
 - b. Stop (when in HAND mode)
 - c. Speed increase (when in HAND mode)
 - d. Speed decrease (when in HAND mode)
 - e. Parameter mode selection (recall programmed parameters)
 - f. HAND/OFF/AUTO control selection
 - g. RUN (at preset speed)
 - h. Parameter lock (password or key switch lockout of changes to programmed parameters)
 - i. Start disable (overrides remote master controller)
 - 3. Pilot Lights: White light for indication of power, green light for VFD "on", red light for VFD "fail".
 - 4. Elapsed run time meter.
 - 5. Speed indication - calibrated in percent rpm.
 - 6. "Reset" pushbutton.
- C. Control circuits shall be not more than 115 volts and supplied by internal control power transformers. Control power transformers shall have additional capacity as required by external devices indicated on the drawings. Control power transformers shall be equipped with two primary leads fused, one secondary lead fused, and one secondary lead grounded.

- D. The VFD shall be factory set for manual restart after the first protective circuit trip for malfunction (overcurrent, undervoltage, overvoltage or overtemperature) or an interruption of power. The VFD shall be capable of being set for automatic restart after a selected time delay. If the drive faults again within a specified time period (adjustable 0-60 seconds), a manual restart will be required.
- E. Controller shall include the following features and functions:
 - 1. Diagnostic indicators that pinpoint failure and fault conditions. Indicators shall be manually reset to restore operation after abnormal shutdown.
 - 2. An isolated process followers with offset, gain, and span adjustment for accepting a remote 4-20 mA speed control signal rated 0 to 100 percent speed.
 - 3. An isolated process control output for remote 4-20 mA speed indication, rated 0 to 100 percent speed.
 - 4. Run interlock contacts rated 5 amperes at 120 volts AC, wired separately to the unit terminal board. One NO and one NC isolated spare interlock shall be furnished with each drive. Additional interlock contacts shall be provided as indicated on the drawings.
 - 5. Drive fault, auto selected at the VFD and run status isolated contacts for remote indication, rated 5 amperes at 120 volts AC. Provide additional relays in the VFD if required to provide these contacts.
 - 6. Speed droop feature, which reduces the speed of the drive on transient overloads. The drive shall return to set speed after the transient is removed. If the acceleration or deceleration rates are too rapid for the moment of inertia of the load, the drive shall automatically compensate to prevent drive trip.
 - 7. Individual variable speed profile settings for start, stop, entry, slope, and minimum and maximum speed points.
 - 8. Coast, controlled ramp, or dc injection selectable modes of stopping.
 - 9. Voltage phase to phase and ampere current indication for each VFD.
- F. Diagnostic indicators on the face of the drive shall display the type of fault responsible for drive shutdown, warning, or failure. If two or more faults occur simultaneously, the diagnostic segment shall record or indicate each condition. The drive shall be capable of storing 10 events with a time and date stamp for each event.
- G. Sequence of Operation:
 - 1. Each VFD shall receive a run command and a speed command from the master controller.
 - 2. When the VFD selector switch is in the "HAND" position, the load shall run and the speed shall be controlled by the VFD manual speed control.
 - 3. When the VFD selector switch is in the "OFF" position, the load shall not run.
 - 4. When the VFD selector switch is in the "AUTO" position, the load shall be turned on and off by the master controller and the speed shall be controlled by the master controller.
 - 5. The VFD shall generate a discrete output signal for transmission to the master controller when the VFD selector switch is not in the "AUTO" position.

2.6 ACCESSORIES

- A. Warning Nameplate. A warning nameplate shall be mounted on each drive to warn the operator to trip the circuit breaker before performing any maintenance
- B. All devices mounted on the face of each drive shall be provided with suitable nameplates. Push buttons, selector switches, and pilot lights shall have the device manufacturer's standard legend plate. All devices shall have a nameplate as specified in Section 16075 – Electrical Equipment Identification.

2.7 SOURCE QUALITY CONTROL

- A. Factory Testing. After the drive system has been assembled at the manufacturer's facility, it shall be tested for at least 24 hours before it is shipped.
- B. The complete drive system, including all peripherals, shall be factory tested under simulated operating conditions, including normal operating sequences and fault conditions. Contact closure inputs and simulated driven-outputs shall be connected to the system input/output modules.
- C. A test report summary indicating satisfactory final test results shall be submitted before shipment of the equipment.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Per NEMA ICS 3.1, install equipment in accordance with approved manufacturer's printed installation drawings, instructions, wiring diagrams, and as indicated on project drawings and the approved shop drawings. A field representative of the drive manufacturer shall supervise the installation of all equipment and wiring.
- B. field quality control
- C. After installation of the system at the site of the work and checkout by the drive manufacturer, a field acceptance test shall be conducted jointly by the drive manufacturer and the manufacturer of the driven equipment.
- D. The test shall be conducted by qualified personnel. Field inspection and testing shall be performed under the provisions of NETA ATS section 7.17 – Adjustable Speed Drive Systems.
- E. VFD Test: The field acceptance test shall consist of repeating the factory acceptance testing procedure and an additional 8 days of similar testing, during which the system shall run continuously without loss of basic functions. Functional tests shall demonstrate satisfactory operation of all interlocks, alarms, and normal operating sequences. The drive manufacturer shall use suitable test equipment to identify and correct malfunctions. Failure of redundant equipment will not be considered as downtime, provided that automatic failure occurs as specified herein and, that in the opinion of the District, the failure was not caused by deficiency in design or installation. Repeated failure of any component shall be cause for the acceptance test to be terminated and restarted.
- F. Performance Verification Tests. "Performance Verification Test" shall provide the step-by-step procedure required to establish formal verification of the performance of the VFD. Compliance with the specification requirements shall be verified by inspections, review of critical data, demonstrations, and tests.
- G. Endurance Test: Immediately upon completion of the performance verification test, the "Endurance Test" shall commence. The system shall be operated at varying rates for not less than 192 consecutive hours, at an average effectiveness level of .9998, to demonstrate proper functioning of the complete system. Continue the test on a day-to-day basis until performance standard is met. During the endurance test, the contractor shall not be allowed in the building. The system shall respond as designed.

3.2 TRAINING

- A. Following completion of the installation and field-testing work, operators shall be trained in the proper operation, troubleshooting, and maintenance of the equipment. Training shall be conducted by a qualified representative of the drive manufacturer and shall consist of at least 8 hours of combined classroom and hands-on instruction.

- B. Training shall include:
1. System overview.
 2. General theory of operation.
 3. System operation.
 4. Alarm formats.
 5. Failure recovery procedures.
 6. Troubleshooting and repair.
 7. Maintenance and calibration.
 8. System programming and configuration.

END OF SECTION

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SECTION 16413
ENCLOSED TRANSFER SWITCH

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes automatic and non-automatic transfer switches in individual enclosures.

1.2 RELATED SECTIONS

- A. Section 16060 – Basic Electrical Materials and Methods
- B. Section 16075 – Electrical Equipment Identification.

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. NEMA ICS 6 – Enclosures.
- B. NEMA ICS 10 - AC Transfer Switch Equipment.
- C. NFPA 110 – Emergency Standby Power Systems.
- D. NFPA 70 – National Electrical Code.
- E. UL 1008 - Transfer Switch Equipment.

1.4 SERVICE CONDITIONS

- A. Temperature: -40 to +50 degrees C
- B. Relative Humidity: up to 95 percent
- C. Altitude: 10 feet (2 meters) above sea level

1.5 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Product Data: Submit catalog sheets showing voltage, switch size, ratings and size of switching and overcurrent protective devices, operating logic, short-circuit ratings, dimensions, and enclosure details.
- C. Test Reports: Indicate results of manufacturer's certification of performance testing.
- D. Manufacturer's Field Report: Indicate inspections, findings, and recommendations.

1.6 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.

- B. Operation and Maintenance Data: Submit instructions and service manuals for normal operation and routine maintenance. List special tools, maintenance materials, and replacement parts.

1.7 QUALIFICATIONS

- A. Manufacturer: Company shall specialize in manufacturing the products specified in this section with minimum five (5) years' experience and with service facilities within 50 miles of project.
- B. Supplier: Authorized distributor of specified manufacturer with minimum five (5) years' experience.

1.8 MAINTENANCE SERVICE

- A. In accordance with Division 1 requirements.
- B. Furnish service and maintenance of transfer switches for one year from Date of Substantial Completion.

1.9 WARRANTY

- A. Furnish two (2) year manufacturer's warranty from acceptance date for defective parts and labor to install the part.

PART 2 PRODUCTS

2.1 AUTOMATIC TRANSFER SWITCH

- A. Description: NEMA ICS 10, automatic transfer switch suitable for use in standby systems as described in NFPA 70 and shall conform to NFPA 110. Manual operator conforming to UL 1008 shall be provided and switch shall be designed for safe operations under full load conditions.
- B. Configuration: Electrically operated, mechanically held in both operating positions.
- C. Rating: Voltage and current rating as indicated on drawings, continuous duty 3 pole with solid neutral. Neutral contact continuous current rating shall be not less than twice the rating of main or phase contacts.
- D. Interrupting Capacity: 100 percent of continuous rating.
- E. Withstand Current Rating: 30,000 RMS symmetrical amperes when used with molded case circuit breaker. Contacts shall be non-welding when used with upstream feeder overcurrent device of available fault current specified.
- F. Product Features:
 - 1. Main transfer switch contacts shall be visible for inspection without disassembly and/or removal of any parts or barriers. Arc guards constructed of transparent materials suitable for use in this application are acceptable.
 - 2. Indicating Lights: Mount on front panel of switchboard to indicate NORMAL SOURCE AVAILABLE, ALTERNATE SOURCE AVAILABLE and switch position.
 - 3. Test Switch: Mount on front panel of switchboard to simulate failure of normal source.

4. Return to Normal Switch Mount on front panel of switchboard to initiate manual transfer from alternate source to normal source.
 5. Auxiliary Contacts: Provide the following discrete output signals, rated at no less than 10 amps at 120 volts, 60 Hz.
 - a. Loss of utility power
 - b. Preferred source active
 - c. Alternate source active
 - d. Any additional control signals as required to control a standby engine generator and as indicated on drawings.
 6. Preferred Source Monitor: Monitor normal source voltage and frequency; initiate transfer when voltage drops below 85 percent or frequency varies more than 3 percent from rated nominal value.
 7. Alternate Source Monitor: Monitor alternate source voltage and frequency; inhibit transfer when voltage is below 85 percent or frequency varies more than 3 percent from rated nominal value.
- G. Automatic Sequence of Operation:
1. Initiate Time Delay to Start Alternate Source Engine Generator: Upon initiation by normal source monitor.
 2. Time Delay to Start Alternate Source Engine Generator: 0.5 to 6 seconds, adjustable, and factory set at 1 second.
 3. Initiate Transfer Load to Alternate Source: Upon initiation by preferred source monitor and permission by alternate source monitor.
 4. Time Delay before Transfer to Alternate Power Source: 0 to 5 minutes, adjustable, and factory set at 0 minutes.
 5. Initiate Retransfer Load to Normal Source: Upon permission by preferred source monitor.
 6. Time Delay before Transfer to Preferred Power Source: 0 to 30 minutes, adjustable, and factory set at 5 minutes. Time delay shall be automatically defeated in event of alternate source failure, provided preferred source is available.
 7. Time Delay before Engine Shutdown: 0 to 30 minutes, adjustable, of unloaded operation, factory set at 10 minutes.
 8. Engine Exerciser: Provide a generator exerciser timer. Run times shall be user programmable. The exerciser shall be selectable between load transfer and engine run only and shall have a fail-safe feature that will retransfer the switch to preferred source during exercise period. Bypass exerciser control when normal source fails during exercising.

2.2 NON-AUTOMATIC TRANSFER SWITCH

- A. Product Description: NEMA ICS 10, non-automatic transfer switch suitable for use in standby systems as described in NFPA 70 and shall conform to NFPA 110. Switch shall be designed for safe operation under full load conditions. Manual operation conforming to UL 1008.
- B. Voltage and current rating as indicated on drawings, continuous duty 3 pole with solid neutral.
- C. Interrupting Capacity: 100 percent of continuous rating.
- D. Withstand Current Rating: 30,000 RMS symmetrical amperes minimum. Contacts shall be non-welding when used with upstream feeder overcurrent device of available fault current specified.
- E. Product Features:

1. Mechanical interlock to prevent interconnection of normal and alternate sources of supply in any configuration.
2. Transfer operation of switch shall not require any tools or external devices.
3. Active source shall be readily apparent without opening enclosure or the removal of any parts or barriers.

2.3 ENCLOSURE

- A. NEMA ICS 6, type as indicated on drawings in accordance with UL 1008.
- B. The transfer switch enclosures shall be front aligned with the Main Distribution Switchboard and the Motor Control Center (MCC) equipment.
- C. Finish:
 1. Manufacturer's standard light gray enamel over external surfaces. Coat internal surfaces with a minimum of one coat of corrosion-resistant paint, or plate with cadmium or zinc.

2.4 SOURCE QUALITY CONTROL

- A. Insulation resistance test to insure integrity and continuity of entire system.
- B. Main switch contact resistance test.
- C. Mechanical test to verify switch is free of mechanical hindrances.
- D. Electrical tests to verify complete control operation and to set up time delays and voltage sensing settings as applicable.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Switch shall be installed in accordance with approved manufacturer's instructions.
- B. Install engraved plastic nameplates in accordance with Section 16075 – Electrical Equipment Identification.

3.2 MANUFACTURER'S FIELD SERVICES

- A. In accordance with Division 1 requirements.
- B. Engage the services of a factory-authorized service representative to inspect field-assembled components and equipment installation, including phasing, electrical connections, and to assist in testing. Report results in writing.

3.3 FIELD QUALITY CONTROL

- A. Following completion of switch installation and after making proper adjustments and settings, site tests shall be performed to demonstrate each switch function as specified. Minimum operational tests shall include:
 1. Insulation resistance shall be tested, both phase-to-phase and phase-to-ground.
 2. Power failure of normal source shall be simulated by opening upstream protective device. This test shall be performed a minimum of five times.

3. Power failure of emergency source with normal source available shall be simulated by opening upstream protective device for emergency source. This test shall be performed a minimum of five times.
4. Low phase-to-ground voltage shall be simulated for each phase of normal source.
5. Operation and settings shall be verified for specified switch features, such as override time delay, transfer time delay, return time delay, engine shutdown time delay, exerciser, auxiliary contacts, and supplemental features.

END OF SECTION

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SECTION 16441
SWITCHBOARD

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes providing and installing a Main Distribution Switchboard.

1.2 RELATED SECTIONS:

- A. Section 16060 – Basic Electrical Materials and Methods.
- B. Section 16413 – Enclosed Transfer Switch
- C. Section 16210 – Electric Utility Services
- D. Section 16442 – 600-Volt Rated Panel Board and Circuit Breakers
- E. Section 16443 – Motor Control Center
- F. Section 16461 – Dry Type Transformer

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. ANSI C12.1 - Code for Electricity Metering.
- B. ANSI C57.13 - Instrument Transformers.
- C. NEMA ICS 6 – Enclosures.
- D. NEMA CU 1 – Fuses.
- E. NEMA PB 2 - Dead Front Distribution Switchboards.
- F. NEMA PB 2.1 - Proper Handling, Installation, Operation and Maintenance of Dead front Switchboards Rated 600 Volts or less.
- G. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- H. NFPA 70 – National Electrical Code.

1.4 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Shop Drawings:
 - 1. Provide front and side views of enclosures, with overall dimensions shown; conduit entrance locations and requirements; nameplate legends; size and number of bus bars for each phase, neutral, and ground; and switchboard instrument details.

2. Provide detailed drawings of the service cable entrance compartment, main circuit breaker compartment, instrument transformer and metering compartment.
 3. Submit service cable entrance, instrument transformer and metering compartment drawings to utility company for review and approval prior to release for fabrication and construction.
 4. Submit calculations and enclosure pad-mount anchoring method (anchor bolt size, embedment, and assembly details) to meet California Seismic Zone IV requirements.
- C. Product Data: Submit electrical characteristics, including voltage, frame size and trip ratings, fault current withstand ratings, and time-current curves of equipment and components.

1.5 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Project Record Documents: Record actual locations, configurations, and ratings of switchboards and their components on single line diagrams and plan layouts.
- C. Operation and Maintenance Data: Submit spare parts data listing, source and current prices of replacement parts and supplies, and recommended maintenance procedures and intervals.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three (3) years' experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Division 1 requirements.
- B. Deliver in convenient width shipping splits, individually wrapped for protection and mounted on shipping skids.
- C. Accept switchboard on site. Inspect for damage.
- D. Store in clean, dry space. Maintain factory wrapping or provide additional canvas or plastic cover to protect units from dirt, water, construction debris, and traffic. Provide heaters to prevent condensation during storage.
- E. Handle in accordance with NEMA PB 2.1. Lift only with lugs provided. Handle carefully to avoid damage to switchboard internal components, enclosure, and finish.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. In accordance with Division 1 requirements.
- B. Conform to NEMA PB 2 service conditions during and after installation of switchboards.

1.9 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

PART 2 PRODUCTS

2.1 UTILITY CABLE PULL SECTION AND METER COMPARTMENT

- A. Description: Service cable pull section and utility meter compartment shall be USERC certified, 480/277-volts, 800-amps, 3-phase, 4-wire, 30 KAIC rated with space for mounting utility instrument transformers, meter socket for utility service revenue meter(s), service cable termination and equipped with an 800-amp rated main service disconnect circuit breakers in accordance with Utility (Silicon Valley Power) requirements and as indicated on the drawings.
- B. Enclosure: NEMA 3R. The Utility cable pull section and metering compartment(s) shall be suitable for wall mounting, and suitable for padlocking.
 - 1. Finish: Manufacturer's standard light gray enamel over external surfaces. Coat internal surfaces with a minimum of one coat of corrosion-resistant paint, or plate with cadmium or zinc.
- C. Main Bus:
 - 1. Material: Insulated Copper with tin plating, standard size. Provide minimum 1,000 ampere per square inch copper bus density.
 - 2. Connections: Bolted, accessible from front only for maintenance.
- D. Ground Bus: Ground bus rating shall meet requirements of NFPA 70 for indicated main bus rating.

2.2 MAIN SWITCHBOARD

- A. Description: NEMA PB 2, enclosed switchboard rated 480/277-volts, 800-amps, 3-phase, 4-wire, 30 KAIC equipped with branch circuit breakers as indicated on Drawings. Switchboard shall be designed and appropriate for use in a heavy-duty industrial area.
- B. Enclosure: NEMA 3R type as indicated on drawings. Align all sections at front.
 - 1. Finish: Manufacturer's standard light gray enamel over external surfaces. Coat internal surfaces with a minimum of one coat of corrosion-resistant paint, or plate with cadmium or zinc.
- C. Main Bus:
 - 1. Material: Insulated Copper with tin plating, standard size. Provide minimum 1,000 ampere per square inch copper bus density.
 - 2. Connections: Bolted, accessible from front only for maintenance.
- D. Ground Bus: Extend length of switchboard. Ground bus rating shall meet requirements of NFPA 70 for indicated main bus rating.
- E. Transfer Switch Compartment: Furnish an enclosed transfer switch as indicated on drawings and in accordance with the requirements of Section 16413 – Enclosed Transfer Switch.
- F. Control Power Transformer and Panel board: 600-volt rated dry type transformer as specified in Section 16461 - Dry Type Transformer with primary protective circuit breaker; branch circuit panelboard as specified in Section 16442 – 600-volt Rated Panelboards and Circuit Breakers.
- G. Line and Load Terminations: Accessible from front only of switchboard, suitable for conductor materials and sizes as indicated on Drawings.

- H. Future Provisions: Fully equipped spaces for future devices with bussing and bus connections insulated and braced for short circuit currents.

2.3 MANUFACTURERS

- A. Cutler-Hammer.
- B. General Electric.
- C. Siemens.
- D. Square D.
- E. Approved equal manufacturer.

2.4 MOLDED CASE CIRCUIT BREAKER

- A. Description: Molded-case circuit breaker as specified in Section 16442 - 600-volt Rated Panelboards and Circuit Breakers. Suitable for use as service equipment as described in NFPA 70.

2.5 METERING TRANSFORMERS

- A. Current Transformers: ANSI C57.13; 5-ampere secondary, with single secondary winding and secondary shorting device, primary to secondary ratio to match bus ampacity or as indicated on drawings, burden and accuracy consistent with connected metering and relay devices, 60 Hertz.
- B. Potential Transformers: ANSI C57.13; 120-volt secondary with single secondary winding, disconnecting type with integral NEMA FU 1 fuse mountings in both primary legs and one secondary leg, primary to secondary ratio to match bus voltage or as indicated on the drawings, burden and accuracy consistent with connected metering and relay devices, 60 Hertz.

2.6 CURRENT AND VOLTAGE TRANSDUCERS

- A. AC-True RMS transducer.
 - 1. Input: 0 to 5-ampere or 0-150 volts as appropriate.
 - 2. Rated Output: Proportional 0 –20 mA
 - 3. External Power: 100 - 130 VAC
 - 4. Accuracy: +/- 0.5% of Span
 - 5. Operating Temperature: 0 – 50 degrees Celsius
 - 6. Output Ripple Peak: < 1% of Span
 - 7. Standard Calibration: +/- 20% of span (minimum), +/- 5% of zero point (minimum)
 - 8. Frequency: 55 – 65 Hertz
 - 9. Stability: +/- 0.15% of span, Non-cumulative
 - 10. Isolation: Complete (Input, Output, power and case)

2.7 DIGITAL POWER METER

- A. Description: Front display, panel mounted, direct reading, LED, LCD or vacuum fluorescent readout.
- B. Manufacturer:
 - 1. Cutler Hammer – IQ 330

2. General Electric Co – PQM II
3. Square D Company – PowerLogic PM650
4. Approved equal

C. Features:

1. Current (A, B, C, N)
2. Volts L-L (A-B, B-C, C-A)
3. Volts L-N (A-N, B-N, C-N)
4. Real Power – kW (A, B, C, total)
5. Reactive Power – kVAR (A, B, C, total)
6. Apparent Power – kVA (A, B, C, total)
7. Power Factor, True (A, B, C, total)
8. Frequency
9. Real Energy – kWh (3 phase total)
10. Reactive Energy – kVARh (3-phase total)
11. Apparent Energy – kVAh (3-phase total)
12. Energy Accumulation Mode –Signed, Absolute, energy in, energy out
13. Digital outputs configurable as KYZ or alarms.
14. Communications – Modbus RTU
15. THD – Voltage and Current (A, B, C)
16. Current Demand (A, B, C, present and peak)
17. Power Demand – kWd, kVARd, kVA_d (3-phase total, present and peak)
18. Date/Time stamping (Peak demands, power up/restart, resets)
19. Downloadable firmware
20. Revenue Accuracy, ANSI C12.1
21. UL Listed
22. Voltage Input, Direct Connect - 600-Volts
23. Current Input – from external CT's

2.8 SOURCE QUALITY CONTROL

- A. Furnish shop inspection and testing in accordance with NEMA PB 2.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that surface is suitable for switchboard installation.

3.2 INSTALLATION

- A. Install in accordance with NEMA PB 2.1.
- B. Tighten accessible bus connections and mechanical fasteners after placing switchboard.
- C. Install engraved plastic nameplates in accordance with Section 16060.
- D. Ground and bond switchboards in accordance with Section 16060.

3.3 FIELD QUALITY CONTROL

- A. In accordance with Division 1 Requirements.
- B. Perform inspections and tests listed in NETA ATS Section 7.1 for Switchgear and Switchboard Assemblies, as follows:

1. Visual and mechanical inspection
 - a. Compare equipment nameplate data with drawings and specifications.
 - b. Inspect physical, electrical, and mechanical condition.
 - c. Confirm correct application of manufacturer's recommended lubricants.
 - d. Verify appropriate anchorage, required area clearances, physical damage, and correct alignment.
 - e. Inspect all door panels, and sections for paint, dents, scratches, fit, and missing hardware.
 - f. Verify that fuses and/or circuit breaker sizes and types correspond to drawings.
 - g. Verify that current and voltage (potential) transformer ratios correspond to drawings.
 - h. Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 10.12.
 - i. Confirm correct operation and sequencing of electrical and mechanical interlock systems.
 - j. Attempt closure on locked-open devices. Attempt to open locked-closed devices.
 - k. Clean Switchboard.
 - l. Inspect insulators for evidence of physical damage or contaminated surfaces.
 - m. Exercise all active components.
 - n. Verify that air filters are in place and /or vents are clear
 2. Electrical Tests
 - a. Perform ground-resistance testing accordance with NETA ATS Section 7-13.
 - b. Perform resistance tests through all bus joints with a low-resistance ohmmeter. Any joints that cannot be directly measured due to permanently installed insulation wrap shall be indirectly measured from closest accessible connection.
 3. Test Values
 - a. Compare bus connection resistance to values of similar connections.
 - b. Bolt-torque levels shall be in accordance with NETA ATS Table 10.12 unless otherwise specified by manufacturer.
- C. Check phase rotation of all connected loads prior to removal of existing equipment and after new equipment is installed.
- 3.4 ADJUSTING
- A. In accordance with Division 1 requirements.
 - B. Tighten bolted bus connections.
- 3.5 CLEANING
- A. Touch up scratched or marred surfaces to match original finish.
 - B. Remove dust, loose dirt, sand and grit from interior of switchboard.

END OF SECTION

SECTION 16442

600-VOLT RATED PANEL BOARDS AND CIRCUIT BREAKERS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes distribution and branch circuit panelboards and circuit breakers.

1.2 RELATED SECTIONS

- A. Section 16060 - Basic Electrical Materials and Methods.
- B. Section 16075 – Electrical Equipment Identification.
- C. Section 16413 – Enclosed Transfer Switch
- D. Section 16441 – Switchboard
- E. Section 16443 – Motor Control Center

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. IEEE C2 – National Electrical Safety Code.
- B. NECA - Standard of Installation.
- C. NEMA AB 1 - Molded Case Circuit Breakers.
- D. NEMA ICS 6 - Enclosures
- E. NEMA PB 1 - Panelboards.
- F. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.
- G. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- H. NFPA 70 – National Electrical Code.

1.4 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.
- C. Product Data: Submit catalog data showing specified features of standard products.

1.5 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of panelboards and record actual circuiting arrangements.
- B. Operation and Maintenance Data: Submit spare parts listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

1.7 MAINTENANCE MATERIALS

- A. Furnish two of each panelboard key. Panelboards keyed alike to Owner's current keying system.

PART 2 PRODUCTS

2.1 DISTRIBUTION AND BRANCH CIRCUIT PANELBOARDS

- A. Description: NEMA PB 1, circuit breaker type distribution, lighting and appliance branch circuit panelboard.
- B. Manufacturers:
 - 1. Cutler Hammer.
 - 2. Siemens.
 - 3. Square D Co.
 - 4. General Electric Co.
- C. Service Conditions:
 - 1. Temperature: 104 degrees F (40 degrees C) ambient
 - 2. Altitude: 100 feet (35 m) above sea level.
- D. Panelboard Bus
 - 1. Copper current carrying components, ratings as indicated on drawings
 - 2. Furnish copper ground bus in each panelboard.
- E. Minimum integrated short circuit rating
 - 1. Panelboards rated 240-Volts - 22,000 amperes RMS symmetrical, or as indicated on drawings.
 - 2. Panelboards rated 480-Volts - 42,000 amperes RMS symmetrical, or as indicated on drawings.
- F. Enclosure: NEMA 3R, gasketed, steel construction, minimum 6 inches deep, 20 inches wide suitable for flush or surface mounting as indicated on drawings.
 - 1. Flush or surface cabinet front with concealed trim clamps, concealed hinge, metal directory frame, and flush lock keyed alike.
 - 2. Fully hinged door with flush lock and metal directory frame.
 - 3. Finish with manufacturer's standard gray enamel.

2.2 MOLDED CASE CIRCUIT BREAKERS

- A. NEMA AB 1, bolt-on type thermal magnetic and instantaneous magnetic trip circuit breaker. Circuit breaker thermal elements shall be of the bimetallic type and shall be capable of withstanding sustained overload and short-circuit currents without injury and without affecting the calibration of the bimetallic element. The thermal element shall have inverse time characteristics. The instantaneous elements shall trip the circuit breaker at the minimum standard trip setting.
- B. Provide common trip handle for multiple pole circuit breakers.
- C. Provide type SWD circuit breakers for lighting circuits and type HACR circuit breakers for air conditioning equipment circuits.
- D. Class A ground fault interrupter circuit breakers as indicated on drawings.
- E. Trip rating as indicated on drawings.
- F. Circuit breaker interrupting rating shall meet or exceed the panel interrupting rating. Series rated circuit breakers are not acceptable.

PART 3 EXECUTION

3.1 EXISTING WORK

- A. Disconnect and remove abandoned panelboards. Verify all branch circuits are no longer in use before disconnecting.
- B. Maintain access to existing panelboard that remain active and require access. Modify installation or provide access panel.
- C. Clean and repair existing panelboards to remain or to be reinstalled.

3.2 INSTALLATION

- A. Install panelboards in accordance with NEMA PB 1.1 and NECA "Standard of Installation", NFPA 70 and IEEE C2.
- B. Install panelboards plumb.
- C. Install recessed panelboards flush with wall finishes.
- D. Mounting height: 6 feet (1,800 mm) to top of panelboard. Install panelboards taller than 6 feet (1,800 mm) with bottom no more than 4 inches (100 mm) above floor.
- E. Install filler plates for unused spaces in panelboards.
- F. Provide typed circuit directory for each panelboard. Revise directory to reflect circuiting changes to balance phase loads.
- G. Install engraved plastic nameplates in accordance with Section 16075 – Electrical Equipment Identification.

- H. Ground and bond panelboard enclosure according to Section 16060. Connect equipment ground bars of panels in accordance with NFPA 70.

3.3 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS as outlined below:
 - 1. Visual and Mechanical Inspection:
 - a. Compare equipment nameplate data with drawings and specifications.
 - b. Inspect physical and mechanical condition.
 - c. Verify appropriate anchorage, required area clearances, physical damage, and correct alignment.
 - d. Inspect all doors, panels, and sections for corrosion, dents, scratches, fit, and missing hardware.
 - e. Verify that fuse and/or circuit breaker sizes and types correspond to drawings.
 - f. Perform circuit breaker inspections and operation test.

3.4 ADJUSTING

- A. Rearrange circuits in panelboard to balance phase loads to within 20 percent of each other.
- B. Maintain proper phasing for multi-wire branch circuits.

END OF SECTION

SECTION 16443
MOTOR CONTROL CENTER

PART 1 GENERAL

1.1 SUMMARY

- A. This section covers the furnishing and installation of motor control center equipment, motor starters, controls, and accessories.

1.2 RELATED SECTIONS

- A. Section 16060 – Basic Electrical Materials and Methods
- B. Section 16075 –Electrical Equipment Identification
- C. Section 16265 – 600-Volt Rated Variable Frequency Drives
- D. Section 16413 – Enclosed Transfer Switch
- E. Section 16441 - Switchboard
- F. Section 16442 – 600-Volt Rated Panelboard and Circuit Breakers

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. ANSI C37.17 – Trip Devices for AC and General Purpose DC Low Volume Power Circuit Breakers.
- B. IEEE 142 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.
- C. NECA - Standard of Installation.
- D. NEMA ICS 2 - Industrial Control Devices, Controllers and Assemblies
- E. NEMA ICS 2.3 - Instructions for the Handling, Installation, Operation, and Maintenance of Motor Control Centers
- F. NEMA ICS 3 - Industrial Control and Systems: Factory Built Assemblies
- G. NEMA ICS 4 - Industrial Control and Systems: Terminal Blocks
- H. NEMA ICS 5 - Industrial Control and Systems: Control Circuit and Pilot Devices
- I. NEMA ICS 6 - Industrial Control and Systems: Enclosures
- J. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems
- K. NFPA 70 - National Electrical Code
- L. UL 94 – Tests for Flammability of Plastic Materials for Part in Devices and Appliances.

- M. UL 845 - Electrical Motor Control Center

1.4 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Shop Drawings:
 - 1. Submit Motor Control Center front elevation, side views and plan view showing overall dimensions, conduit entrance locations, circuit breaker and motor starter arrangement and enclosure details including support point
 - 2. Submit electrical characteristics including voltage rating, ampacity of horizontal and vertical main bus, neutral bus and ground bus, integrated short circuit ampere rating, starter size, circuit breaker frame size and trip ratings, and name plate legends
 - 3. Submit single line diagrams, interconnection diagrams, connection diagrams, control logic diagrams, point-to-point wiring diagrams and front panel elevation.
 - 4. Submit complete elementary and schematic wiring diagrams with all wires numbered for all control systems.
 - 5. Submit calculations and enclosure pad-mount anchoring method (anchor bolt size, embedment and assembly details) to meet California seismic Zone 4 requirements.
 - 6. Submit a complete description of motor control center prime and finish painting, including paint manufacturers and types, paint colors, painting processes, and dry film thicknesses.
- C. Product Data:
 - 1. Submit catalog sheets showing voltage, ratings and size of all motor control center components.
 - 2. Submit circuit breaker time-current characteristic curves and overload relay thermal element (heater strip) time-current characteristic curves.
- D. Certification and Test Reports: Indicate results of manufacturer's certification of performance testing and submit certified copies of test results of all standard routine factory tests including quality control tests

1.5 REGULATORY REQUIREMENTS

- A. Equipment shall conform to the requirements of NFPA 70, NEMA ICS2 and UL845.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. (UL), Electrical Testing Laboratories, Inc. (ETL), or other recognized, acceptable testing and listing agencies as suitable for the purpose specified and shown.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. In accordance with Division 1 requirements.
- B. Deliver in 60-inch maximum width shipping splits, individually wrapped for protection, and mounted on shipping skids.
- C. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.

- D. Handle in accordance with NEMA ICS 2.3. Lift only with lugs provided for the purpose. Handle carefully to avoid damage to motor control center components, enclosure, and finish.

1.7 CLOSEOUT SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Project Record Documents: Product Data and shop drawings as described under Submittals.
- C. Operation and Maintenance Data: Submit instructions and service manuals for normal operation and routine maintenance. List special tools, maintenance materials, and replacement parts. Include complete information for tightening of all electrical connections secured with bolts or studs.
- D. Furnish as-built elementary and schematic drawings with all manufacturer's equipment, control panels, devices, etc., in detail on the elementary diagram with all terminal points of such equipment indicated.
- E. Manufacturer's Field Report: Indicate inspections, findings, and recommendations.

1.8 WARRANTY

- A. Furnish two (2) year manufacturer's warranty from start-up and acceptance date for defective parts and labor to install the part.

1.9 QUALIFICATIONS

- A. Manufacturers proposing to furnish equipment under this specification shall have been manufacturing motor control centers for at least the most recent five (5) years.
- B. Supplier: Authorized distributor of specified manufacturer with minimum five (5) years' experience with that manufacturer's products.

1.10 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. The following is a list of acceptable manufacturers for the motor control center.
 1. Allen-Bradley
 2. Cutler Hammer
 3. Siemens Energy & Automation, Inc.
 4. Square D Company

2.2 MOTOR CONTROL CENTER

- A. General
 1. The motor control center shall be designed and constructed for use on a 480 volt, three-phase, four-wire, 60 Hz, solidly grounded system.

2. Except as specified otherwise herein all equipment shall be designed for service below 3,000 feet above sea level at an ambient temperature of 40°C maximum.

B. Construction

1. Motor control center equipment shall be mounted in compartmented vertical sections fabricated of steel and assembled to provide a rigid self-supporting structure. Each vertical section shall be nominally 90 inches high, 20 inches wide and 20 inches deep. Thickness of the steel sheets shall be not less than the thickness specified in UL 845, Table 1.
 - a. All iron and steel components of the motor control center shall be protected against corrosion by methods specified in UL 845.
 - b. Manufacturer's standard fasteners for removable panels consisting of screw type fasteners that are inserted in captive nuts held in place by nut retainer clips will be acceptable. Contractor shall furnish 100 percent replacement nuts and nut retainer clips as spare parts.
 - c. Contractor shall furnish 100 percent replacement screw type fasteners if they are of a non-captive type and 50 percent replacement of screw type fasteners if they are of a captive type.
 - d. Lifting angles shall be furnished on the top of each motor control center shipping section.
2. Enclosure. The motor control center enclosure shall be NEMA 3R gasketed.
3. Wire Troughs. Horizontal wire troughs shall be located at the top and bottom of each section, aligned and located to provide a continuous wire way of the same cross-sectional dimensions throughout the length of the assembled motor control center. A vertical wire trough equipped with wire ties shall extend the full height of each section.
4. Compartments. Each motor control section shall accommodate 100 HP rated variable frequency drives (VFD), and/or no more than six NEMA Size 1 full voltage, single speed, non-reversing combination motor starters. All individual compartments shall be isolated from each other by metal barriers when the units are assembled in the operating position and when the units are removed or replaced in the section structure. All section compartments shall be front accessible only.
5. Doors. Gasketed and hinged doors shall be provided on the front of each compartment. Doors shall be designed to allow easy maintenance or replacement of all devices from the front. A separate hinged and gasketed full-height door shall be furnished on the front of each section to allow access to the vertical wire trough without opening any starter unit or feeder tap unit door.
6. Equipped Spare. A compartment designated as "Spare" shall be furnished complete with stab-ins, guide rails, guide rail supports, starter unit or feeder tap unit, doors and all control devices and other hardware to permit connection of a load.
7. Space. Blank unassigned compartments shall be complete with vertical bus and removable covers over all openings between the unit compartment and the bus, but shall not include stab-ins, guide rails, guide rail supports, etc.
8. Future Additions and Modifications. The ends of each end vertical section shall be arranged to allow the future installation of similar sections. Each section shall be arranged to allow the removal, addition, interchange, or replacement of individual units as may be required.

C. Circuit Breakers. Each compartment not designated as "space" shall include one (1) three-pole, single-throw, 600-volt, molded-case air circuit breaker with RMS symmetrical interrupting rating to match MCC main bus in accordance with the requirements of Section 16442 – 600-Volt Panelboards and Circuit Breakers.

1. All circuit breakers shall be of the same manufacture throughout the composite motor control center assembly.

2. Manual operating handles shall be furnished on the access doors of the compartment to operate the circuit breaker. Provisions shall be made for padlocking each handle in the open position. Each operating handle shall indicate when the breaker has tripped automatically.
 3. Access doors shall be interlocked with the operating handles to prevent opening the doors normally when the circuit breakers are in the CLOSED position. Provisions shall be made for overriding this interlock.
- D. Bussing
1. Main and Neutral Bus. The motor control center main horizontal and vertical busses shall be insulated copper designed to continuously carry the full load rated current as specified, without exceeding temperature rise requirements.
 - a. The bus shall be installed with rigid, non-tracking, fire-resistant, and non-hygroscopic molded insulating supports with high dielectric strength and high creepage surface capable of withstanding the mechanical forces imposed by short-circuit currents of the magnitude specified on the drawings.
 - b. Bus shall be tin-plated for the entire length of the bus.
 - c. All joints shall have tin-plated contact surfaces with minimum contact resistance.
 2. Ground Bus. An un-insulated copper bar ground bus with a continuous current rating of 50 percent of the horizontal main bus shall be furnished through the entire length of the motor control center. All motor control center equipment requiring grounding shall be connected to this ground bus.
 3. The main horizontal bus shall be isolated from the horizontal wiring trough by means of removable barriers. The vertical bus shall be isolated from the removable combination starter units and feeder tap units by means of barriers that are part of the motor control center stationary structure. Barriers shall be sheet steel or other material that will pass the vertical burning test of UL 94 V-0.
 4. Provisions shall be made for bus expansion, to prevent undesirable or destructive mechanical strains in the bus supports and connections, through a full-ambient temperature range from -30°C to +50°C. Expansion joints shall be furnished where required.
- E. Entrance: Incoming feeder cable entrance will be from the top or bottom.
1. An incoming line termination compartment shall be provided for entry cables. The manufacturer shall extend the main bus into a compartment of the vertical section for termination of the incoming line. Each incoming line termination compartment shall be not less than 18 inches high, and shall be located at the top or bottom of the vertical section to coordinate with the direction of incoming line cable entrance specified.
- F. Configuration
1. All VFDs, motor starter units and feeder circuit breakers shall be readily interchangeable with units of same type and size. In addition, all NEMA sizes 1 and 2, full-voltage, single-speed, non-reversing combination motor starters shall be readily interchangeable with each other. NEMA sizes 3, 4 and 5 full-voltage, single-speed, non-reversing combination starters shall occupy spaces that are multiples of the space occupied by the NEMA sizes 1 and 2 starters.
 2. Two (2) 100 ampere frame feeder tap unit breakers or one (1) 225 ampere frame feeder tap unit breaker shall be able to be mounted in the space required for one NEMA sizes 1 or 2, full-voltage, single-speed, non-reversing combination starter. One (1) feeder tap unit breaker shall be able to be mounted in the space required for one NEMA size 3 full-voltage, single-speed, non-reversing combination starter when larger than 225 ampere frame feeder tap unit breakers are specified.

3. All units, except Size 5 starter units and 400-ampere frame or larger feeder tap units, shall be automatically disconnected and connected to the bus as the units are removed or replaced in the motor control center. Size 5 starter units and 400-ampere frame or larger feeder tap units shall have fixed mounting within the motor control center.
 4. Reduced voltage solid state starters and variable frequency drives shall be provided in accordance with the requirements of this section and Section 16265 – 600-Volt Variable Frequency Drives, respectively, as indicated on drawings.
- G. Integrated Short Circuit Rating. The integrated short circuit rating of the motor control center shall be as indicated on the drawings at 480-volts, 60 Hertz nominal, and no less than 42 KAIC.
- H. Terminals. Furnish terminals for all power, control, and ground conductors entering the motor control centers. Terminal connectors shall be furnished for all incoming line cables and shall be as specified elsewhere. Solder-type terminals are not acceptable.
1. Terminal connectors shall be furnished for all power and control conductors of combination motor starter and feeder tap units as part of the manufactured assembly.
 2. Each combination motor starter unit shall be furnished with terminal blocks located adjacent to the vertical wire way for termination of control cable. Terminal blocks shall be manufacturer's standard side-mounted, pressure pull-apart type control terminal blocks rated 480-volt AC. Control cable terminal blocks for combination motor starter units shall be furnished with not less than 18 terminals, with provisions for future terminal blocks.
 3. Connectors for attachment of ground busses to the external equipment grounding conductor system shall be suitable for copper conductors, sized to connect to the installed equipment grounding conductor. One connector shall be provided at each end of each motor control center ground bus. A load ground connector shall be furnished on the ground bus for each combination starter unit and each feeder tap unit.
- I. Nameplates. An engraved nameplate shall be furnished for the motor control center, each starter unit door, and each feeder tap unit door in accordance with the requirements of Section 16075 –Electrical Equipment Identification. Nameplate inscriptions will be as indicated on the drawings or as furnished by the District during shop drawing review.

2.3 MOTOR STARTER UNITS

- A. Motor Starter Units shall be full-voltage, single-speed, non-reversing, combination motor starter units and shall include disconnecting and branch circuit over-current protective devices; dry-type control power transformers; contactors, overload relays, auxiliary control devices, door mounted pilot devices, control relays and accessories as indicated and required for the system provided.
- B. Disconnecting and Branch Circuit Over-current Protective Devices for all motor starters shall be magnetic, instantaneous trip-only type, motor circuit protector circuit breakers sized and rated in accordance with the latest NEC and the manufacturer's recommendations based on the service conditions and contractor-supplied motor data.
- C. Starter Contactors shall have rated continuous current carrying capacity as listed in NEMA ICS 2, Table 2-210-1 for that size contactor. The interrupting capacity of each starter contactor shall be not less than 10 times the rated continuous current-carrying capacity listed in NEMA ICS 2, Table 2-210-1 for that size contactor.

- D. Overload Relays. Thermal overload relays shall be furnished in each phase leg of each motor starter. The overload capacity of the relays shall be manually adjustable through a range of 85 to 115 percent of the normal trip rating. The relays shall not be temperature compensated. Provisions shall be made for manually resetting the thermal relays without opening the starter door.
- E. Control power transformer shall be furnished with fuses in both of the primary and one of the secondary phase wires. It shall have a rating of 250 Volt-Amps, minimum.
- F. Mechanically Operated Auxiliary Contacts. Each magnetic motor starter shall be furnished with a total of two (2) mechanically operated auxiliary contacts, normally open, convertible in the field, and mounted on the main contactor. The use of auxiliary relays to furnish the specified quantities of auxiliary contacts will not be acceptable. Combination starter units that require line voltage to energize the main contactor operating coils shall be equipped with a total of eight (8) mechanically operated auxiliary contacts.
- G. Each starter will be controlled by remote pilot devices. All necessary internal wiring for this feature shall be furnished and connected to terminal blocks.

2.4 VARIABLE FREQUENCY DRIVES

- A. Variable Frequency Drives shall be as specified in Section 16265 – 600 Volt Rated Variable Frequency Drives complete with logic component, an integral LCD display and shall include disconnecting and branch circuit over-current protective devices; dry-type control power transformers; contactors, overload relays, auxiliary control devices, door mounted pilot devices, control relays and accessories as indicated and required for the system provided.

2.5 FEEDER TAP UNITS

- A. Feeder tap units shall be thermal magnetic trip type molded case circuit breakers as required by Section 16442 – 600-Volt Panelboards and Circuit Breakers.

2.6 CONTROL RELAYS AND pilot devices

- A. Solid State and Magnetic Control Relays
 1. Description: NEMA ICS 5, solid state relay or Class A300 magnetic control relay.
 2. Contacts: Form A or B (or both) as required.
 3. Contact Ratings: 10 amperes continuous, minimum.
 4. Coil Voltage: 120-volts, 60 Hz.
 5. Enclosure: NEMA ICS 6, Type 1.
- B. Time Delay Control Relays (On-Time Delay and Off-Time Delay)
 1. Description: NEMA ICS 5, solid-state time delay relay – time delay after Energization or after De-Energization indicated on drawings.
 2. Contacts: Form A or B (or both) as required.
 3. Contact Ratings: 10 amperes continuous, minimum.
 4. Coil Voltage: 120-volts, 60 Hz.
 5. Enclosure: NEMA ICS 6, Type 1.
- C. Plug-in Control Relays
 1. Product Description: NEMA ICS 5, miniature, hermetically sealed relay.
 2. Contacts: 4 pole double throw (4PDT) Form A or B.
 3. Contact Ratings: 5 amperes continuous, minimum.
 4. Coil Voltage: 120-volts, 60 Hz.

5. Enclosure: Hermetically sealed, suitable for Class 1, Division 1 and 2 installations.
6. Socket: To match relay and meet conditions of installation.

D. Switches and Push Buttons:

1. Product Description: NEMA ICS 5, heavy-duty oil-tight.
2. Contact Ratings: 10 amperes continuous, minimum.
3. Selector Switches: Rotary type.
4. Toggle Switches: Honeywell Micro Switch Type TL or approved equal.
5. Each switch shall have a legend plate – “Hand-Off-Auto”, “Local-Remote”, Start-Stop”, etc. as required to describe the control mode or function.

E. Pilot Lights:

1. Cluster type light emitting diode (LED) suitable for operation at 120-volt AC control voltage or as required. The LED color shall be coordinated with the alarm or indicated function.
2. Pilot lights shall be push-to-test type.

Lens Color	Status and Alarm Condition Indication
Red	Alarm indication – abnormal condition, Equipment De-energized
Green	Equipment energized – motor running, valve open, circuit breaker closed.
Amber	Abnormal “trouble” condition exists.
White	Power on indication.

F. Terminal Blocks

1. Description: NEMA ICS 4 terminal blocks.
2. A Power Terminal is defined as any terminal that is required to carry a current greater than 1 amp or a voltage in excess of 50-volts. Power terminals shall be of the unit construction type with closed back and tubular pressure screw connectors, rated 600 volts minimum, and with a continuous current carrying capacity of 15-amp minimum.
3. A Signal and/or Control Terminal is defined as any terminal that is required to carry a current that may not exceed 1,000 mA instantaneous and a voltage that is not to exceed 50-volt instantaneous. Signal and/or control terminals may be of the modular construction type, suitable for channel mounting, with tubular pressure screw connectors, rated 300-volts minimum.
4. Terminal connections shall be made using solid copper conductor. If stranded conductor is to be used, it must be terminated with a “spade” type lug. Stranded wire may not be directly landed on terminal blocks.

2.7 SOURCE QUALITY CONTROL

- A. The motor control centers shall be factory-tested in accordance with NEMA standards and ANSI C37.17, together with any additional tests which may be required to ensure that the wiring is correct and that all equipment is in a satisfactory operating condition.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Motor control center shall be assembled and installed in the location indicated on the drawings in conformance to applicable requirements of the NFPA 70, NECA Standard of Installation and manufacturer’s instructions for assembly, leveling and alignment.

- B. Tightening of Connections. All electrical connections secured with bolts or studs shall be tightened using a torque wrench or other tightening procedures recommended by the manufacturer for tightening bus joints, connector attachments, and contact attachments.
- C. All power and control circuits shall be connected to the motor control center as indicated on the drawings. The motor control center shall be grounded in conformance with the requirements of Section 16060 – Basic Electrical Materials and Methods.

3.2 FIELD QUALITY CONTROL

- A. Check phase-to-phase and phase-to-ground insulation for proper resistance levels. Check motor control center electrical circuits for continuity and for short circuits.
- B. Subsequent to wire and cable hookups, energize motor control centers and demonstrate functioning in accordance with requirements.
- C. All control devices including interlocks, indicating lights, control relays, timers, time delay relays, and push buttons shall be checked for correct operation.

END OF SECTION

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SECTION 16461

DRY TYPE TRANSFORMER

PART 1 GENERAL

1.1 SUMMARY

- A. Furnish and install single-phase and three-phase general purpose, individually mounted, dry-type transformers of the two-winding type, self-cooled, with ratings and voltages as indicated on the drawings.

1.2 RELATED SECTIONS

- A. Section 16060 – Basic Electrical Materials and Methods
- B. Section 16075 – Electrical Equipment Identification.

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. ANSI C57.96 – Guide for Loading Dry-Type Distribution and Power Transformers.
- B. UL 506 – Specialty Transformers
- C. ASTM D635 – Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position
- D. NEMA ICS 6 – Enclosures
- E. NEMA ST 1 - Specialty transformers
- F. NEMA ST 20 - Dry type transformers for general applications
- G. NEMA TP 1 - Guide for Determining Energy Efficiency for Distribution Transformers
- H. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems
- I. NFPA 70 - National Electrical Code

1.4 DESIGN REQUIREMENTS

- A. Transformers shall be designed, manufactured, and tested in accordance with the latest applicable ANSI, NEMA and IEEE standards. All 600-volt class transformers 2 kVA through 750 kVA shall be UL listed and bear the UL label.
- B. Transformers shall be designed for continuous operation at rated kVA for 24 hours a day, 365 days a year operation with normal life expectancy as defined in ANSI C57.96.
- C. Transformers shall be of the energy efficient type, meeting the requirements of NEMA TP 1.

1.5 CONTRACTOR SUBMITTALS

- A. In accordance with Division 1 requirements
- B. Product Data.
 - 1. Submit outline and support point dimensions of enclosure and accessories, unit weight, voltage, kVA, impedance rating, characteristics, insulation system type, rated temperature rise, winding configurations, terminations at primary and secondary connection points.
 - 2. Indicate application conditions and limitations of use stipulated by product testing agency specified under regulatory requirements. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of product.
 - 3. Report on all factory tests and results. Factory test data on a prototypical unit of identical size and features is not acceptable.
- C. Shop Drawings: Submit calculations and anchoring methods (anchor bolt size, embedment and assembly details) to meet California Seismic Zone IV requirements.
- D. Certification and Test Reports.
 - 1. Indicate loss data, efficiency at 25, 50, 75 and 100 percent rated load, and sound level.
 - 2. Manufacturer's Certificate. Certify that products meet or exceed specified requirements.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store, protect and handle products in accordance with NEMA standards.
- B. Deliver transformers individually wrapped for protection and mounted on shipping skids.
- C. Accept transformers on site and inspect for damage.
- D. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- E. Handle in accordance with manufacturer's written instructions. Lift only with lugs provided for the purpose. Handle carefully to avoid damage to transformer internal components, enclosure and finish.

PART 2 PRODUCT

2.1 MANUFACTURERS

- A. The transformers shall be as manufactured by one of the following manufacturers:
 - 1. General Electric Company
 - 2. Siemens
 - 3. Square D Company
 - 4. Cutler-Hammer/Eaton Corp.
 - 5. Approved equal

2.2 STANDARD DRY-TYPE TRANSFORMERS

- A. NEMA ST 20 Class AA dry-type transformer. Transformer shall be suitable for connection to 75 degrees C wire loaded to the 75 degrees C ampacity. All three-phase transformers shall have three-winding primaries and three-winding secondary.
- B. Insulation Systems
1. Transformers shall be insulated as follows:
 - a. 2-kVA and below - 150 degrees C insulation system
 - b. 3 through 30 kVA - 180 degrees C insulation system
 - c. 45-kVA and above - 220 degrees C insulation system.
 2. Required performance shall be obtained without exceeding the above indicated temperature rise in a 40 degrees C maximum ambient, with a 30 degrees C average over 24 hours.
 3. All insulation material shall be flame-retardant and shall not support combustion as defined in ASTM D635.
 4. Transformers 30 kVA through 225 kVA shall be 115 degrees C temperature rise above 40 degrees C ambient. 115 degrees C rise transformers shall be capable of carrying a 15 percent continuous overload without exceeding a 150 degrees C rise in a 40 degrees C ambient.
 5. Transformers rated 300 kVA through 500 kVA shall be 80 degrees C temperature rise above 40 degrees C ambient. 80 degrees C rise transformers shall be capable of carrying a 30 percent continuous overload without exceeding a 150 degrees C rise in a 40 degrees C ambient.
 6. Limit transformer surface temperature rise to maximum of 50 degrees C.
- C. Core and Coil Assemblies
1. The transformer core shall be constructed with high grade, non-aging, grain-oriented silicon steel with high magnetic permeability, and low hysteresis and eddy current losses. Maximum magnetic flux densities shall be substantially below the saturation point.
 2. The transformer core volume shall allow sufficient transformer operation at 10 percent above the highest tap voltage.
 3. The core laminations shall be tightly clamped and compressed.
 4. Coils shall be wound of electrical grade copper or aluminum with continuous wound construction, terminations brazed or welded.
 5. On units rated below 3 kVA, the core and coil assembly shall be completely encapsulated in a proportioned mixture of resin and aggregate to provide a moisture proof, shock resistant seal. The core and coil encapsulation system shall minimize the sound level.
 6. On units rated 3 kVA and above, the core and coil assembly shall be impregnated with non-hygroscopic, thermosetting varnish and cured to reduce hot spots and seal out moisture. The assembly shall be installed on vibration-absorbing pads.
- D. Taps
1. For transformers 25 kVA and larger, provide primary windings with 6 taps; two 2-1/2 percent increments above full-rated voltage and four 2-1/2 percent increments below full-rated voltage.
 2. For transformers below 25 kVA, provide two taps at 5 percent increments below full-rated voltage.
 3. For transformers below 1 kVA, no taps are required.
- E. Provide terminal enclosure with screw cover to accommodate primary and secondary coil wiring connections and electrical supply raceway terminal connector.

1. Provide terminal board with mechanical compression type connectors. Limit terminal compartment temperature to 75 degrees C when transformer is operating continuously at rated load with ambient temperature of 40 degrees C.
2. Provide wiring connections suitable for stranded copper wiring, rated 75 degrees C, and loaded to the 75 degrees C ampacity.

F. Basic Impulse Level

1. 10-kV for transformers less than 300-kVA
2. 30-kV for transformers 300-kVA and larger.

G. Grounding

1. Ground core and coil assembly to enclosure by means of a visible flexible copper-grounding strap. Provide grounding in accordance with Section 16060 – Basic Electrical Materials and Methods.

2.3 ENCLOSURE

- A. The enclosure shall be made of heavy gauge steel and shall be degreased, cleaned, primed, and finished with ANSI 61 color weather-resistant enamel. All transformers shall be equipped with a wiring compartment suitable for conduit entry and large enough to allow convenient wiring. The maximum temperature of the enclosure shall not exceed 90 degrees C. The core of the transformer shall be grounded to the enclosure.
- B. On units rated below 3 kVA, the enclosure construction shall be totally enclosed, non-ventilated, NEMA ICS 6, Type 3R with lifting eyes as required.
- C. On units rated 3 kVA and above, the enclosure construction shall be fully ventilated NEMA ICS 6, Type 3R or as indicated on drawings, with lifting lugs as required. All ventilation openings shall be protected against falling dirt and water.

2.4 NAMEPLATE

- A. Provide manufacturer nameplate that includes transformer connection data and overload capacity based on rated allowable temperature rise.
- B. Provide transformer nameplate in accordance with Section 16075 –Electrical Equipment Identification.

2.5 SOUND LEVELS

- A. Transformer sound levels shall not exceed the following:

1.	Up to 9-kVA	40 db
2.	10 to 50 kVA	45 db
3.	51 to 150 kVA	50 db
4.	151 to 300 kVA	55 db
5.	301 to 500 kVA	60 db
6.	501 to 700 kVA	62 db
7.	701 to 1000 kVA	64 db

2.6 SOURCE QUALITY CONTROL

- A. The following factory test results shall be provided for each transformer:
 1. Ratio tests at the rated voltage connection and at all tap connections
 2. Polarity and phase relation tests on the rated voltage
 3. Applied potential tests

4. Induced potential test
5. No-load and excitation current at rated voltage on the rated voltage connection.

PART 3 INSTALLATION

3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions
- B. Set transformer plumb and level
- C. Use liquid-tite flexible conduit, 2 feet minimum length, for connections to transformer case. Make conduit connections to side panel of enclosure.
- D. Where mounted on a structural flooring, mount transformers on vibration isolating pads (minimum 0.75-inch thick) suitable for isolating the transformer noise from the building structure.
- E. Provide seismic restraints and securely anchor to structural system.
- F. Provide grounding and bonding in accordance with Section 16060 – Basic Electrical Materials and Methods.

3.2 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS as outlined below:
 1. Dry Type Air-Cooled Transformers, 600 Volt and Below – All Single-Phase and Three-Phase.
 - a. Visual and Mechanical Inspections
 - 1) Compare equipment nameplate data with drawings and specifications.
 - 2) Inspect physical, electrical and mechanical condition.
 - 3) Verify that resilient mounts are free and that any shipping brackets have been removed.
 - 4) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 10.12.
 - b. Electrical Tests
 - 1) Perform resistance measurements through all bolted connections with a low-resistance ohmmeter.
 - 2) Perform insulation-resistance tests winding-to-winding and each winding-to-ground with test voltage in accordance with NETA ATS Table 10.5.
 - 3) Calculate polarization index.
 - 4) Perform turns ratio tests at all tap positions.
 - 5) Verify that as-left tap connections are as specified.
 - c. Test Values
 - 1) Compare bolted connection resistances to values of similar connections.
 - 2) Bolt-torque levels should be in accordance with NETA ATS Table 10.12 unless otherwise specified by manufacturer.
 - 3) Microhm or millivolt drop values shall not exceed the high levels of the normal range as indicated in the manufacturer's published data. If manufacturer's data is not available, investigate any

- values that deviate from similar connections by more than 50 percent of the lowest value.
- 4) Insulation-resistance test values at one minute should not be less than the values calculated in accordance with the formula in NETA ATS Table 10.5. Results shall be temperature corrected in accordance with NETA ATS Table 10.14.
 - 5) The polarization index shall be greater than 1.0 and shall be recorded for future reference.
 - 6) Turns-ratio test results should not deviate more than one-half percent from either the adjacent coils or the calculated ratio.
2. Dry Type Air-Cooled Transformer, Above 600 Volt and 600 Volt and below – Greater than 167 kVA Single-Phase and 500 kVA Three-Phase. The following tests shall be in addition to those listed in above.
- a. Visual and Mechanical Inspection
 - 1) Verify that control and alarm settings on temperature indicators are as specified.
 - 2) Verify that cooling fans operate and that fan motors have correct overcurrent protection.
 - 3) Perform specific inspections and mechanical tests as recommended by manufacturer.
 - 4) Verify that the core, frame, and enclosure groundings are correct.
 - 5) Verify the presence of transformer surge arresters.
 - b. Electrical Tests
 - 1) Perform power-factor or dissipation-factor tests in accordance with the test equipment manufacturer's published data.
 - 2) Perform an excitation-current test on each phase.
 - 3) Measure the resistance of each winding at each tap connection.
 - 4) Measure core insulation resistance at 500 volts dc if core is insulated and if the core ground strap is removable.
 - 5) Perform an overpotential test on all high- and low-voltage windings-to-ground.
 - 6) Verify correct secondary voltage phase-to-phase and phase-to-neutral after energization and prior to loading.
 - c. Test Values
 - 1) CH and CL dissipation-factor/power-factor values will vary due to support insulators and bus work utilized on dry transformers. The following is expected on CHL power factors:
 - a) Power Transformers: one percent or less
 - b) Distribution Transformers: three percent or less
 - 2) Consult transformer manufacturer or test equipment manufacturer's data for additional information.
 - 3) Winding resistance test results, after factoring in temperature corrections, should compare within one percent of factory obtained results except in instances of extremely low resistance values.
 - 4) Typical excitation current test data pattern for a three-legged core transformer is two similar current readings and one lower current reading.
 - 5) Core insulation resistance values should be comparable to factory obtained results but not less than one megohm at 500 volts dc.
 - 6) AC overpotential test shall not exceed 75 percent of factory test voltage for one-minute duration. DC overpotential test shall not exceed 100 percent of the factory RMS test voltage for one-

minute duration. The insulation shall withstand the overpotential test voltage applied.

- B. Energize primary circuit at rated voltage and frequency from normal power source and test transformer, including, but not limited to, audible sound levels, to demonstrate capability and compliance with requirements. Where possible, correct malfunctioning units at the site, then retest to demonstrate compliance otherwise, remove and replace with new units and proceed with re-testing.

3.3 ADJUSTING

- A. Measure primary and secondary voltages and make appropriate tap adjustments. Record final voltages and submit test report.

END OF SECTION

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SECTION 16500

INTERIOR AND EXTERIOR LIGHTING

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes interior and exterior luminaires, lamps, ballasts, and accessories.

1.2 REFERENCES

- A. ANSI C78.379 Electric Lamps Classification of the Beam Patterns of Reflector Lamps.
- B. ANSI/NFPA 101 - Life Safety Code.
- C. IEC/EN 60669-2-1 Switches for household and similar fixed electrical installations - electronic switches.
- D. IWSNA LM-79 – Electrical and Photometric Measurements of Solid State Lighting Products.
- E. IESNA LM-80 – Measuring Lumen Maintenance of LED Light Sources.
- F. National Electrical Manufacturer's Association (NEMA) SSL-1 – Electronic Drivers for LED Devices, Arrays, or Systems.
- G. Underwriters Laboratories, Inc. (UL) 8750 – Light Emitting Diode (LED) Light Sources for Use in Lighting Products
- H. NFPA 70 – National Electrical Code.
- I. UL 924 – Emergency Lighting and Power Equipment.
- J. UL 935 – Lamp Ballasts.

1.3 SUBMITTALS

- A. In accordance with Division 1 requirements.
- B. Product Data: Submit dimensions, ratings, photometry and performance data.
 - 1. Light fixtures.
 - 2. Lamps.
 - 3. Ballasts.

1.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three (3) years' experience.

1.5 WARRANTY

- A. Fixtures and ballasts shall have a minimum five year warranty.

PART 2 PRODUCTS

2.1 LIGHT FIXTURES – GENERAL

- A. Provide lighting fixtures, lamps, ballasts and accessories complete and ready for operation. Furnish the fixtures as indicated on the Drawings and as listed in the fixture schedule. Verify in all cases, the quantity and quantity of fixtures necessary to achieve the indicated results.
- B. All lighting fixtures shall have published photometric tests conducted by Electrical Testing Laboratories. Make available the test results upon request. Testing shall include candlepower distribution curves, total fixture efficiency, brightness and shielding angles in longitudinal and transverse directions.
- C. Provide lighting fixtures in the finishes and colors as noted on the Drawings.
- D. Provide the UL and IBEW labels on all lighting fixtures.
- E. Observe the requirements of the CBC Section 2606 regarding plastic lighting diffusers. Fixtures and auxiliary equipment mounted against combustible material shall be approved for such installation.
 - 1. Make-up fixtures with Type AF or equal fixture wire. Provide an identified, approved landing lug for equipment ground wires.

2.2 LED LIGHT FIXTURES

- A. General
 - 1. LED light fixtures shall be in accordance with IES, NFPA, UL, as shown on the drawings, and as specified.
 - 2. LED light fixtures shall be a factory assembled luminaire including all required driver and light engine modules integral to and within a single housing. Lead lengths between driver and light engine shall not exceed 3 feet. Remote luminaire/driver installations are not acceptable.
 - 3. LED light fixtures shall be Reduction of Hazardous Substances (RoHS) compliant.
- B. LED Driver Modules
 - 1. Description: Universal voltage switching-mode LED driver module with a rated lifetime of not less than 50,000 hours when operated at an ambient temperature of less than 60-degrees C.
 - 2. LED drivers shall include native 0-10V dimming capabilities without additional control devices or field-installed circuitry, integral short-circuit, open-circuit and overload fault protection to prevent driver failure.
 - 3. LED drivers shall be capable of producing adequate output current to produce the specified light levels. Compatibility of driver and LED light engine must be tested and ensured by driver manufacturer.
 - 4. Minimum efficiency: 85% at full load.
 - 5. Minimum Operating Ambient Temperature: -20° C (-4° F).
 - 6. Input Voltage: 120V to 277V (±10%) AC at 60Hz. Drivers that require DC input shall include an integral converter that accepts standard line voltage AC.
 - 7. Power Factor: ≥ 0.95.
 - 8. Total Harmonic Distortion: ≤ 20% and meet ANSI C82.11 maximum allowable THD requirements
 - 9. Designed and tested to withstand electrostatic discharges up to 15,000 V without impairment per IEC 801-2.

10. Electrolytic capacitors to operate at least 20 degrees C below the capacitor's maximum temperature rating when the driver is under fully-loaded conditions and case temperature is 62 degrees C.
11. Maximum inrush current of 2 amperes for 120-Volt and 277-Volt drivers.
12. Withstand up to a 4,000 volt surge without impairment of performance as defined by ANSI C62.41 Category A.
13. Inaudible in a 27 dBA ambient.

- C. LED Light Engine Modules
1. Minimum CRI: 80.
 2. Color Temperature: 3500K, unless otherwise noted.
 3. Minimum Rated Life: 50,000 hours as per LM79.

2.3 EXIT LIGHT

- A. Provide exit lights and signs to meet the requirements of UL 924 with 90-minute internal battery backup.

2.4 LIGHTING CONTROL

- A. Lighting control panels with time clock and relays.
1. Manufacturer: Wattstopper or approved alternate.
 2. Provide panel to meet requirements of UL 916 or UL 508.
- B. Photocells
1. Provide photocell suitable for use with lighting control panel and other installed system components.
 2. Provide photocell to meet the requirements of UL 773.
- C. Occupancy Sensors
1. Wall or ceiling mounted infrared or ultrasonic (or combination) occupancy sensor with UL 916 or UL 508 listing.
- D. Dimmer Switches
1. Wall mounted electronic type dimmer switches to match the LED type fixtures.

PART 3 EXECUTION

3.1 GENERAL

- A. Install fixtures in straight, true lines and without visible gaps between fixtures and building surfaces and between fixtures in continuous rows. For linear wall mounted fixtures, ensure that the wall surface is finished flat, straight, and free of imperfections prior to mounting the fixtures. Replace or repair lighting fixture installations that are out of plumb or that have obvious gaps or misalignment.
- B. Provide fixtures with the appropriate trim frames, flanges, canopies, and finish accessories to accommodate the ceiling conditions. Prior to ordering fixtures, and throughout the Project, verify the exact ceiling types, finishes, and thicknesses and coordinate the fixture installation therewith.
- C. Refer to the Drawings, particularly the architectural elevations and reflected ceiling plans, in determining the exact mounting location and height of lighting fixtures. For wall mounted or suspended fixtures that do not have the mounting heights clearly indicated, contact the Owner for clarification prior to ordering pendants and installing the fixtures.

- D. Following installation of HID and fluorescent lighting fixtures, and prior to completion of the Project, perform a burn in test of the lights. The burn in test shall consist of operating the fixtures continuously for a minimum of forty-eight (48) hours. Replace lamps that are inoperative or that show signs of flicker or color wander. If building power is not available for the burn in test, then provide a portable generator, fuel, and temporary connections for the stipulated period.
- E. Provide final touchup painting to repair fixture finishes which are nicked or marred during installation. Obtain the paint from the fixture manufacturer.

3.2 AUDIBILITY

- A. Fixtures shall be free from any undesirable hum, vibration, or noise. Provide lighting equipment suitable for the intended ambient sound levels. Where necessary to meet these criteria, provide additional means of sound deadening, whether or not specifically indicated. Fixtures that are found to be unsatisfactory in the opinion of the Owner shall be removed and replaced at the Contractor's expense.

3.3 SUPPORTS AND BLOCKING

- A. Provide hangers, suspension cables, and blocking for lighting fixtures that will provide support independent of suspended ceilings, ceiling or wall surfaces, and electrical outlet boxes. Exception: Fixtures less than 12 inches in all dimensions and weighing less than six pounds may be permitted to be supported from the electrical outlet box if the box itself is independently supported by blocking or hangars.
- B. Refer to the Drawings for specific blocking details and seismic mounting details for lighting fixtures.

3.4 OBSTRUCTIONS

- A. Verify throughout the Project that mounting locations and suspension systems remain free of obstructions. Suspended or pendant mounted fixtures must be free to swing 45 degrees in all directions without hitting obstructions or other fixtures. Provide seismic rated swivel ball hangars for pendant mounted lighting fixtures to achieve the proper swing.

3.5 GROUNDING AND BONDING

- A. Ground and bond interior luminaries under the provisions of Section 16060.

3.6 FIELD QUALITY CONTROL

- A. Install complete lighting system and connect control devices to meet the requirements of local, state and federal energy codes.
- B. Operate each luminaire after installation and connection.
- C. Inspect for proper connection and operation.

3.7 ADJUSTING AND CLEANING

- A. Aim and adjust luminaries as directed.
- B. Remove dirt and debris from enclosures.

- C. Clean photometric control surfaces as recommended by manufacturer
- D. Clean finishes and touch up damage

3.8 PROTECTION OF FINISHED WORK

- A. Relamp luminaries that have failed lamps at substantial completion.

END OF SECTION

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SECTION 16640
CATHODIC PROTECTION SYSTEM

PART 1 GENERAL

1.1 SUMMARY

- A. The Work of this Section includes providing all engineering services, materials, equipment and labor, and all accessories required for a complete operable system, including testing the system after installation, for the installation of an automatically controlled impressed current cathodic protection system to provide corrosion control for the interior submerged surface of a 2.0 million gallon welded steel water tank (103-foot inside diameter x 33-foot high overflow depth). All work furnished shall be in accordance with A.W.W.A. Standard D104-14, ANSI/NSF 61 and features included in this specification.
- B. The Work requires that one Supplier or Subcontractor accept responsibility for the Work as indicated but without altering or modifying the Contractor's responsibilities under the Contract Documents.
- C. Related Sections:
 - 1. Section 09910 – Tank Painting
 - 2. Section 13210 – Welded Steel Tank and Appurtenances

1.2 QUALITY ASSURANCE

- A. All engineering services shall be provided by a Corrosion Specialist who is accredited by the National Association of Corrosion Engineers International as a Senior Corrosion Technologist, Corrosion Specialist or Cathodic Protection Specialist. The system shall be designed by a Corrosion Specialist with experience in cathodic protection for water storage tanks.

1.3 DESIGN REQUIREMENTS

- A. The Corrosion Specialist shall design the system to provide effective corrosion control in accordance with criteria for protection. The criteria for protection shall be based on a tank-to-water potential, IR drop free, within a range of -0.850 volts to 1.50 volts relative to a stationary copper-copper sulfate reference electrode. This potential shall be measured free of the effect of voltage gradients (IR drop).
- B. The Corrosion Specialist shall also base system capacity and performance on:
 - 1. Total submerged surface area of the tank.
 - 2. Type of coating and condition of coating.
 - 3. Total bare surface area to be protected will be a minimum of 20% of total surface area.
 - 4. Minimum current density of 0.5 MA/ft.2 bare surface area.
 - 5. Chemical analysis of water including resistivity expressed in ohm-cm.
 - 6. Susceptibility of tank to icing conditions.
 - 7. Minimum anode design life of twenty (20) years.
 - 8. Selection dimensions, and layout of system components specified in Part 2of this specification.

1.4 SUBMITTALS

- A. General
 - 1. Make all submittals and resubmittals in strict accordance with the provisions of Section 01300.
 - 2. Make all submittals listed in Part 1.03-B, and any others required to fully describe what is to be furnished and/or installed under this Section.
- B. Required Submittals:
 - 1. Drawings showing system design/configuration.
 - 2. Description of system components.
 - 3. Copy of ANSI/NSF 61 classification for all system components located within the tank.
 - 4. Design calculations for required voltage, amperage & life expectancy.
 - 5. As-built drawings
 - 6. Maintenance manual

1.5 WARRANTY

- A. All workmanship, equipment, and materials furnished by the Subcontractor shall be guaranteed for one (1) year from Substantial Completion.

PART 2 PRODUCTS

2.1 RECTIFIER

- A. The rectifier unit shall perform in accordance with ANSI/AWWA Standard D104-14 IR Drop Free control standards and shall include:
 - 1. Transformer
 - 2. Silicon rectifying elements
 - 3. Circuit breaker(s)
 - 4. Lightning, surge, and overload protection
 - 5. Provision for air-cooling operation
 - 6. Digital voltmeter(s), ammeter(s) and potential meter(s)
 - 7. Weatherproof cabinet in accordance with NEMA 4 requirements
 - 8. Provision to vary current output from 0% to 100% of rated capacity
 - 9. Provisions for mounting, grounding, and locking
 - 10. Provision for 110-120 volt, 60 Hz, single phase A.C. power.
 - 11. D.C. output capacity in volts and amperes in accordance with the Design Requirements in Part 1
 - 12. Number of circuits in accordance with the Design Requirements in Part 1
 - 13. Automatic controller shall adjust current output to compensate for changes in water level, temperature of water, water chemistry, and cathodic polarization, and shall include the following provisions:
 - a. Utilize long-life reference electrode(s) installed within the tank
 - b. Monitor the tank-to-water potential, free of IR drop
 - c. Automatically adjust the tank-to-water potential, free of IR drop, to a preset value
 - d. Operate within 5MV of preset value
 - e. Limit current to a preset value
 - f. Utilize digital potential meter(s) to display tank-to-water potential, free of IR drop
 - 14. Remote monitoring unit (RMU) terminal hook-up for SCADA

2.2 LONG LIFE REFERENCE ELECTRODE(S)

- A. The permanent reference electrode shall consist of a copper-copper sulfate electrode which is manufactured to remain stable (plus or minus 10MV) for minimum of fifteen (15) years.
- B. The reference electrode to lead wire connection shall be encapsulated to prevent water migration with not less than AWG NO. 14 HMW-PE lead wire.
- C. The control reference electrode shall be positioned within the tank to provide the most representative measurements for the submerged surface area(s).

2.3 VERTICAL ANODE SUSPENSION SYSTEM

- A. The anode suspension system shall be in accordance with ANSI/AWWA Standard D104, Section 4.2.4.2.2 Type C, Vertical System.
- B. The anode lead wire for vertical suspension shall be attached to a porcelain insulator bracket bolted to the interior of the tank roof.
- C. Handhole assemblies used for the installation of vertical anode suspension systems from the roof of the tank shall consist of a 6" diameter plated steel cover, rubber gasket, and PVC clamping bar with a stainless steel bolt assembly for each 5" diameter access opening.

2.4 ANODE MATERIALS

- A. The anode materials shall be selected in accordance with the Design Requirements in Part 1 and shall consist of minimum .062" diameter titanium with a mixed metal oxide coating.

2.5 WIRING

- A. All wiring within the tank shall be insulated to prevent copper conductor to water contact. Anode lead and power feed wire to be AWG #10 HMW-PE.
- B. All wiring on the exterior of the tank shall be insulated and run in rigid galvanized conduit.

2.6 HARDWARE

- A. All hardware used in conjunction with the system shall be protected against corrosion.

2.7 ANSI/NSF 61

- A. All materials in contact with the water or exposed to the interior of the tank shall be classified in accordance with ANSI/NSF 61 "Drinking Water System Components". This requirement shall be met under testing conducted by a product certification organization accredited for this purpose by the American National Standards Institute. Contractor shall submit copy of company registration and materials certificate to the project engineer verifying ANSI/NSF 61 system components classification per California State Citation CCR Title 22 64590 / 64591.

PART 3 EXECUTION

3.1 QUALIFICATIONS

- A. The Supplier or Subcontractor shall have a minimum of five (5) years experience installing and servicing the types of systems described in this specification. The system shall be installed by personnel specifically trained to provide all workmanship required for corrosion control performance.
- B. All personnel shall be subject to Federal Substance Abuse and Testing Regulations.

3.2 PERFORMANCE

- A. All work shall be in accordance with the following requirements:
 - 1. Components of the cathodic protection system shall be installed in the manner and at the locations as shown on the design drawings prepared by the Corrosion Specialist.
 - 2. Welding, cutting, and coating shall be in accordance w/AWWA Standards D100, D102 & D105
 - 3. Welding of rectifier hardware shall be performed by the prime contractor prior to coating the tank. The cutting of 5" diameter access openings for vertical anode suspension shall be performed by the prime contractor prior to coating. The Subcontractor shall furnish drawings and materials to the prime contractor prior to coating.
 - 4. Verification of electrical continuity of all sections of bolted or riveted tanks shall be the responsibility of the purchaser of the cathodic protection system.
 - 5. Materials and equipment shall be inspected prior to installation. Any defective component shall be repaired or replaced.
 - 6. Electrical work shall be in accordance with the National Electrical Code.
 - 7. Lead wires shall be installed to prevent damage from abrasion.
 - 8. Electrical connections within the tank shall be sealed to prevent water migration.
 - 9. The rectifier shall be mounted at a convenient height (eye level) above grade for monitoring and service purposes.
 - 10. A.C. power to the rectifier shall be furnished by the purchaser.
 - 11. Disinfection of the tank shall be the responsibility of the purchaser.
 - 12. Work provided by the constructor shall be completed in a clean and safe manner.

3.3 ENERGIZING THE SYSTEM

- A. After the system is installed and the tank is filled, the Subcontractor shall provide start-up service which includes energizing, testing, and adjusting the system for optimum performance of the cathodic protection system. This start-up service shall be in performed in accordance with ANSI/AWWA D104 Section 5.2 Testing.
- B. This start-up service shall be coordinated with the Owner or his representative.
- C. All tank-to-water potential measurements shall be conducted with a calibrated portable copper-copper sulfate reference electrode and a portable high impedance voltmeter. A minimum of five (5) locations shall be measured.
- D. All test data shall be reviewed and evaluated by the Corrosion Specialist. The final test and adjustment of the system shall be conducted approximately twelve (12) months after the start-up service.

3.4 MONITORING

- A. The Subcontractor shall furnish self-addressed report cards to be completed by the owner.
- B. Report cards received by the Subcontractor during the guarantee and service period(s) shall be evaluated for system performance.

3.5 SERVICE AGREEMENT

- A. At the conclusion of the warranty period, the Subcontractor shall furnish a service agreement to the owner for the type of system installed. The agreement shall include the annual service rate and a complete description of the scope of work proposed.
- B. The agreement for annual inspection and potential testing shall be in accordance with AWWA D104, Appendix C and include as a minimum:
 - 1. One (1) annual job site visit.
 - 2. Tank-to-water potential measurements conducted at representative locations within the tank. A minimum of five (5) locations shall be measured.
 - 3. Measurements shall be conducted with a portable high impedance voltmeter and a calibrated copper-copper sulfate reference electrode.
 - 4. Adjustments for optimum corrosion control shall be in accordance with criteria for protection.
 - 5. Data recorded shall provide sufficient information to evaluate the performance for the system relating to criteria for protection.
 - 6. In the event additional work is required, the constructor shall submit a report with recommendations for optimizing corrosion control.

END OF SECTION

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Date: January 30, 2015

To: City Manager for Council Action

From: Human Resources Division Manager

Subject: Compromise and Release for Workers' Compensation Claim (Claim #30130351038-0001) – Mr. Philip Martin, Fire Captain

EXECUTIVE SUMMARY:

Mr. Martin filed a cumulative trauma claim covering a period of employment through February 7, 2013.

The City's Workers' Compensation legal counsel recommends approval of the proposed Compromise and Release (C&R) agreement to settle this claim in the amount of \$27,500.00. Future medical is needed.

The C&R covers any and all benefits claimed by applicant either on the basis of specific or cumulative injury.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow settlement of this claim when final approval has been obtained from the Workers' Compensation Appeals Board. Once settled, the cost of administering the claim is virtually eliminated except for future medical costs.

ECONOMIC/FISCAL IMPACT:

Mr. Martin's claim is being settled by Compromise and Release in the amount of \$27,500.00 less \$4,125.00 in attorney fees. Once settled, the cost of administering the claim is virtually eliminated except for future medical costs.

Compromise and Release
Mr. Philip Martin, Fire Captain
January 30, 2015
Page 2

RECOMMENDATION:

That the Council approve the Compromise and Release, as recommended by the City's Workers' Compensation legal counsel, to settle the claim for the injury Mr. Philip Martin sustained cumulatively through February 7, 2013.



Greg Harris
Human Resources Division Manager

APPROVAL RECOMMENDED:



Elizabeth C. Brown
Director of Human Resources

APPROVED as to Form:



Richard E. Nosky, Jr.
City Attorney

APPROVED:



Julio J. Puentes
City Manager

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7A.3

City of Santa Clara, California



Date: January 30, 2015

To: City Manager for Council Action

From: Human Resources Division Manager

Subject: Stipulations with Request for Award for Workers' Compensation Claim
(Claim #30120972968-0001) – Charles Collins, Police Officer

EXECUTIVE SUMMARY:

Mr. Charles Collins filed a cumulative trauma claim covering a period of employment through September 11, 2012.

This settlement represents Stipulations with Request for Award for this injury, which resolved with 83% permanent disability. Future medical treatment is needed.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow settlement of this claim when final approval has been obtained from the WCAB. Once settled, the cost of administering the claim is virtually eliminated except for future medical costs and life pension.

ECONOMIC/FISCAL IMPACT:

Mr. Collins' claim is being settled with a permanent disability rating of 83%, which is payable in the amount of \$198,760.98 less \$29,814 in attorney fees and previous permanent disability payments (permanent disability benefits advanced to date total \$23,690.00). Mr. Collins will also receive a life pension of \$177.81 per week once the permanent disability has been paid in full. The City will be responsible for any future medical expenses he may have as a result of this injury.

City Manager for Council Action
Subject: Mr. Charles Collins, Police Officer
January 30, 2015
Page 2

RECOMMENDATION:

That the Council approve these Stipulations with Request for Award, based on the recommendation of the City's Workers' Compensation legal counsel, to settle the claim for the injury Mr. Charles Collins sustained cumulatively through September 11, 2012.



Greg Harris
Human Resources Division Manager

APPROVAL RECOMMENDED:



Elizabeth C. Brown
Director of Human Resources

APPROVED as to form:



Richard E. Nosky Jr.
City Attorney

APPROVED:



Julio J. Fuentes
City Manager

Documents Related to this Report:

1) *None*

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7A.4



City of Santa Clara, California



Date: February 10, 2015

To: City Manager for Council Action

From: Chief of Police

Subject: Approval to Accept a Gift to the City of a Utility Trailer from K&L Supply Company and Authorize Transmission of a Letter of Appreciation

EXECUTIVE SUMMARY:

K&L Supply Co. has offered to donate a utility trailer to the Santa Clara Police Department's Homeland Security/Special Events Unit. This trailer is a prototype all-terrain trailer designed to be towed by all-terrain vehicles (ATV's) such as the Kawasaki ATV's currently used by SCPD officers around Levi's stadium. This trailer would be very valuable to our officers working special events at the stadium. The trailer would be used to transport equipment including traffic cones and barricades. This trailer would make traffic control officers' jobs easier and more efficient. It would also reduce work hours and payroll costs for special events at the stadium.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Acceptance of this donation will provide one all-terrain utility trailer for the use by the Police Department's Homeland Security/Special Events unit. At the present time, the Police Department does not have a utility trailer that can be used with our ATV's. By accepting this donation, the Police Department will increase the effectiveness of its officers.

ECONOMIC/FISCAL IMPACT:

There would be a minimal cost of registering the trailer with the DMV and possible future maintenance costs that will be the responsibility of the Police Department.

RECOMMENDATION:

That the Council:

1. Accept a gift to the City of a utility trailer from K&L Supply Co., for use by the Santa Clara Police Department; and
2. Authorize the transmission of a letter of appreciation to Mr. KC Cho and the K&L Supply Co.


Michael J. Sellers
Chief of Police

APPROVED:


Julio J. Fuentes
City Manager



Date: January 20, 2015

To: City Council for Action

From: Mayor Jamie L. Matthews

Subject: Appointments to Remaining City Council Committees for 2015 Calendar Year

EXECUTIVE SUMMARY:

At the January 13, 2015 City Council meeting, the City Council Committees List for 2015 calendar year was approved with four committees remaining with vacancies to be filled for Alternates. The following Council Members will serve as Alternates on these four committees:

1. Architectural Committee – Council Member Caserta
2. Santa Clara Sister Cities Association – Mayor Matthews
3. San Jose/Santa Clara Clean Water Financing Authority – Council Member Caserta
4. Silicon Valley Animal Control Authority – Council Member Marsalli

In addition, the following changes are proposed for the Committee List:

Change:

- o Modesto-Santa Clara-Redding Energy Authority (MSR EA): Under Staff Members, replace City Manager with Assistant City Manager/Chief Operating Officer-Utilities
- o Modesto-Santa Clara-Redding Public Power Agency (MSR): Under Staff Members, replace City Manager with Assistant City Manager/Chief Operating Officer-Utilities
- o Northern California Power Agency (NCPA): Under Staff Members, replace City Manager with Assistant City Manager/Chief Operating Officer-Utilities
- o Various Committees: change of dates, times, locations, and/or contact information

ADVANTAGES AND DISADVANTAGES OF ISSUE:

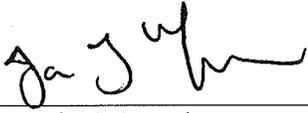
Approval of the suggested appointments would ensure Santa Clara’s representation at the various Council Committees.

ECONOMIC/FISCAL IMPACT:

There is no cost to the City other than administrative staff time and expense.

RECOMMENDATION:

That the Council approve the appointments and changes to the updated City Council Committees List for the 2015 calendar year.



Jamie L. Matthews
Mayor

Documents Related to this Report:

- 1) 2015 City Council Committee List***

CITY OF SANTA CLARA
Council Committee List/Agency Memberships

CITY COMMITTEES (City staff responsible for preparing and posting the agendas for the meetings).

1. Americans with Disabilities Act Committee (ADA):

Date: Meets on the second Thursday in March, June, September and December

Time: 10:00 am to 12:00 pm

Location: Council Chambers

Council Member: Davis (Chair)

Staff Member: Director of Public Works

Established on September 29, 1992, to review accessibility issues, the Committee includes individuals and representatives from community organizations such as VIA Rehabilitation, Self Help for Hard of Hearing People, and the Adult Independence Development Center.

2. Architectural Committee:

Date: Meets on scheduled Wednesdays, 16 meetings per year

Time: 6:00 pm

Location: Council Chambers

Council Member: O'Neill Alternate: Caserta

Staff Member: Associate Planner or Assistant Planner

Originally established in 1960 and reinstated as a Council Committee on January 21, 1986, the Committee, which includes two appointed members of the Planning Commission, reviews new development projects to encourage orderly and harmonious appearance of structures and property, maintains property and improvement values, and encourages the physical development as intended by the General Plan.

3. Audit Committee:

Date: Meets on call

Time: Usually at 5:00 pm or 5:30 pm or during business hours

Location: City Hall

Council Members: Kolstad (Chair), Caserta, Marsalli

Staff Members: City Manager, Director of Finance, City Auditor

Reviews the annual independent audit, Comprehensive Annual Financial Report and City Auditor's Annual Report. Meetings are attended with independent auditor.

4. Bicycle Pedestrian Advisory Committee (BPAC):

Date: Meets on the third Wednesday of January, March, June, August and October

Time: 4:00 pm

Location: Inspection Division Conference Room, City Hall

Council Member: O'Neill (Chair) Alternate: Gillmor

Staff Members: Director of Public Works, Traffic Engineer, Police Department Traffic Sergeant

Originally established on May 14, 1991, the Committee was established to explore developing safe bicycle lanes and routes on City streets. The Committee name and duties was revised in March 25, 2014 to include pedestrian aspects and to also provide input on non-engineering activities to increase pedestrian and bicycle usage in the City.

5. Child Care and Preschool Committee:

Date: Meets on call

Time: Usually 5:30 pm

Location: East Wing Staff Conference Room, City Hall

Council Members: Gillmor (Chair), Davis, O'Neill

Staff Members: City Manager, Director of Parks and Recreation

Reviews current issues, trends and regulations relating to child care locally, statewide and nationally. Discusses ways of improving child care within the City.

6. Consolidation Options for City Board & Commissions Ad Hoc Committee: INACTIVE

Date: Meets

Time: To be determined

Location: Council Conference Room

Council Members: Davis, O'Neill, VACANT,

Staff Members: Executive Assistant to the City Manager

Established by Council on March 12, 2013 to review the process and details associated with the impacts of maintaining Commissions and also the opportunities for community involvement in municipal government through volunteering on a Commission.

7. Council Goal Setting Committee:

Date: Meets every two years, or when needed

Location: City Hall

Council Members: Mayor Matthews, Davis, Gillmor

Staff Member: City Manager

Established to develop a Goal Setting Program to identify overarching goals and action goals for a two-year period.

8. Council Officers and Elected Full-Time Employees Performance/Salary Review Committee:

Date: Meets on call

Location: Usually in the East Wing Staff Conference Room, City Hall

Council Members: Mayor Matthews (Chair), Gillmor, Kolstad

Staff Members: City Manager, Director of Human Resources

Established in 1990, the Committee meets when needed to review the salaries/performance of the appointed positions of City Manager, City Attorney, and City Auditor and the elected full-time positions of City Clerk and Chief of Police. All other performance/salary reviews are conducted by the City Manager per the City Charter.

9. Downtown Revitalization Plan Committee:

Date: Meets as needed
Location: City Hall
Council Members: Davis, Marsalli, Mayor Matthews Alternate: Caserta
Staff Members: City Manager, Director of Planning and Inspection, Economic Development Officer

Established in 2010, the Committee meets when needed to review the current Downtown revitalization plan and to evaluate whether to re-confirm the existing conceptual plan or to re-visit the plan to explore alternative approaches.

10. Economic Development Committee:

Date: Meets quarterly
Time: Usually at 5:30 pm
Location: Council Conference Room, City Hall
Council Members: Gillmor (Chair), Kolstad, Caserta
Staff Members: City Manager, Assistant City Manager, Economic Development Officer, Director of Planning and Inspection, Director of Electric Utility, Director of Finance, Chamber of Commerce – Steve Van Dorn – President and CEO of the Santa Clara Chamber of Commerce and Convention-Visitors Bureau

The Economic Development Committee, formerly the Mission City 21 Committee, was originally established in October, 1995. As part of the City Council goals for 2011-2013, the Council renamed the committee and placed renewed emphasis on proactive economic development.

11. Ethics Committee:

Date: Meets on call
Location: City Hall
Council Members: Davis (Chair), O'Neill, Caserta, Alternate: Marsalli
Staff Members: City Manager, Assistant City Manager, City Attorney, City Clerk, Chief of Police, Fire Chief
Ethics Advisor: Dr. Tom Shanks

Consolidated Campaign Finance Reform Committee and Ethics Ordinance Committee by Council action on January 11, 2005. The Committee goal is to further implement the City's Ethics & Values program and guide the Ethics program to the next level.

12. Facilities Naming and Honorary Recognition Ad Hoc Committee:

Date: Meets on call
Location: City Hall
Council Members: Gillmor (Chair), Davis, Marsalli Alternate: O'Neill
Staff Member: City Manager

Established May 6, 2003, as the result of the Council Goal Setting Program for 2003-05, to develop policies for naming of City facilities and recognition criteria for conferring honorary titles/recognition.

13. Housing Rehabilitation Loan Committee (NCIP):

Date: Meets quarterly on the second Thursday of February, April, July and October

Time: 8:00 am

Location: Housing & Community Services Division Office, 1500 Civic Center Drive, Santa Clara

Council Member: O'Neill (Chair)

Staff Member: Housing and Community Services Division Manager

Established to review requests for services from eligible residents using funds from the Neighborhood Conservation and Improvement Program. The Committee includes one Council Member and three at-large representatives from the community.

14. Marketing Committee:

Date: Meets on the third Wednesday of every month

Time: 4:00 pm

Location: City Main Library, Edinger Room

Council Member: Davis (Chair), Gillmor, O'Neill

Staff Member: City Manager, Assistant City Manager

Establish a new committee to review ongoing marketing efforts and consider additional methods of promoting the City.

15. Neighborhood Enhancement Committee:

Date: Meets as needed

Location: Usually in the Council Conference Room, City Hall

Council Members: Gillmor (Chair), Davis, O'Neill

Staff members: City Manager, Assistant City Manager, Director of Planning and Inspection, Chief of Police

Established in 1999 to identify and evaluate both residential and non-residential neighborhoods and implement measures for enhancement of these areas. "Neighborhood Connections" theme implemented. Fairway Glen and Scott Lane School neighborhoods participated in programs, as well as Haman Elementary School and the Habitat for Humanity homes; Observance of "One Day Pay - National Day of Voluntary Service".

16. Police Activities League (PAL):

Date: Meets second Wednesday of every month

Time: 7:00 pm

Location: Police Department Community Room, 601 El Camino Real, Santa Clara

Council Members: Gillmor Alternate: Marsalli

Staff Members: PAL Executive Director, Chief of Police

Founded and incorporated in 1970 as a nonprofit organization to provide a place where the youth of the City may enjoy educational and social benefits and athletic activities under competent supervision. The organization is managed by a board of directors comprised of volunteers.

17. Santa Clara Sister Cities Association:

Date: Meets second Wednesday of every month

Time: 7:00 pm

Location: Headen Inman House for Board Meetings

Council Member: Davis Alternate: Matthews

Staff Member: Public Communications Manager

The Santa Clara Sister Cities Association, an independent non-profit organization, assists the City in exchange activities with Coimbra, Portugal and Izumo, Japan -- Santa Clara's two sister-cities. The Council appoints a representative to serve as liaison to the Association.

18. Santa Clara University Liaison/Neighborhood-University Relations Committee (NURC):

Date: Meets three times annually on Monday evenings during the academic year

Time: 7:00 pm

Location: City Hall Council Chambers

Council Member: Gillmor (Chair), Davis, O'Neill

Staff Members: City Manager, Director of Planning and Inspection, Code Enforcement Technician, Chief of Police

Established in 1990 to review student housing issues (formerly Student Housing Committee). Established a forum for on-going communication and problem solving among City officials, neighborhoods, property owners and Santa Clara University officials and students. Santa Clara University/City Liaison Committee and NURC were combined because of the similar topics that the two committees cover. Three NURC meetings will be held per year (October/November, February and April) for neighborhood issues, and the STAFF TASK FORCE and the CITY-NEIGHBORHOOD FORUM will no longer be held (pursuant to Council action of June 23, 2009). A University-City Subcommittee comprised of NURC City Council Members, University officials and City Executive Team Members will meet as needed.

AREA WIDE/OUTSIDE AGENCY COMMITTEES (Outside Agency responsible for preparing and posting the agendas for the meetings).

1. Association of Bay Area Governments (ABAG) (General Assembly):

Date: Meetings held twice a year, spring and fall
Time: From approximately 9:00 am to 3:00 pm
Location: Varies
Contact: ABAG Phone: (510) 464-7900
Council Member: Mayor Matthews Alternate: Gillmor, Caserta
Staff Member: City Manager
Established in 1961 to protect local control, planning for the future and promoting cooperation in area-wide issues.

2. Bay Area Water Supply and Conservation Agency (BAWSCA):

Date: Board meetings held every odd numbered month (Jan, Mar, May, Jul, Sep, Nov) on the third Thursday of the month
Time: 7:00 pm
Location: Foster City Community Building, Wind Room, 2nd Floor, 1000 E. Hillsdale Blvd, Foster City
Contact: Nicole Sandkulla Phone: (650) 349-3000
Council Member: Marsalli
Staff Member: Director of Water and Sewer Utilities
Established February 2003 to allow the City to have a greater voice in planning and funding of improvements in the Hetch-Hetchy regional water supply system.

3. Caltrain Modernization Local Policymaker Group (CalMod)

Date: Meets monthly on the fourth Thursday; except in December, meets on the third Thursday
Time: 6:00 pm – 7:00 pm
Location: Caltrain Joint Powers Authority Board Headquarters
Bacciocco Auditorium
1250 San Carlos Avenue, San Carlos, CA 94070
Council Member: Mayor Matthews Alternate: Gillmor
Staff Member: Director of Public Works, Director of Planning & Inspection
Established by Caltrain Joint powers Board for Caltrain modernization/electrification. Members represent cities along the Caltrain corridor.

4. Cities Association of Santa Clara County

Contact: Raania Mohsen, Executive Director Phone: (408) 730-7770
505 W. Olive Ave., Suite 749, Sunnyvale
A. Board of Directors:
Date: Meets second Thursday every month, except July and August
Time: 7:00 pm
Location: Sunnyvale City Hall
Council Member: Mayor Matthews Alternate: Marsalli

B. City Selection Committee:

Date: Meets as needed

Time: 6:45 pm (immediately prior to the Board of Directors meeting)

Location: Sunnyvale City Hall

Council Member: Mayor Matthews Alternate: Marsalli

Established to promote cooperation among the fifteen cities of Santa Clara County and to promote legislative action that will affect local control.

C. Legislative Action Committee:

Date: Meets as needed

Time: Immediately following the Board of Directors meeting

Location: Sunnyvale City Hall

Council Member: Mayor Matthews Alternate: Marsalli

5. City/Mission College Liaison Committee:

Date: Meets on call

Time: Usually at 4:30 pm

Location: East Wing Staff Conference Room, City Hall or at Mission College, 3000 Mission College Boulevard, Santa Clara

Contact: Mission College President's Secretary or Phone: (408) 855-5123
Santa Clara City Manager's Office (408) 615-2210
Executive Assistant to the City Manager

Council Members Gillmor (Chair), Davis, Caserta

Staff Members: City Manager, Director of Planning and Inspection, Director of Parks and Recreation

Established on-going communication and review of joint programs with Mission College. The Mission College President and two board members participate on the Committee.

6. City/School Liaison Committee (Santa Clara Unified School District):

Date: Meets on call

Time: Usually at 7:30 am

Location: Mariani's Restaurant, 2500 El Camino Real, Santa Clara or Santa Clara City Hall

Contact: Executive Assistant to the City Manager Phone: (408) 615-2210
SCUSD Superintendent

Council Members: Mayor Matthews (Chair), Gillmor, O'Neill Alternate: Caserta

Staff Members: City Manager, Assistant City Manager, Director of Parks and Recreation, Chief of Police, Director of Planning and Inspection

Established on-going communication and coordination of joint projects/programs between City officials and SCUSD officials. The School Board representatives and School Superintendent are members of the Committee.

7. Grand Boulevard Task Force/El Camino Real:

Date: Meets quarterly on the last Wednesday in March, June, September and November

Time: Approximately 10:00 am to 12:00 pm

Location: Alternatively held at the SamTrans Auditorium in San Carlos and the Historic Adobe Building in Mountain View

Contact: Joint Venture Silicon Valley Network/Peninsula Policy Partnership, Lisa Bruner (bruner@jointventure.org)

Council Members: Mayor Matthews Alternate: Davis

Staff Members: Director of Planning and Inspection, City Planner (support for Mayor at Task Force level), Economic Development Officer, Associate Planner, Assistant Planner

Member and alternate appointed by Council on February 21, 2006. First meeting was held March 2006. Joint Venture Silicon Valley Network/Peninsula Policy Partnership formed the Task Force for the purpose of looking for ways to raise the status of the El Camino Real to a world-class boulevard with special attention to the aesthetic, safety and interjurisdictional issues.

8. Guadalupe/West Valley Flood Protection and Watershed Advisory Committee:

Date: Meets quarterly in February, May, September and November on the second Wednesday of the month

Time: 9:30 am – 11:30 am

Location: Santa Clara Valley Water District, 5700 Almaden Expressway, San Jose

Contact: Santa Clara Valley Water District Phone: (408) 630-2883
Michelle Critchlow – Advisory
Committee Clerk

Council Member: Marsalli

Staff Members: Director of Public Works, Principal Engineer- Design Division
(Alternates)

Reviews existing Santa Clara Valley Water District policies, projects and activities related to flood control and makes recommendations to the Board of Directors. Committee members are appointed for a 2 year term. (Formerly Central/North Central Flood Control Zone Advisory Committee – name changed in April 2002).

9. Modesto-Santa Clara-Redding Energy Authority (MSR EA):

Date: Meets the third or fourth Wednesday every May and November

Time: Immediately following the MSR Commission meeting

Location: Navigant Consulting Offices, 35 Iron Point Circle, Suite 225, Folsom

Contact: MSR Phone: (408) 307-0512
Martin Hopper, General Manager
P.O. Box 4060, Modesto, CA 95352

Member: Director of Electric Utility

Council Members: Kolstad, O'Neill
(Alternates)

Staff Members: Assistant City Manager/Chief Operating Officer-Utilities, Assistant Director of Electric Utility (Planning and Strategic Services), Electric Division Manager – Joyce Kinnear
(Alternates)

10. Modesto-Santa Clara-Redding Public Power Agency (MSR):

Date: Meets the third or fourth Wednesday every other month
Time: 12:00 pm, noon
Location: Navigant Consulting Offices, 35 Iron Point Circle, Suite 225, Folsom
Contact: MSR Phone: (408) 307-0512
Martin Hopper, General Manager, P. O.
Box 4060, Modesto, CA 95352
Council Members: Kolstad Alternate: O'Neill
Staff Members: Assistant City Manager/Chief Operating Officer-Utilities, Director of Electric
(Alternates) Utility, Assistant Director of Electric Utility (Planning and Strategic Services),
Electric Division Manager – Joyce Kinnear

11. Montague Expressway Task Force: INACTIVE

Date: To be determined
Location: County Government Center, 10th Floor Conference Room, 70 West Hedding
Street, San Jose
Contact: Roads and Airport Operations Phone: (408) 573-2465
Dawn Cameron
Council Member: VACANT
Staff Member: Director of Public Works or Traffic Engineer

12. Northern California Power Agency (NCPA):

Date: Meets the fourth Thursday of every month
Time: Usually 9:30 am
Location: Rotating NCPA Cities (half in Roseville)
Contact: NCPA Phone: (916) 781-4202
Council Member: Kolstad Alternate: O'Neill
Staff Members: Assistant City Manager/Chief Operating Officer-Utilities, Director of Electric
(Alternates) Utility, Assistant Director of Electric Utility (Planning and Strategic Services),
Electric Division Manager – Joyce Kinnear

13. Peninsula Division of the League of California Cities:

Date: Meets four times per year. Additionally, the Peninsula Division holds a
"Legislative Day" in April of each year in Sacramento
Location: Alternating between San Mateo and Santa Clara Counties
Contact: Jessica Stanfill Phone: (650) 238-4111
Council Members: Mayor Matthews Alternate: Davis

Established to encourage greater participation in the Division's activities, thereby creating a strong and unified voice for cities in the Peninsula Division. The responsibilities of the liaison include keeping the Council informed about and engaged in the Division's legislative activities, to provide periodic League updates at Council meetings and to attend Division and League events whenever possible.

14. Joint Recycled Water Policy Advisory Committee:

Date: Meets in April and as-needed
Location: Alternates annually between San Jose City Hall and the Santa Clara Valley Water District Headquarters, San Jose
Contact: Kerrie Romanow, City of San Jose Phone: (408) 535-8552
Environmental Services
Council Member: Mayor Matthews Alternate: Marsalli
Staff Member: Director of Water and Sewer Utilities

Established in 2010 to review and advise the Santa Clara Water District and the City of San Jose (lead agency for the San Jose/Santa Clara Water Pollution Control Plant) on all policy issues related to recycled water including operations and capital improvements.

15. Recycling and Waste Reduction Commission of Santa Clara County (RWRC):

Date: Meets the 4th Wednesday of every even numbered month except the December meeting (date to be determined due to holidays)
Time: 5:15 pm
Location: Board of Supervisors' Chambers, County Government Center, 70 West Hedding Street, 1st Floor, San Jose 95127
Contact: Integrated Waste Management Phone: (408) 441-1198
Council Member: O'Neill
Staff Member: Superintendent of Streets and Solid Waste

Established per requirements of the California Integrated Waste Management Act of 1989 (AB 939) and subsequent amending legislation in order to coordinate and provide input to the countywide solid waste management program. Membership appointed through the City Selection Committee of Santa Clara County Cities' Association.

16. San Francisco Bay Area Regional Water System Financing Authority:

Date: Meets two times a year, January and July
Time: Immediately prior to the BAWSCA Board Meetings at 7:00 pm
Location: Foster City Community Center, Wind Room, 2nd Floor, 1000 E. Hillsdale Blvd., Foster City
Contact: Nicole Sandkulla Phone: (650) 349-3000
Council Member: Marsalli
Staff Member: Director of Water and Sewer Utilities

Established February 2003 to allow the City to have a greater voice in planning and funding of improvements in the Hetch-Hetchy regional water supply system. The Regional Financing Authority is a parallel organization with the Bay Area Water Supply and Conservation Agency (BAWSCA).

17. San Jose/Santa Clara Clean Water Financing Authority:

Date: Meets quarterly (February, May, August, November) on the second Thursday of the month
Time: 4:00 pm
Location: San Jose City Hall, 200 East Santa Clara Street, Room T-1352, San Jose
Contact: City of San Jose Finance Department – Phone: (408) 535-7010
Debt Management (408) 535-7004
Council Member: Marsalli Alternate: Caserta
Staff Members: Assistant Director of Water and Sewer Utilities

18. San Jose/Santa Clara Treatment Plant Advisory Committee (TPAC):

Date: Meets second Thursday every month

Time: 4:30 pm (if there are other meetings, this group would meet last)

Location: San Jose City Hall, City Manager's Office, 17th floor, Room 1734, San Jose

Contact: Kim Daly Phone: (408) 945-5313
Santa Clara Water Pollution Control Plant

Council Members: Kolstad, Mayor Matthews Alternate: Marsalli

Staff Member: Assistant Director of Water and Sewer Utilities

Reviews and advises the City of San Jose City Council on all issues relating to the operation and capital improvement of the San Jose/Santa Clara Water Pollution Control Plant. Per diem of \$100 per meeting.

19. Santa Clara County Comprehensive Expressway Planning Study Policy Advisory Board (PAB):

Contact: Dawn Cameron, County of Santa Clara, Phone: (408) 573-2465
Director of Roads and Airports

Council Member: O'Neill Alternate: Mayor Matthews

The Santa Clara County Comprehensive Expressway Planning Study policy Advisory Board (PAB) will provide a forum for policy input from elected officials for updating the Expressway Study's Implementation Plan originally adopted in August 2003.

20. Santa Clara County Emergency Operational Area Council (EOAC):

Date: Meets fourth Thursdays every month

Time: 1:30 pm

Location: Santa Clara County Board of Supervisors Chambers

Contact: Melissa Erickson, Office of Emergency Services Phone: (408) 808-7800

Council Member: Marsalli

The Emergency Preparedness Council is the advisory body of the Santa Clara County Operational Area in matters affecting disaster preparedness throughout the Operational Area.

21. Santa Clara Valley Transportation Authority (SCVTA):

Contact: Board Secretary, SCVTA Phone: (408) 321-5773

A. Board of Directors:

Date: Meets first Thursday of every month

Time: 5:30 pm

Location: Board of Supervisors Chambers, 70 West Hedding Street, San Jose

North East Cities Group

Position includes appointment to one of three sub-committees appointed by the VTA Board of Directors. Small Cities Group representation is a 2 year rotating term. Small Cities Group is comprised of:

City of Milpitas

City of Sunnyvale

City of Santa Clara (Alternate)

Council Member: Mayor Matthews

Sets VTA policy; establishes committees to give advice on policy matters and provide in-depth review. Per diem of \$50 per day.

Congestion Management Program & Planning Committee (CMPP):

Date: Meets the third Thursday of every month

Time: 10:00 am

Location: VTA Offices, 3331 N. First Street, Conference Room B-104, San Jose

Council Member: Mayor Matthews

B. CalTrain Policy Advisory Board: INACTIVE

Staff Member: Traffic Engineer

Established by the VTA Board of Directors on 1/7/99. Ensures that local jurisdictions are involved in guiding the planning, design and construction of projects in the CalTrain corridor.

C. County Expressways Policy Advisory Committee:

Date: Meets as needed

Location: To be announced

Council Member: Mayor Matthews

Appointment made by VTA Board of Directors. This committee is a Policy Advisory Board sub-committee.

D. El Camino Real Rapid Transit (ECRRT) Policy Advisory Board (PAB):

Date: Meets quarterly in March, June, September and December on the second Friday of the month

Time: 10:00 am

Location: Varies

Council Member: Mayor Matthews

Established by the VTA Board of Directors in October 2010 to guide the planning and implementation of Bus Rapid Transit corridors in Santa Clara County.

E. Levi's Stadium Transit Program Ad Hoc Committee:

Date: Meets on the fourth Wednesday of each month

Time: 10:00 am

Location: VTA River Oaks Campus, 3331 North First Street, Conference Room B-104

Council Member: Mayor Matthews (appointed by VTA)

Levi's Stadium Transit Program Committee is an ad-hoc committee created by the VTA Board of Directors in 2014, which will focus on transit service to the stadium. This committee's role will be to work with staff, the 49ers and the community to make VTA "the choice" when travelling to the Levi's Stadium.

F. Policy Advisory Committee:

Date: Second Thursday of every month

Time: 4:00 pm

Location: VTA Offices, 3331 N. First Street, Conference Room B-104, San Jose

Council Member: O'Neill

Alternate: Marsalli

Ensures that all jurisdictions within the County have access to development of VTA's policies.

G. Silicon Valley Rapid Transit Corridor (BART) Warm Springs Extension Policy Advisory Board:

Date: Meets quarterly

Time: 3:00 pm

Location: Milpitas City Hall, 455 Calaveras Boulevard, Milpitas

Council Member: Davis

Staff Members: Director of Planning and Inspection Alternate: Associate Planner

Established by the VTA Board of Directors on January 11, 2001, to replace all previous policy committees associated with the "Fremont-South Bay Corridor" (BART) to review the progress of the upcoming Major Investment Study/Environmental Impact Report.

22. Santa Clara Valley Water Commission (SCVW):

Date: Meets quarterly in January, April, July and October on the fourth Wednesday of the month
Time: 11:30 am
Location: SCVW District Headquarters, 5750 Almaden Expressway, San Jose
Contact: Glenna Brambill Phone: (408) 630-2408
Santa Clara Valley Water District
Council Member: Marsalli
Staff Members: Assistant Director of Water and Sewer Utilities
(Alternates) Principal Engineer – Water Utility
Established by the Santa Clara Valley Water District Board of Directors to review and advise on issues relating to water supply and water pricing.

23. Silicon Valley Animal Control Authority (SVACA):

Date: Meets on the fourth Thursday of every other month beginning in January
Time: 4:30 pm
Location: SVACA Headquarters, 3370 Thomas Road, Santa Clara
Contact: Heidi Springer Phone: (408) 764-0350
Council Member: Matthews Alternate: Marsalli
Staff Members: City Manager, Assistant City Manager, Lieutenant – Police Dept.
Established in 2000 to provide animal control field services and shelter services for the participating cities. The Board is comprised of three members representing the participating cities of Santa Clara, Campbell, Monte Sereno and Mountain View.

24. Silicon Valley Regional Interoperability Authority (SVRIA) Board of Directors:

Date: Two regular meetings to be held annually
Time: 7:00 pm
Location: Santa Clara Police Department, 601 El Camino Real, Santa Clara
Contact: Heather Tannelhill-Plamondon Phone: (650) 269-9490
Primary: Marsalli
Staff Member: Chief of Police

In 2001 several agencies in the area established the Silicon Valley Regional Interoperability Project to design an implementation strategy for an interoperable communications network; purchase a radio and data communications system or network; integrate this system or network with other nearby regional public safety communications systems; participate in regional interoperability; and to jointly apply for grants and funding to facilitate these goals. In 2010 a Joint Powers Agreement was established to implement and operate the SVRIA and other projects. The nine-member Board of Directors of the JPA consists of elected officials from different geographic regions of the County and will serve as the governing body for the agreement. The City of Santa Clara is represented in the "Central County Agencies" that also includes Sunnyvale and Milpitas.

25. South Bay Dischargers Authority: INACTIVE

Date: Meets on call, annually
Location: Usually at San Jose City Hall
Contact: City of San Jose Environmental Services Phone: (408) 277-5540
Director (408) 945-3070
Council Member: VACANT Alternate: VACANT
Staff Member: Director of Water and Sewer Utilities
Established in 1973 for the more efficient disposal of treated sewage through jointly owned disposal facilities (Joint Powers Agreement between the cities of San Jose, Santa Clara, Sunnyvale and Palo Alto - Treatment Plants). Per diem of \$50 per meeting.

26. Triton Museum of Art Liaison Committee:

Date: Meets on the third Thursday of each month

Time: 4:30 pm – 5:30 pm

Location: Triton Museum Boardroom

Contact: Triton Museum of Art

Phone: (408)247-3754

Closed on Mondays

Council Member: Davis

Staff Member: Executive Assistant to the City Manager

The Triton Museum of Art is an independent non-profit organization. The Council appoints a representative to serve as a liaison to the Triton Museum Board. The participation of a Council Member at the Triton Museum Board meetings will further the communication and knowledge of the City's support.

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A.6



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Site Acceptance: Site No. 7162; EPs 13705, 13610, & 13378 - Public Improvements
5409 Stevens Creek Boulevard, Santa Clara

Contractor: Vance Brown, Inc.
3197 Park Boulevard
Palo Alto, CA 94306

EXECUTIVE SUMMARY:

This project consisted of installation of water utility, electric utility, driveway, sidewalk, pavement, curb & gutter, curb ramp, sanitary sewer, storm drain, bus pad, & traffic signal.

This is to certify that all work in connection with the referenced site has been completed in accordance with the applicable plans and specifications and to the satisfaction of the City Engineer.

All fees have been paid and all bonds have been posted.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Completes requirements for these improvements as part of the development.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

Site Acceptance: Site No. 7162 , EPs 13705, 13610, & 13378 - Public Improvements

5409 Stevens Creek Blvd, Santa Clara

Page 2 of 2

RECOMMENDATION:

That the Council:

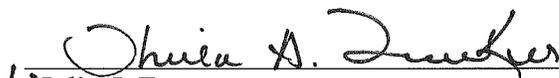
1. Accept the public improvements including installation of water utility, electric utility, driveway, sidewalk, pavement, curb & gutter, curb ramp, sanitary sewer, storm drain, bus pad, & traffic signal performed by Vance Brown, Inc. for Site 7162, EPs 13705, 13610, & 13378, APN 316-19-031, located at 5409 Stevens Creek Boulevard; and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



Julio J, Fuentes

City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A.7



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Site Acceptance: Site No. 7217 , EP 13848 - Public Improvements
Address: : 2421, 2431, 2441, & 2451 Mission College
Boulevard; and 4551 Great America Parkway, Santa Clara

Contractor: Sobrato Construction Corporation
10600 N. De Anza Blvd, Suite 200
Cupertino, CA 95014

EXECUTIVE SUMMARY:

This project consisted of installation of water utilities, driveways, sidewalks, pavement, curb & gutters, curb ramps, & traffic signal modifications.

This is to certify that all work in connection with the referenced site has been completed in accordance with the applicable plans and specifications and to the satisfaction of the City Engineer.

All fees have been paid and all bonds have been posted.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Completes requirements for these improvements as part of the development.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

Site Acceptance: Site No. 7217 , EP 13848 - Public Improvements

2421, 2431, 2441, & 2451 Mission College Boulevard; and 4551 Great America Parkway,
Santa Clara

Page 2 of 2

RECOMMENDATION:

That the Council:

1. Accept the public improvements including installation of water utilities, driveways, sidewalks, pavement, curb & gutters, curb ramps, & traffic signal modifications performed by Sobrato Construction Corporation for Site 7217, EP 13848, APN 104-41-031, 032, & 043; 104-42-020, & 21, located at 2421, 2431, 2441, & 2451 Mission College Boulevard; and 4551 Great America Parkway; and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



for Julio J, Fuentes
City Manager

Documents Related to this Report: None



Date: February 10, 2015

To: City Manager for Council Action

From: City Attorney

Subject: Adoption of Ordinance No. 1938 which Amends Section 8.35.020 (Definitions) of Chapter 8.35 (Smoking and Tobacco Regulations) of Title 8 (Health and Safety) of the City Code to Prohibit Electronic Cigarettes in the Same Manner as Other Regulated Means of Smoking

EXECUTIVE SUMMARY:

Ordinance No. 1938, which amends Section 8.35.020 (Definitions) of Chapter 8.35 (Smoking and Tobacco Regulations) of Title 8 (Health and Safety) of “The Code of the City of Santa Clara, California” (City Code) to prohibit electronic cigarettes in the same manner as other regulated means of smoking was passed for the purpose of publication (“passed to print”) on January 20, 2015. Pursuant to City Charter Sections 808 and 812, proposed Ordinance No. 1938 was published on February 4, 2015 and copies were posted in at least three public places.

The City of Santa Clara has long had regulations prohibiting smoking in public places. Smoking is defined as “the carrying or holding of a lighted pipe, cigar, or cigarette of any kind.” Santa Clara’s local ordinance prohibits smoking in the following places: City owned or controlled facilities and enclosed public places and places of employment (such as elevators, restrooms, service lines, laundromats, retail stores and all areas in shopping malls inside and outside of retail stores, restaurants, bars, banks, offices, lobbies, sporting arenas, amusement parks, grocery stores, theaters, hotels, polling places and private clubs).

The use of electronic smoking devices, commonly known as “e-cigarettes” or “electronic cigarettes,” is a relatively recent trend that has gained significant popularity over the past few years. E-cigarettes are battery-powered devices that are designed to mimic cigarettes by vaporizing a nicotine-infused liquid that is inhaled by the user and emits vapor. They use rechargeable lithium batteries and have a cartridge that contains liquid such as propylene glycol, nicotine, and special flavoring. The e-cigarette is meant to look and feel like a traditional cigarette, often including a small light at the tip that mimics a burning cigarette.

Studies are not yet conclusive as to the effects of e-cigarettes. Some studies indicate the vapor may be releasing harmful substances, including nicotine, but the trend is still too new to be able to cite longitudinal effects of direct usage and second-hand/third-hand inhalation. Electronic smoking devices have not been approved by the Food and Drug Administration, but the FDA has indicated its intent to study and regulate them. Note that similar legislation (SB 140) was introduced at the state level on January 26, 2015.

Due to the similarity between smoking e-cigarettes and traditional cigarettes and their unknown health effects, City staff recommends at a minimum treating e-cigarettes in the same manner as traditional cigarettes. This ordinance proposes to include e-cigarette devices in the definition of “smoking” to ensure

City Manager for Council Action
Subject: Adoption of Ordinance No. 1938
February 10, 2015
Page 2

safe and smoke-free environments for City residents and visitors, including Levi's Stadium, and particularly to protect children from the unknown effects of electronic smoking devices.

Many other California cities that have considered or enacted e-cigarette regulations include Sunnyvale, Morgan Hill, Milpitas, Palo Alto, Los Angeles, San Francisco, Davis, La Mesa, Richmond, Carlsbad, and Walnut Creek.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

This ordinance will regulate new technologies of delivering nicotine in the same manner as the City currently regulates cigarette smoking. There are no disadvantages to the City in adopting the ordinance.

ECONOMIC/FISCAL IMPACT:

There is no cost to the City other than administrative staff time and expense.

RECOMMENDATION:

That the Council adopt Ordinance No. 1938, which amends Section 8.35.020 (Definitions) of Chapter 8.35 (Smoking and Tobacco Regulations) of Title 8 (Health and Safety) of the City Code to prohibit electronic cigarettes in the same manner as other regulated means of smoking.



Richard E. Nosky, Jr.
City Attorney

Documents Related to this Report:

1) ***Ordinance No. 1938***

I:\AGENDA\AGENDA REPORTS\Ordinance Adoption 1938 - E-Cigarette Definition 02-10-15.doc

Approved:


for Julio J. Fuentes
City Manager

ORDINANCE NO. 1938

AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA, AMENDING SECTION 8.35.020 (“DEFINITIONS”) OF CHAPTER 8.35 (“SMOKING AND TOBACCO REGULATIONS”) OF TITLE 8 (“HEALTH AND SAFETY”) OF “THE CODE OF THE CITY OF SANTA CLARA, CALIFORNIA” TO PROHIBIT ELECTRONIC CIGARETTES IN THE SAME MANNER AS OTHER REGULATED MEANS OF SMOKING

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, the City of Santa Clara previously adopted Chapter 8.35, imposing regulations on where and when persons may smoke or carry lit tobacco products;

WHEREAS, new technology has created new means of smoking, including e-cigarettes and vaporizer devices;

WHEREAS, electronic cigarettes, commonly known as “e-cigarettes,” “ecigars,” “e-cigarillos,” “e-pipes,” “e-hookahs,” “electronic nicotine delivery systems,” etc., are battery operated devices designed to deliver nicotine, flavor, and/or other substances through a vapor inhaled by the user;

WHEREAS, consumption of electronic cigarettes has increased significantly in recent years, as evidenced by the fact that:

- Between 2011 and 2012 the percentage of all youth in grades 6 to 12 who had tried electronic cigarettes doubled;
- 6.8% of all youth between 6th and 12th grade report trying electronic cigarettes;
- 10% of high school students have tried electronic cigarettes;
- 9.3% of youth who have used electronic cigarettes have never smoked conventional cigarettes; and,

- Between 2010 and 2011, rates of both awareness and use of unregulated electronic cigarettes by adults also increased significantly;

WHEREAS, existing studies on electronic cigarettes' vapor emissions and cartridge contents have found a number of dangerous substances including:

- Chemicals known to the State of California to cause cancer such as formaldehyde, acetaldehyde, lead, nickel, chromium, and toluene;
- PM2.5, acrolein, tin, and aluminum, which are associated with a range of negative health effects such as skin and eye irritation, respiratory irritation, gastrointestinal irritation and problems with the nervous system;
- Inconsistent labeling of nicotine levels in electronic cigarette products; and,
- In one instance, diethylene glycol, an ingredient used in antifreeze and toxic to humans; and,

WHEREAS, while the public health impact of these new technologies is not fully known and is currently being studied by the Federal Drug Administration and other public health organizations, the City of Santa Clara finds that these new technologies should be regulated in the same manner as cigarettes and other tobacco products to ensure safe and smoke-free environments for its residents and visitors, and particularly to protect children from the unknown effects of electronic smoking devices.

NOW THEREFORE, BE IT FURTHER ORDAINED BY THE CITY OF SANTA CLARA AS FOLLOWS:

SECTION 1: That Section 8.35.020 (“Definitions”) of Chapter 8.35 (“Smoking and Tobacco Regulations”) of Title 8 (“Health and Safety”) of “The Code of the City of Santa Clara, California” (“SCCC”) is hereby amended to read:

“(h) “Smoking” means the carrying or holding of a lighted pipe, cigar, or cigarette of any kind, including any type of electronic and/or battery operated cigarette or vaporizer device (regardless of product name or descriptor), the use of which may resemble smoking, which can be used to deliver an inhaled dose of nicotine or other substances.”

SECTION 2: Savings clause.

The changes provided for in this ordinance shall not affect any offense or act committed or done or any penalty or forfeiture incurred or any right established or accruing before the effective date of this ordinance; nor shall it affect any prosecution, suit or proceeding pending or any judgment rendered prior to the effective date of this ordinance. All fee schedules shall remain in force until superseded by the fee schedules adopted by the City Council.

SECTION 3: Constitutionality, severability.

If any section, subsection, sentence, clause, phrase, or word of this ordinance is for any reason held by a court of competent jurisdiction to be unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of the ordinance. The City Council hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, phrase, and word thereof, irrespective of the fact that any one or more section(s), subsection(s), sentence(s), clause(s), phrase(s), or word(s) be declared invalid.

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SECTION 4: Effective date.

This ordinance shall take effect thirty (30) days after its final adoption; however, prior to its final adoption it shall be published in accordance with the requirements of Section 808 and 812 of “The Charter of the City of Santa Clara, California.”

PASSED FOR THE PURPOSE OF PUBLICATION this 20th day of January, 2015, by the following vote:

AYES:	COUNCILORS:	Caserta, Davis, Gillmor, Kolstad, Marsalli and O’Neill and Mayor Matthews
NOES:	COUNCILORS:	None
ABSENT:	COUNCILORS:	None
ABSTAINED:	COUNCILORS:	None

ATTEST: 

ROD DIRIDON, JR.
CITY CLERK
CITY OF SANTA CLARA

Attachments Incorporated by Reference: None

PROOF OF PUBLICATION

Santa Clara Weekly

P.O. Box 580, Santa Clara, California 95052

IN THE

City of Santa Clara,
State of California,
County of Santa Clara

CITY OF SANTA CLARA

NOTICE OF PROPOSED ORDINANCE

ORDINANCE NO. 1938

ELECTRONIC CIGARETTES

State of California, }
County of Santa Clara } SS.

The undersigned, being first duly sworn, deposes and says: That at all times hereinafter mentioned affiant was and still is a citizen of the United States, over the age of eighteen years, and not a party to nor interested in the above entitled proceeding; and was at and during all said times and still is publisher of the Santa Clara Weekly, a newspaper of general circulation printed and published weekly in the County of Santa Clara, State of California, and said Santa Clara Weekly is and was at all times hereinmentioned a newspaper of general circulation as that term is defined by sections 6000 and following, of the government code of the State of California, and, as provided by said sections, is published for the dissemination of local or telegraphic news and intelligence of a general character, having a bonafide subscription list of paying subscribers, and is not devoted to the interest or published for the entertainment or instruction of a particular class, profession, trade, calling, race or denomination, or for the entertainment and instruction of any number of such classes, professions, trades, callings, races or denominations; that at all times said newspaper has been established, printed and published in the said County of Santa Clara and State of California at regular intervals for more than one year proceeding the first publication of the notice herein mentioned; that said notice was set in type not smaller than non-parell, describing and expressing in general terms the purport and character of the notice intended to be given; that the clipping of which the annexed is a true printed copy, was published and printed in said newspaper on the following dates to wit:

Pub: 2/4/2015

Dated at Santa Clara, California

This 4TH day of FEBRUARY, 2015

I declared under penalty of perjury that the foregoing is true and correct.

Signed: _____

(Assoc.) Publisher of the Santa Clara Weekly

The Santa Clara Weekly was adjudicated a newspaper of general circulation in and for the County of Santa Clara on September 3, 1974 (Case No. 314617). The Santa Clara Weekly was adjudicated a newspaper of general circulation within the City of Santa Clara on April 2, 1976 (Case No. 347776).

NOTICE OF PROPOSED ORDINANCE NO. 1938
AN ORDINANCE OF THE CITY OF SANTA CLARA, CALIFORNIA,
AMENDING SECTION 8.35-020 ("DEFINITIONS") OF CHAPTER 8.35
("SMOKING AND TOBACCO REGULATIONS") OF TITLE 8 ("HEALTH
AND SAFETY") OF "THE CODE OF THE CITY OF SANTA CLARA, CALI-
FORNIA" TO PROHIBIT ELECTRONIC CIGARETTES IN THE SAME
MANNER AS OTHER REGULATED MEANS OF SMOKING

This ordinance proposes to include e-cigarette devices in the definition of "smoking" to ensure safe and smoke-free environments for City residents and visitors, including Levi's Stadium, and particularly to protect children from the unknown effects of electronic smoking devices. The new definition is proposed as: "Smoking" means the carrying or holding of a lighted pipe, cigar, or cigarette of any kind, including any type of electronic and/or battery operated cigarette or vaporizer device (regardless of product name or descriptor), the use of which may resemble smoking, which can be used to deliver an inhaled dose of nicotine or other substances." DATE OF ORDINANCE INTRODUCTION: January 20, 2015 DATE OF PUBLIC HEARING: February 10, 2015 LOCATION OF PUBLIC HEARING: City Council Chambers, 1500 Warburton Avenue, Santa Clara, CA 95050 POSTING LOCATIONS: City of Santa Clara Clerk's Office, 1500 Warburton Avenue, Santa Clara, CA; Central Park Library, Central Park Library 2635 Homestead Road Santa Clara, CA; Mission Branch Library, 1098 Lexington Street, Santa Clara, CA

Pub.: 2/4/2015

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A.9



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Acceptance: Street Corporation Yard Bunker Wash Area Sewer Connection
(CE 13-14-07)

Contractor: K.J. Woods Construction, Inc.
1485 Bayshore Boulevard, #149
San Francisco, CA 94124

EXECUTIVE SUMMARY:

This project consisted of installation of a sanitary sewer line from an existing wash area to the main line in Walsh Avenue.

This is to certify that all work in connection with the referenced project has been completed in accordance with the plans and specifications and to the satisfaction of the City Engineer.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow acceptance of contract and allow for the thirty-five (35) day retention period to begin.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

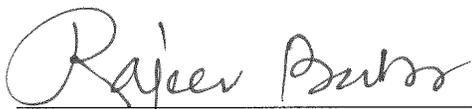
Acceptance: Street Corporation Yard Bunker Wash Area Sewer Connection (CE 13-14-07)

Page 2 of 2

RECOMMENDATION:

That the Council:

1. Accept the work performed by K.J. Woods Construction, Inc. on Street Corporation Yard Bunker Wash Area Sewer Connection Project (CE 13-14-07); and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



Julio J. Fuentes

City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A.10



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Acceptance: Winchester Boulevard and Newhall Street Storm Drain Replacement (CE 13-14-06)

Contractor: K.J. Woods Construction, Inc.
1485 Bayshore Boulevard, #149
San Francisco, CA 94124

EXECUTIVE SUMMARY:

This project consisted of replacement of an existing storm drain line.

This is to certify that all work in connection with the referenced project has been completed in accordance with the plans and specifications and to the satisfaction of the City Engineer.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow acceptance of contract and allow for the thirty-five (35) day retention period to begin.

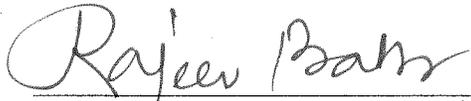
ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

RECOMMENDATION:

That the Council:

1. Accept the work performed by K.J. Woods Construction, Inc. on Winchester Boulevard and Newhall Street Storm Drain Replacement Project (CE 13-14-06); and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



fw Julio J. Fuentes
City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A-11



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Acceptance: De La Cruz Boulevard, El Camino Real, and Scott Boulevard Traffic Signal Interconnect and Coordination Project (CE 12-13-01)

Contractor: Tennyson Electric, Inc.
7275 National Road
Livermore, CA 94550

EXECUTIVE SUMMARY:

This project consisted of replacement of existing traffic signal controller cabinets, installing new traffic signal service cabinets at various locations, and the installation of new traffic signal communication conduits, pullboxes, and fiber-optic cables.

This is to certify that all work in connection with the referenced project has been completed in accordance with the plans and specifications and to the satisfaction of the City Engineer.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow acceptance of contract and allow for the thirty-five (35) day retention period to begin.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

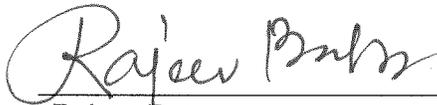
Acceptance: De La Cruz Boulevard, El Camino Real, and Scott Boulevard Traffic Signal Interconnect and Coordination Project (CE 12-13-01)

Page 2 of 2

RECOMMENDATION:

That the Council:

1. Accept the work performed by Tennyson Electric, Inc. on De La Cruz Boulevard, El Camino Real, and Scott Boulevard Traffic Signal Interconnect and Coordination Project (CE 12-13-01); and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



Julio J. Fuentes

City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A.12



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Acceptance: Cabrillo Avenue/Main Street Sewer Replacement
(Scott Boulevard to U.P.R.R.)
(CE 12-13-06)

Contractor: K.J. Woods Construction, Inc.
1485 Bayshore Boulevard, #149
San Francisco, CA 94124

EXECUTIVE SUMMARY:

This project consisted of installation of a new sanitary sewer line in Cabrillo Avenue and Main Street.

This is to certify that all work in connection with the referenced project has been completed in accordance with the plans and specifications and to the satisfaction of the City Engineer.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow acceptance of contract and allow for the thirty-five (35) day retention period to begin.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

Acceptance: Cabrillo Avenue/Main Street Sewer Replacement (Scott Boulevard to U.P.R.R)
(CE 12-13-06)

Page 2 of 2

RECOMMENDATION:

That the Council:

1. Accept the work performed by K.J. Woods Construction, Inc. in Cabrillo Avenue/Main Street Sewer Replacement (Scott Boulevard to U.P.R.R) (CE 12-13-06); and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra
Director of Public Works / City Engineer

APPROVED:



Julio J. Fuentes
City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 7A.13



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Acceptance: Lafayette Street UPRR Underpass Storm Drain Improvement
(CE 14-15-05)

Contractor: Cratus, Inc.
945 Taraval Street, Suite 302
San Francisco, CA 94116

EXECUTIVE SUMMARY:

This project consisted of dewatering, installing two perforated pipes within the median to collect ground water, connecting these pipes to new drainage structures, traffic control, and other necessary work to complete the Project.

This is to certify that all work in connection with the referenced project has been completed in accordance with the plans and specifications and to the satisfaction of the City Engineer.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow acceptance of contract and allow for the thirty-five (35) day retention period to begin.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

Acceptance: Lafayette Street UPRR Underpass Storm Drain Improvement (CE 14-15-05)

Page 2 of 2

RECOMMENDATION:

That the Council:

1. Accept the work performed by Cratus, Inc. on Lafayette Street UPRR Underpass Storm Drain Improvement Project (CE 14-15-05); and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



Julio J. Fuentes
City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7A.14

City of Santa Clara, California



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Public Works / City Engineer

Subject: Acceptance: Monroe Street, Chromite Drive, Machado Avenue, and Nobili Avenue Sanitary Sewer Improvements Phase II Project (CE 10-11-01)

Contractor: K.J. Woods Construction, Inc.
1485 Bayshore Boulevard, #149
San Francisco, CA 94124

EXECUTIVE SUMMARY:

This project consisted of installation of new sanitary sewer mains, manholes, and a siphon.

This is to certify that all work in connection with the referenced project has been completed in accordance with the plans and specifications and to the satisfaction of the City Engineer.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval will allow acceptance of contract and allow for the thirty-five (35) day retention period to begin.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than staff time and expense.

City Manager for Council Action

Acceptance: Monroe Street, Chromite Drive, Machado Avenue, and Nobili Avenue Sanitary Sewer

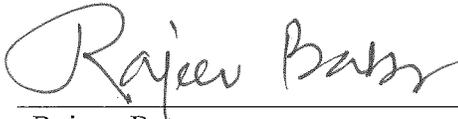
Improvements Phase II Project (CE 10-11-01)

(CE 10-11-01)Page 2 of 2

RECOMMENDATION:

That the Council:

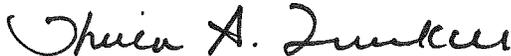
1. Accept the work performed by K.J. Woods Construction, Inc. on Monroe Street, Chromite Drive, Machado Avenue, and Nobili Avenue Sanitary Sewer Improvements Phase II Project (CE 10-11-01); and
2. Authorize recordation of a Notice of Completion with the County Recorder.



Rajeev Batra

Director of Public Works / City Engineer

APPROVED:



for Julio J. Fuentes
City Manager

Documents Related to this Report: None

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7A.15

City of Santa Clara, California



Date: January 22, 2015
To: City Manager for Council Action
From: Director of Electric Utility
Subject: Approval of the Project Manual for Lump Sum Bidding and Construction of Fairview 60kV Transmission Line Loop-In Project (Public Works Contract 2403B), and Authorization for the City Manager to Solicit Bids, Award the Public Works Contract, and Approve Change Orders up to 10% of the Original Contract Price

EXECUTIVE SUMMARY:

Silicon Valley Power (SVP), the City of Santa Clara's Electric Utility, currently provides primary and secondary electric service to the CoreSite Campus in the vicinity of Coronado Drive and Central Expressway. On December 6, 2011, Council approved a Special Facilities Agreement for their data center development. An amended Agreement was approved by Council on January 8, 2013. The Special Facilities Agreement addressed the terms and conditions for SVP to provide electric service to the data center development. Under the Agreement, SVP will construct, operate and maintain Fairview Substation on land donated by CoreSite. Fairview Substation is scheduled to be placed into service in May 2015.

In meetings with City staff, CoreSite has requested an expedited construction schedule so that they can meet the needs of their tenants. The Electric Department has requested expedited deliveries of the switchgear and transformers. The project schedule will be negotiated with the successful contractor. In order to expedite the Public Works bidding, award, and construction process, staff requests that Council approve the use of these documents to solicit bids; and delegate authority to the City Manager award the Public Works Contract and to approve change orders up to a total aggregate amount of 10% of the original contract price. A copy of the Project Manual can be viewed on the City's website or is available in the City Clerk's Office for review during normal business hours.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Bidding and award of Public Works Contract 2403B for the construction of Fairview Substation 60kV Transmission Line Loop-In will allow the City to meet the energy needs of CoreSite and the area. Delegation of authority to the City Manager to award the contract and approve change orders with an aggregate of 10% of the contract price will expedite the approval process and demonstrate to CoreSite the City's willingness to work with CoreSite's necessary schedule. There are no identified disadvantages with this issue.

ECONOMIC/FISCAL IMPACT:

The total cost of the proposed contract will be determined after solicitation and receipt of sealed bids on March 4, 2015 for completion of all labor, equipment, material, services, fees, expenses, transportation costs and taxes. Construction cost will be funded by Capital Improvement Project 2403 – Install Fairview Substation.

RECOMMENDATION:

That the Council:

1. approve the Project Manual for Lump Sum Bidding & Construction of the Fairview Substation 60kV Transmission Line Loop-In (Public Works Contract 2403B)
2. direct the City Manager to solicit bids for the Project according to the standard procedure;
3. delegate authority to the City Manager to award this contract to the lowest responsible and responsive bidder; and
4. delegate authority to the City Manager to approve change orders up to a total aggregate amount of 10% of the original contract price.



John C. Roukema
Director of Electric Utility

APPROVED:



60 Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) ***Project Manual for Lump Sum Bidding and Construction of the Fairview Substation 60kV Transmission Line Loop-In (Public Works Contract 2403B)***

DOCUMENT 00001

TITLE PAGE

PROJECT MANUAL

For the
LUMP SUM BIDDING & CONSTRUCTION
of the

FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN

PROJECT

Public Works

CONTRACT 2403B

Located in the
CITY of SANTA CLARA, CALIFORNIA

For the
City of Santa Clara

Doing business as

SILICON VALLEY POWER

1500 Warburton Avenue
Santa Clara, California 95050

Prepared by



FOR



Issued for Bidding
February 2015

00001-1

Contract # 2403B

DOCUMENT 00001

TITLE PAGE

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DOCUMENT 00010

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END OF DOCUMENT

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DOCUMENT 00015

LIST OF MAPS, DRAWINGS AND SKETCHES

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DOCUMENT 00100

ADVERTISEMENT FOR BIDS

1. **NOTICE.** THE CITY OF SANTA CLARA, CALIFORNIA, a chartered California municipal corporation ("City") hereby gives notice that it will accept Bids for construction of the following public work:

CITY CONTRACT NUMBER 2403B

FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT

2. **BID SUBMISSION.** City will receive sealed Bids from plan holders of record, at the office of the City Clerk, no later than 3:00 pm. as determined by the atomic clock on the wall of the Office of the City Clerk on March 4, 2015. City's representative will call out the designated time in the Office of the City Clerk, 1500 Warburton Avenue, Santa Clara, California, stating that the period for accepting Bids is closed. The Bid opening will be in accordance with procedures set forth in Document 00200 (Instructions to Bidders).
3. **CONTACT INFORMATION.**
Project Manager: Rocco Colicchia
Phone: (925) 348-1098
E-Mail: rcolicchia@harris-assoc.com

Mailing address: City of Santa Clara – City Clerk
Silicon Valley Power
Kevin Keating
1500 Warburton
Santa Clara, CA 95054-3410
4. **STATEMENTS OF QUALIFICATIONS.** Each Bidder shall be required to submit, in accordance with Document 00200 (Instructions to Bidders) and Document 00450 (Statement of Qualifications for Construction Work), a Statement of Qualifications.
5. **DESCRIPTION OF THE WORK.** The **FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT** consists of the construction of a new 60 kV double circuit, 2-conductor per phase overhead transmission line to the Fairview Substation in Santa Clara, CA.
6. **CONTRACT TIME.** Work shall be substantially complete by April 30, 2014 and Final Completion shall be by May 15, 2015
7. **REQUIRED CONTRACTOR'S LICENSE(S).** A valid California contractor's license, appropriate to the Work, is required to Bid this Contract. Contractor must also possess a valid "A" and "C-10". Joint ventures must secure a joint venture license prior to award of this Contract. Removal, handling, and/or disposal of hazardous materials may, by law, require hazardous substance removal certification by the Contractor's State License Board.

DOCUMENT 00100

ADVERTISEMENT FOR BIDS

8. **PREVAILING WAGE LAWS.** The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents.
9. **INSTRUCTIONS.** Bidders shall refer to Document 00200 (Instructions to Bidders) for required documents and items to be submitted in sealed envelopes to the City Clerk's office, at the applicable times for submission.
10. **SUBSTITUTION OF SECURITIES.** City will permit successful Bidder to substitute securities for retention monies withheld to ensure performance of Contract, as set forth in Document 00680 (Escrow Agreement for Security Deposits in Lieu of Retention), in accordance with California Public Contract Code, Section 22300. By this reference, Document 00680 (Escrow Agreement for Security Deposits in Lieu of Retention) is incorporated in full in this Document 00100.
11. **VOLUNTARY PRE-BID MEETING.** The City will conduct a voluntary pre-bid meeting. While voluntary, attendance is strongly recommended. The meeting will take place at the following time and place:
 - Time: 9:30 A.M.
 - Date: February 18, 2015
 - Place: City of Santa Clara, Council Chambers
1500 Warburton Ave.
Santa Clara, CA 95050

The pre-Bid Meeting will last approximately two (2) hours.

A reference drawing CD will be issued at the pre-bid meeting.

Any Bidder wishing to investigate subsurface conditions at the Site must schedule such a visit with the City in accordance with Document 00200 (Instructions to Bidders).

12. **PROCUREMENT OF BIDDING DOCUMENTS.** Potential Bidders may examine Bidding Documents at the City's Electric Department by contacting Voula Margelos Brown (408-261-5036).
13. **SUBMITTING A BID.** In order to submit a bid, a Potential Bidder must become a plan holder of record by purchasing at least one (1) copy of the Bidding Documents and making a non-refundable payment of \$75.00 for each set of bidding documents purchased. Only plan holders of record will receive addenda and notices during bidding. City will accept cash or checks payable to the "City of Santa Clara." Bidding Documents need not be returned to City.
14. **BID PREPARATION COST.** Bidders are solely responsible for the cost of preparing their Bids.

DOCUMENT 00100

ADVERTISEMENT FOR BIDS

15. **RESERVATION OF RIGHTS.** City specifically reserves the right, in its sole discretion, to reject any or all Bids, or re-bid, or to waive inconsequential deviations from Bid requirements not involving time, price, or quality of the Work.

END OF DOCUMENT

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

Bids are requested for a general construction contract, or work described in general, as follows:

CITY CONTRACT NUMBER 2403B

FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT

1. **RECEIPT OF BIDS.** Sealed Bids will be received from plan holders of record by the City at the City Clerk's Office (see paragraph 2 below) on March 4, 2015. City will receive Bids in two separate opaque sealed 10" x 13" envelopes, labeled Envelope "A" and Envelope "B," each containing the items described in paragraphs 4 and 5 below, respectively. All Bid envelopes will be time-stamped to reflect their submittal time. Both Envelope "A" and Envelope "B" shall be due by 3:00 p.m. as determined by the atomic clock on the wall of the Office of the City Clerk. City will reject all Bids received after the specified time and will return such Bids to Bidders unopened. Bidders must submit Bids in accordance with this Document 00200.

2. **CONTACT INFORMATION.**
Project Manager: Rocco Colicchia
Phone: (925) 348-1098
E-Mail: rcolicchia@harris-assoc.com

Mailing address: City of Santa Clara – City Clerk
Silicon Valley Power
Kevin Keating
1500 Warburton
Santa Clara, CA 95054-3410

3. **BID SUBMISSION.** Each Bidder shall submit its Bid in two (2) separate opaque sealed 10" x 13" envelopes containing forms listed in Document 00250 Bid Contents, Evaluation, Selection and Award and in the manner described in Document 00250. Each Bidder should mark its Bid envelopes as:

Bids shall be deemed to include the written responses of the Bidder to any questions or requests for information of City made as part of Bid evaluation process after submission of Bid. Bidder's failure to submit all required documents strictly as required entitles City to reject the Bid as non-responsive.

BIDDER'S COMPANY NAME

BID FOR CONTRACT #2403B

**FAIRVIEW SUBSTATION 60 kV
TRANSMISSION LINE LOOP-IN PROJECT**

ENVELOPE "A" (or "B" as appropriate)

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

4. CONTENTS OF ENVELOPE "A" - BID PRICE. Envelope "A" shall include:
 - A. Document 00400 (Bid Form)
 - B. Document 00411, Bidder's Bond
Bid security supplied and completed in accordance with paragraph 7 of this Document 00200
 - C. Document 00420 (Bidder's Registration Form)
 - D. Document 00421 (Declaration of Contractor's License Status)
 - E. Document 00430 (Subcontractors List Form).
 - F. Document 00440 (Affidavit of Compliance with Ethical Standards)
 - G. Document 00460 (Schedule of Major Equipment and Material Suppliers)
 - H. Document 00481 (Non-Collusion Affidavit)
 - I. Document 00654 (Worker's Compensation Insurance Statement)
5. CONTENTS OF ENVELOPE "B" - BIDDER QUALIFICATIONS. Envelope "B" shall include:
 - A. Document 00450 (Statement of Qualifications for Construction Work). Statement of Qualifications submitted in accordance with paragraph 9 of this Document 00200.
6. REQUIRED BID FORMS. All Bidders must submit Bids using, where applicable, documents supplied in this Project Manual, including without limitation, Document 00400 (Bid Form), Document 00420 (Bidder Registration Form), Document 00421 (Declaration of Contractor's License Status), Document 00430 (Subcontractors List), Document 00440 (Affidavit of Compliance with Ethical Standards for Contractors), Document 00450 (Statement of Qualifications for Construction Work), and Document 00481 (Non-Collusion Affidavit), Document 00654 (Worker's Compensation Insurance Certificate), and any other item identified in Document 00250 Bid Contents, Evaluation, Selection and Award.

City may reject as non-responsive any Bid not submitted on the required forms. Bids must be full and complete. Bidders must complete all Bid items and supply all information required by Bidding Documents. City reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Bidders may not modify the Bid Form or qualify their Bids. Bidders must submit clearly and distinctly written Bids. Bidders must clearly make any changes in their Bids by crossing out original entries, entering new entries, and initialing new entries. City reserves the right to reject any Bid not clearly written.

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

7. **REQUIRED BID SECURITY.** Bidders must submit with their Bids either cash, a cashier's check, or certified check from a responsible bank in the United States, or corporate surety bond furnished by a surety authorized to do business in the State of California, of not less than ten percent of amount of Bid, payable to City. All Bidders choosing to submit a surety bond must submit it on the required form, Document 00411 (Bond Accompanying Bid). City will reject as non-responsive any Bid submitted without the necessary Bid security.

City may retain Bid securities and Bid bonds of other than the Apparent Low Bidder for a period of 90 Days after award or full execution of the Contract, whichever first occurs. Upon full execution of the Contract, and upon request by Bidder, City will return to the respective unsuccessful Bidders their Bid securities and Bid bonds.

8. **REQUIRED SUBCONTRACTORS LIST.** All Bidders must submit with their Bids the required information on all Subcontractors in Document 00430 (Subcontractors List) for those Subcontractors who will perform any portion of Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent of total Bid. Violation of this requirement may result in Bid being deemed non-responsive and not being considered.

9. **REQUIRED STATEMENT OF QUALIFICATIONS.** In order for a Bidder to be eligible to Bid on this Contract, it must submit a Statement of Qualifications responsive to the requirements identified in Document 00450 (Statement of Qualification for Construction Work) ("SOQ"), including without limitation qualification information for Subcontractors and schedulers, if any.

Each Bidder shall submit its SOQ as part of Envelope B as provided in Paragraph 1 above, paragraph 5 of Document 00250 Bid Contents, Evaluation, Selection and Award and Document 00450 Statement of Qualifications for Construction Work, containing all information required by Document 00450 Statement of Qualifications for Construction Work, including without limitation qualification information for subcontractors and schedulers.

Except as otherwise provided in paragraphs 20 and 21 of this Document 00200, Document 00250 (Bid Contents, Evaluation, Selection and Award), or in Document 00450 (Statement of Qualification for Construction Work), City will make final determinations regarding Bidder responsibility based solely upon the SOQ submitted as part of Envelope "B" on Bid day. Information in the SOQ shall be current.

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

10. **PRE-BID QUESTIONS.** The City will respond to pre-bid questions submitted by plan holders of record to the e-mail address shown below.

E-mail pre-bid Questions from Plan Holders of Record February 19, 2015 by 5:00 p.m. to:
vmargelos@svpower.com

E-mail Responses to pre-bid questions from City to :

Any Bidder wishing to investigate subsurface conditions or otherwise conduct invasive investigations, explorations, tests, or studies at this Site, shall schedule such examinations with the City by giving the City at least seven (7) days written notice. Any such Bidder must deliver an executed Document 00210 (Indemnity and Release Agreement) and provide an insurance certificate as described therein by noon of the Day prior to its examination. Bidders who intend only to observe Site conditions and not conduct such examinations are not required to provide an executed Document 00210 (Indemnity and Release Agreement) or an insurance certificate. Any additional pre-bid site visits are not substitutes for the pre-bid meeting and related site visit. Additional pre-bid Site Visits may be scheduled at the City's sole discretion and are dependent on staff availability.

Bidders may submit written questions in connection with the Pre-Bid Meeting and related Site Visit. City will transmit to all parties recorded as having received Bidding Documents such Addenda as City in its discretion considers necessary in response to written questions. Bidders shall not rely on oral statements. Oral statements will not be binding or legally effective. Other Pre-Bid Site Visits may be scheduled at City's sole discretion, depending on staff availability.

11. **OTHER REQUIREMENTS PRIOR TO BIDDING.** Submission of Bid signifies Bidder's careful examination of Bidding Documents and complete understanding of the nature, extent, and location of Work to be performed. As a condition to Bidding, Bidder must complete tasks listed in Document 00520 (Agreement), Article 5. Submission of Bid shall constitute Bidder's express representation to the City that Bidder has fully completed these tasks.
12. **EXISTING DRAWINGS AND GEOTECHNICAL DATA.** Bidders may examine any available existing conditions information (e.g., record documents, specifications, studies, drawings of previous work) by giving City reasonable advance notice, as well as applicable environmental assessment information (if any) regarding the Project. Document 00320 (Geotechnical Data and Existing Conditions) applies to all supplied existing conditions information and geotechnical reports and all other information supplied regarding existing conditions either above ground or below ground. City will make copies available for a fee. A Bidder must give two (2) days advance notice if copies are desired.

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INSTRUCTIONS TO BIDDERS

13. **ADDENDA.** Bidders must direct all questions about the meaning or intent of Bidding Documents to City (Attention: Project Manager) in writing. Interpretations or clarifications considered necessary by City in response to such questions will be issued by Addenda mailed, faxed, e-mailed, or delivered to all parties recorded by City as having received Bidding Documents. Addenda will be written and will be issued to each Bidder to the address or fax number supplied City by Bidder. City may not answer questions received less than ten (10) Days prior to the date for opening Bids. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
 - A. Addenda may also be issued to modify the Bidding Documents as deemed advisable by City.
 - B. Addenda shall be acknowledged by number with signature in Document 00400 (Bid Form) and shall be part of the Contract Documents. A complete listing of Addenda may be secured from City.
14. **SUBSTITUTIONS.** Bidders must base their Bids on products and systems specified in Contract Documents or listed by name in Addenda unless approved by the City prior to Bid opening.
 - A. Except as provided in paragraph 14.c below, City will consider substitution requests only for "or equal items." Bidders wanting to use "or equal" item(s) may submit Document 00660 (Substitution Request Form) no later than 35 Days after the due date for City receiving Bids. After that date, the City will not accept "or equal" substitution requests. To assess "or equal" acceptability of product or system, submittals of substitutions shall contain the information required in Document 00660 (Substitution Request Form) and set forth in Document 01600 (Product Requirements). Insufficient information will be grounds for rejection of substitution. City shall, within a reasonable period of time after having received a request for substitution, issue in writing its decision as to whether the proposed substitute item is an "or equal" item. City's decision shall be conclusive on all Bidders.
 - B. Approved substitutions shall become part of Record Documents.
 - C. Substitutions may be requested after submitting Bids and Award of Contract only in accordance with requirements specified in Document 01600 (Product Requirements).
 - D. As further limitation on Bidder's privilege to substitute items, City has found that certain items are designed as City standards and certain items are designed to match existing items in use on a particular public improvement, either completed or in the course of completion. As to such items, City will not permit substitution. City will not permit substitutions for the following items:
15. **WAGE RATES.** Contractor shall pay prevailing wages to any worker(s) employed by Contractor or any of its subcontractors under this Contract. The term "worker" is defined

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

under California Labor Code Sections 1723 and 1772. A prevailing wage is the basic hourly rate the majority of workers in a particular craft or classification earn. The prevailing wage also is based on the locality and nearest labor market. The California Department of Industrial Relations annually determines prevailing wage for various crafts, job classifications and job types. The general prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform the Work required under this Contract, as determined by the State of California Department of Industrial Relations (the "DIR"), are available from the Division of Labor Standards, 455 Golden Gate Avenue, San Francisco, CA 94102 (P.O. Box 420603, San Francisco, CA 94142-0603) or on the DIR website at www.dir.ca.gov/dlsr. Also, Contractor shall post the applicable prevailing wage rates at the Site.

16. **EQUAL EMPLOYMENT OPPORTUNITY.** Contractor shall comply with all applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical conditions, disability, or any other reason.
17. **BID OPENING.** City will open all Bidders' Envelopes "A," immediately after the bid submittal deadline on the date specified in paragraph 1 above, initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein. City will not open Envelopes "B" publicly, and except for the Apparent Low Bidder's Envelope "B" (or as otherwise provided in this Document 00200), they will remain unopened.
18. **DETERMINATION OF APPARENT LOW BIDDER (Envelope "A").** Apparent Low Bid will be based solely on the total amount of all Bid items (including any alternates) based on assumptions contained in Document 00400 (Bid Form). All Bidders are required to submit Bids on all Bid items (including any alternates).
19. **EVALUATION OF BIDDER RESPONSIBILITY (Envelope "B").**
 - A. City will open Apparent Low Bidder's Envelope "B" and check its contents for compliance with paragraph 5 above and this paragraph 19. City will notify Apparent Low Bidder in writing of any deficiencies found and will provide Bidder the opportunity to respond in writing with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.
 - B. If any Apparent Low Bidder is determined to be non-responsive or non-responsible, City may open the next Apparent Low Bidder's Envelope "B" pursuant to any procedures determined in its reasonable discretion, and proceed for all purposes as if this Apparent Low Bidder were the original Apparent Low Bidder. City shall use reasonable efforts to make the responsive responsible Apparent Low Bidder's Envelope "B" public on the fifth (5th) Day following opening of the Bidders' Envelope "A"s, subject to paragraph 27 below.
 - C. Document 00450 sets forth certain minimum criteria for a Bidder to be found responsible.

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INSTRUCTIONS TO BIDDERS

- D. Minimum licensing requirements including evidence of a valid California "A and C10" contractor's license for the Bidder and evidence of requisite licenses for Key Personnel of Bidder or any designated Subcontractor(s).
20. **BID EVALUATION.** City may reject any or all Bids and waive any informalities or minor irregularities in the Bids. City also reserves the right, in its discretion, to reject any or all Bids and to re-bid the Project. City reserves the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if City believes that it would not be in the best interest of Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by City. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some work items and enhanced prices for other work items.
- A. In evaluating Bids, City will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, unit prices and other data, as may be requested in Document 00400 (Bid Form) or prior to the Notice of Award.
- B. City may conduct reasonable investigations and reference checks of Bidder, proposed Subcontractors, suppliers and other persons and organizations as City deems necessary to assist in the evaluation of any Bid and to establish Bidder's responsibility, qualifications, financial ability, proposed Subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to City's satisfaction within the prescribed time. Submission of a Bid constitutes Bidder's consent to the foregoing. City shall have the right to consider information provided by sources other than Bidder. City shall also have the right to communicate directly with Bidder's surety regarding Bidder's bonds.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between written words and figures will be resolved in favor of the words.
- D. Quantities stated in the Bidding Documents are approximate only and are subject to correction upon final measurement of the Work, and are subject further to the rights reserved by the City to increase or diminish the amount of work under any classification as advantages to design or construction needs require.
- E. City may determine whether a Bidder is qualified in its sole discretionary judgment.
21. **AWARD.** If the Contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. Following completion of all required City procedures and receipt of all City approvals, City will issue Document 00510 (Notice of Award) to successful Bidder.

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

22. **BID PROTEST.** Any Bid protest must be submitted in writing to the City Clerk's office (Attention: Kevin Keating, Division Manager, Electric Engineering), before 3:30 p.m. of the tenth (10th) Day following opening of Bidders' Envelope "A"s.
- A. The initial protest document must contain a complete statement of the basis for the protest.
 - B. The protest must refer to the specific portion of the document that forms the basis for the protest.
 - C. The protest must include the name, address, and telephone number of the person representing the protesting party.
 - D. Only Bidders whom the City otherwise determines are responsive and responsible are eligible to protest a Bid; protests from any other Bidder will not be considered. In order to determine whether a protesting Bidder is responsive and responsible, City may open and evaluate information contained in any protesting Bidder's Envelope "B", and conduct the same investigation and evaluation as City is entitled to take regarding an Apparent Low Bidder. Any such opened Envelope "B" shall also be subject to all provisions of paragraph 27.
 - E. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
 - F. The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.
23. **POST-NOTICE OF AWARD REQUIREMENTS.** After Notice of Award, the successful Bidder must execute and submit the following documents as indicated below.
- A. Submit the following documents to City by 5:00 p.m. of the 20th Day following Notice of Award. Execution of Contract by City depends upon approval of these documents:
 - 1. Document 00520 (Agreement): To be executed by successful Bidder. Submit two (2) originals, each bearing an original signature.
 - 2. Document 00610 (Construction Performance Bond): To be executed by successful Bidder and surety, in the amount set forth in Document 00610 (Construction Performance Bond). Submit one (1) original.
 - 3. Document 00620 (Construction Labor and Material Payment Bond): To be executed by successful Bidder and surety, in the amount set forth in

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

- Document 00620 (Construction Labor and Material Payment Bond). Submit one (1) original.
4. Insurance certificates and endorsements required by Document 00822 (Insurance). Submit one (1) original set.
 5. One (1) complete set of documentary information received or generated by successful Bidder in preparation of Bid prices for its Bid, as set forth in Document 00670 (Escrow Bid Documents).
 6. The Guaranty in the form set forth in Document 00630 (Guaranty). Submit two (2) originals, each bearing an original signature.
- B. City shall have the right to communicate directly with Apparent Low Bidder's proposed performance bond surety, to confirm the performance bond. City may elect to extend the time to receive faithful performance and labor and material payment bonds.
- C. Successful Bidder's failure to submit the documents required herein, in a proper and timely manner, entitles City to rescind its award, and to cause Bidder's Bid security to be forfeited as provided herein.
24. **FAILURE TO EXECUTE AND DELIVER DOCUMENTS.** If Bidder to whom Contract is awarded shall, within the period described in paragraph 23a of this Document 00200, fail or neglect to execute and deliver all required Contract Documents and file all required bonds, insurance certificates, and other documents, City may, in its sole discretion, foreclose on Bidder's deposit surety bond, or deposit Bidder's cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages City may suffer as a result of Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of City's damages. In addition, upon such failure City may determine the next Apparent Low Bidder and proceed accordingly.
25. **MODIFICATION OF COMMENCEMENT OF WORK.** City expressly reserves the right to modify the date for the Commencement of Work under the Contract and to independently perform and complete work related to the Project. City accepts no responsibility to Contractor for any delays attributed to its need to complete independent work at the Site.
26. **WITHDRAWAL OF BIDS.** Bidders may withdraw their Bids at any time prior to the Bid opening time fixed in this Document 00200, only by written request for the withdrawal of Bid filed with the City at the Office of the City Clerk. Bidder or its duly authorized representative shall execute request to withdraw Bid. The submission of a Bid does not commit the City to award a contract for the Project, to pay costs incurred in the preparation of a Bid, or to procure or contract for any goods or services.

DOCUMENT 00200

INSTRUCTIONS TO BIDDERS

27. PUBLIC RECORDS ACT REQUESTS.

- A. Per the Public Records Act, City will make available to the public Bidder's SOQ (if Bidder's Envelope "B" is opened), all correspondence and written questions submitted during the Bid period, all Bid submissions opened in accordance with the procedures of this Document 00200, and all subsequent Bid evaluation information. All submissions not opened will remain sealed and eventually be returned to the submitter. Except as otherwise required by law, City will not disclose trade secrets or proprietary financial information submitted that has been designated confidential by Bidder (including but not limited to the SOQ). Any such trade secrets or proprietary financial information that a Bidder believes should be exempted from disclosure shall be specifically identified and marked as such. Blanket-type identification by designating whole pages or sections shall not be permitted and shall be invalid. The specific information must be clearly identified as such.
- B. Upon a request for records regarding this Bid, City will notify Bidder involved within ten (10) Days from receipt of the request of a specific time when the records will be made available for inspection. If the Bidder timely identifies any "proprietary, trade secret, or confidential commercial or financial" information that Bidder determines is not subject to public disclosure, and requests City to refuse to comply with the records request, Bidder shall take all appropriate legal action and defend City's refusal to produce the information in all forums; otherwise, City will make such information available to the extent required by applicable law, without restriction.
- C. Information disclosed in the SOQ (if Envelope "B" is opened) and the attendant submissions are the property of City unless Bidder makes specific reference to data that is considered proprietary. Subject to the requirements in the Public Records Act, reasonable efforts will be made to prevent the disclosure of information except on a need-to-know basis during the evaluation process.

28. CONFORMED CONSTRUCTION DOCUMENTS. Following Award of Contract, City will prepare a conformed set of Contract Documents reflecting Addenda issued during bidding, which will, failing objection, constitute the approved set of Contract Documents.

29. DEFINITIONS. All abbreviations and definitions of terms used in this Document 00200 are set forth in Document 01420 (References and Definitions).

END OF DOCUMENT

DOCUMENT 00210

INDEMNITY AND RELEASE AGREEMENT

Date	Potential Bidder (type or print company name)
CITY:	SANTA CLARA, CALIFORNIA
SITE:	FAIRVIEW SUBSTATION LOCATED IN THE CITY OF SANTA CLARA, CA.
PROJECT:	FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT

In consideration of the above-referenced City's permitting the undersigned potential bidder ("Bidder") to have access to, and to conduct investigations, tests and/or inspections on, the Site, Bidder hereby agrees as follows:

1. To the greatest extent permitted by law, Bidder hereby releases, and shall defend, indemnify and hold harmless City, and its officers, employees, consultants (including without limitation Consulting Engineer), representatives, and agents, and all other parties having any other interest in the Site, against any claim or liability, including attorney's fees, arising from or relating to any Site-related access, investigation, test, inspection and/or other activity conducted by Bidder or any of Bidder's officers, employees, consultants, representatives, and/or agents, regardless of whether claim or liability is caused in part by the negligence of City or by any released and indemnified party.
2. Bidder hereby waives the provisions of California Civil Code Section 1542 which provides as follows:

A general release does not extend to claims that the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.
3. Bidder shall repair any damage to the Site or adjacent property resulting from activities authorized hereunder, and comply with and be subject to all other requirements and obligations described or referenced in Document 00320 (Geotechnical Data and Existing Conditions).
4. Attached hereto (or to be delivered separately before Bidder's visit to the Site) is a certificate for comprehensive general liability insurance satisfying the requirements of Document 00700 (General Conditions).

DOCUMENT 00210

INDEMNITY AND RELEASE AGREEMENT

5. Although this Indemnity and Release Agreement is not a Contract Document (see Document 00520 (Agreement), it shall be fully effective and binding regardless of whether Bidder submits a Bid for the subject Project, is awarded a contract for the Project, or otherwise.

By: _____
Signature

By: _____
Signature

Its: _____
Title
(If Corporation: Chairman, President,
or Vice President)

Its: _____
Title
(If Corporation: Chairman, President,
or Vice President)

END OF DOCUMENT

DOCUMENT 00250

BID CONTENTS, EVALUATION, SELECTION AND AWARD

1. Document summarizes the required Bid contents and City's procedures for opening and evaluating Bids and making award for:

CITY CONTRACT NUMBER 2403B

FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT.

2. All abbreviations and definitions of terms used herein are defined in the Division 1 Specifications, Document 01420 References and Definitions.
3. Bidders shall submit Bids in two (2) separate sealed Envelopes marked "Envelope A" and "Envelope B."
4. At the designated time of Bid opening, City will open the Envelope A submitted by each Bidder, initially evaluate it for responsiveness, and determine an Apparent Low Bidder as specified herein. City will not open the Envelope B submitted by each Bidder publicly, and except for the Apparent Low Bidder's Envelope B (or as otherwise provided in this Document 00250), they will remain unopened.
5. **CONTENTS OF ENVELOPE A - BID PRICE (Checklist).** Envelope A shall include:

- A. Document 00400 (Bid Form).
- B. Document 00411, (Bidder's Bond). Bid security supplied and completed in accordance with paragraph 7 of this Document 00200.
- C. Document 00420 (Bidder's Registration Form)
- D. Document 00421 (Declaration of Contractor's License Status)
- E. Document 00430 (Subcontractors List Form)
- F. Document 00440 (Affidavit of Compliance with Ethical Standards)
- G. Document 00460 (Schedule of Major Equipment and Material Suppliers)
- H. Document 00481 (Non-Collusion Affidavit)
- I. Document 00654 (Workers' Compensation Insurance Statement)

CONTENTS OF ENVELOPE B - BIDDER QUALIFICATIONS. (Checklist) Envelope B shall include:

- A. Document 00450 - Statement of Qualifications and Statement of Qualifications submitted in accord with Document 00450.

DOCUMENT 00250

BID CONTENTS, EVALUATION, SELECTION AND AWARD

6. DETERMINATION OF APPARENT LOW BIDDER. City will determine Apparent Low Bidder based on the total of the base bid items.
7. EVALUATION OF BIDDER RESPONSIBILITY (ENVELOPE B)
 - A. City will open Apparent Low Bidder's Envelope B and check its contents for compliance with Paragraph 6 above and this Paragraph 8. City will notify Apparent Low Bidder in writing of any deficiencies found and will provide Bidder the opportunity to respond in writing within two (2) business days, with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.
 - B. City will determine Bidder responsibility in accord with Document 00450 Statement of Qualifications for Construction Work.

END OF DOCUMENT

DOCUMENT 00320

GEOTECHNICAL DATA AND EXISTING CONDITIONS

1. SUMMARY

This Document 00320, sets forth the terms and conditions under which Bidder may review, study, use, or rely upon geotechnical data and information concerning existing conditions at or contiguous to the Site. This Document 00320, the available geotechnical data, and the supplied existing conditions information are not Contract Documents.

2. REPORT AND INFORMATION

- A. City, its consultants, and prior contractors may have collected documents providing a general description of the Site and conditions of the Work. These documents may consist of geotechnical reports for and around the Site, contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding Underground Facilities. These reports, documents and other information are not part of the Contract Documents.
- B. Bidders may inspect geotechnical reports and information regarding existing conditions available at the City's Office, and may obtain copies at cost of reproduction and handling upon Bidder's payment for the costs. These reports, documents and other information are not part of the Contract Documents. Nevertheless, by submitting a Bid, Bidder accepts full responsibility for reviewing, knowing and understanding the contents of all of these materials.
- C. Geotechnical reports may be included in the Project Manual and information regarding existing conditions may also be included in the Project Manual, but neither shall be considered part of the Contract Documents.
- D. The following geotechnical reports and data, and information regarding existing conditions and Underground Facilities at or contiguous to the Site, are available for review for Contract Number 2403B through City:
 - 1. Appendix A – Fairview Substation Geotechnical Report

3. USE OF INFORMATION ON EXISTING CONDITIONS

- A. Above Ground Existing Conditions: Under no circumstances shall City be deemed to make a warranty or representation of existing aboveground conditions, as-built conditions, or other aboveground actual conditions verifiable by reasonable independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder must perform prior to bidding and Bidder must not rely on the information supplied by City regarding existing conditions. Bidder represents and agrees that in submitting its Bid, it is not relying on any information regarding existing conditions supplied by City.
- B. Underground Facilities: Information supplied regarding existing Underground Facilities at or contiguous to the Site is based on information furnished to City by others (e.g., the owners or builders of such Underground Facilities or others). Except

DOCUMENT 00320

GEOTECHNICAL DATA AND EXISTING CONDITIONS

as expressly set forth in this Document 00320, City does not assume responsibility for the accuracy, completeness or thoroughness of this information, and Bidder is solely responsible for any interpretation or conclusion drawn from this information. Except as expressly set forth in this Document 00320, City will be responsible only for the general accuracy of information regarding Underground Facilities, and only for those Underground Facilities that are owned by City. This express assumption of responsibility applies only if Bidder has conducted the independent investigation required of it and discrepancies were not apparent.

4. LIMITED RELIANCE PERMITTED ON CERTAIN INFORMATION

- A. Geotechnical Data: Except as expressly set forth in this Document 00320, City does not warrant, and makes no representation regarding, the accuracy or thoroughness of any geotechnical data. Bidder represents and agrees that in submitting its Bid, it is not relying on any geotechnical data supplied by City, except as specifically set forth herein.
- B. Bidder may rely upon the general accuracy of the "technical data" contained in the geotechnical reports and drawings identified above, but only insofar as it relates to subsurface conditions, provided Bidder has conducted the independent investigation required of it and discrepancies were not apparent. The term "technical data" in the referenced reports and drawings shall be limited as follows:
 - 1. The term "technical data" shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment, or structures that were encountered during subsurface exploration.
 - 2. The term "technical data" does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures.
 - 3. The term "technical data" shall not include the location of Underground Facilities.
 - 4. Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder may rely upon the general accuracy of the "technical data" contained in such reports or drawings.
 - 5. Bidder is solely responsible for any interpretation or conclusion drawn from any "technical data" or any other data, interpretations, opinions, or information contained in supplied geotechnical data.

5. INVESTIGATIONS

- A. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and

DOCUMENT 00320

GEOTECHNICAL DATA AND EXISTING CONDITIONS

safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents. Bidders shall advise City in writing during the Bid period of any questions, suppositions, inferences or deductions Bidders may have for City's review and response.

- B. City has provided time in the period prior to bidding for Bidder to perform these investigations. Bidder represents and agrees that in submitting its Bid, it has been provided time in the period prior to bidding to perform these investigations.

6. ACCESS TO SITE FOR INVESTIGATIONS

Subject to reasonable scheduling, City will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of Document 00200 (Instructions to Bidders) and Document 00700 (General Conditions) including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Bidder shall supply all equipment required to perform any investigations, as each Bidder deems necessary. City has the right to limit the number of pieces of machinery operating at one time due to safety concerns.

END OF DOCUMENT

DOCUMENT 00320

GEOTECHNICAL DATA AND EXISTING CONDITIONS

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DOCUMENT 00400

BID FORM

THIS BID IS SUBMITTED BY:

(Firm/Company Name)

CITY CONTRACT NUMBER 2403B

FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the City of Santa Clara ("City") in the form included in the Contract Documents, Document 00520 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Contract Documents, Document 00100 (Advertisement for Bids), and Document 00200 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 90 Days after the day of Bid opening.
3. In submitting this Bid, Bidder represents:
 - (a) Bidder has examined all of the Contract Documents and the following Addenda (receipt of all of which is hereby acknowledged).

Addendum No.	Addendum Date	Signature of Bidder

- (b) Bidder has visited the Site and performed all tasks, research, investigation, reviews, examinations, and analysis and given notices, regarding the Project and the Site, as set forth in Document 00520 (Agreement), Article 5.
- (c) Bidder has received and examined copies of the following technical specifications on City-provided, Contractor- installed equipment. (N/A)
- (d) Bidder has given City prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by City is acceptable to Contractor.

DOCUMENT 00400

BID FORM

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items, including lump sums and unit prices, must be filled in completely. Bid items are described in Section 01100 (Summary of Work). Quote in figures only, unless words are specifically requested.

ITEM	DESCRIPTION	MATERIALS	LABOR	TOTAL
1	BONDS AND INSURANCE			
2	SAFETY PLAN AND PROGRAMS			
3	TOTAL EXHIBIT A – FAIRVIEW SUB TRANSMISSION LINE			
5	ALL OTHER WORK (work not separately provided for above)			
	COLUMN TOTALS			

LUMP SUM BID		\$
LUMP SUM BID	
in words	

5. Subcontractors for work included in all Bid items are listed on the attached Document 00430 (Subcontractors List).
6. The undersigned Bidder understands that City reserves the right to reject this Bid.
7. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in paragraph 2 of this Document 00400 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00200 (Instructions to Bidders) within the times specified therein. These documents include, but are not limited to, Document 00520 (Agreement), Document 00610 (Construction Performance Bond), and Document 00620 (Construction Labor and Material Payment Bond).
8. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.

DOCUMENT 00400

BID FORM

9. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Document 00200 (Instructions to Bidders), in the amount of ten percent (10%) of the total of Bid items 1 through 19 and made payable to the "City of Santa Clara".
10. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00700 (General Conditions) and to complete all work within the time specified in Document 00520 (Agreement). The undersigned Bidder acknowledges that City has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges City has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.
11. The undersigned Bidder agrees that, in accordance with Document 00700 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00520 (Agreement) shall be as set forth in Document 00520 (Agreement).
12. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).

NAME OF BIDDER: _____

licensed in accordance with an act for the registration of Contractors, and with license number: _____ Expiration: _____.

Where incorporated, if applicable

Principals

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signature of Bidder

DOCUMENT 00400

BID FORM

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address:

Officers authorized to sign contracts:

Telephone Number(s):

Fax Number(s):

Date of Bid:

DOCUMENT 00400

BID FORM

EXHIBIT A – FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT

SCHEDULE OF BID PRICES

All Bid items, including lump sums and unit prices, must be filled in completely. Bid items are

DOCUMENT 00400

BID FORM

ITEM	DESCRIPTION	MATERIALS	LABOR	TOTAL
1	MOBILIZATION/DEMOBILIZATION			
2	INSTALL/RE-ESTABLISH RESTORATIVE LANDSCAPING & HARDSCAPE			
3	INSTALL AND MAINTAIN SWPPP BEST MANAGEMENT PRACTICES			
4	INSTALL AND MAINTAIN TEMPORARY SECURITY FENCING			
5	EXCAVATE, INSTALL & BACKFILL FOUNDATION #1			
6	EXCAVATE, INSTALL & BACKFILL FOUNDATION #2			
7	EXCAVATE, INSTALL & BACKFILL FOUNDATION #3			
8	EXCAVATE, INSTALL & BACKFILL FOUNDATION #4			
9	TRANSPORT, FRAME, & SET STRUCTURE AND MATERIALS FOR STRUCTURE #1			
10	TRANSPORT, FRAME, & SET STRUCTURE AND MATERIALS FOR STRUCTURE #2			
11	TRANSPORT, FRAME, & SET STRUCTURE AND MATERIALS FOR STRUCTURE #3			
12	TRANSPORT, FRAME, & SET STRUCTURE AND MATERIALS FOR STRUCTURE #4			
13	TRANSPORT MATERIALS & RE-FRAME STRUCTURE "A"			
14	TRANSPORT MATERIALS & RE-FRAME STRUCTURE "B"			
15	TRANSPORT MATERIALS & RE-FRAME STRUCTURE "C "			
16	FABRICATE, PAINT, & INSTALL NEW POLE CAPS			

DOCUMENT 00400

BID FORM

BID SCHEDULE OF UNIT PRICES

ITEM	DESCRIPTION	UNIT OF MEASURE	UNIT PRICE
1	3-MAN CREW	HR.	
2	5-MAN CREW	HR.	
3	SWITCHING ASSIST (3 MAN CREW, 4 HOURS)	LS.	
4			
5			
6			
7			
8			
9			

END OF EXHIBIT A

END OF DOCUMENT

DOCUMENT 00411

BOND ACCOMPANYING BID

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned as Principal and the undersigned as Surety are held and firmly bound unto the CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California ("City"), as obligee, in the penal sum of _____

Dollars (\$_____) lawful money of the United States of America being at least ten percent (10%) of the aggregate amount of said Principal's base Bid, for the payment of which, well and truly to be made, we bind ourselves, our successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, THE SAID PRINCIPAL IS SUBMITTING A BID FOR CITY PROJECT

**FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT
CONTRACT #2403B**

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by the said Principal be accepted and the Contract be awarded to said Principal and said Principal shall within the required periods enter into the Contract so awarded and provide the required Construction Performance Bond, Construction Labor and Material Payment Bond, insurance certificates, and all other endorsements, forms, and documents required under Document 00200 (Instructions to Bidders), then this obligation shall be void, otherwise to remain in full force and effect.

DOCUMENT 00411

BOND ACCOMPANYING BID

IN WITNESS WHEREOF, the above bounden parties have executed this instrument this

_____ day of _____, 201_____.

CONTRACTOR AS PRINCIPAL:

SURETY:

Name: _____

Name: _____

Principal Place of Business:
Address: _____

Principal Place of Business:
Address: _____

City/State/Zip: _____

City/State/Zip: _____

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

(Please Note: Surety Signature must be notarized)

Please Apply Corporate Seal Here

Please Apply Corporate Seal Here

Approved as to Form:

City Attorney

Date: _____

END OF DOCUMENT

DOCUMENT 00420

BIDDER REGISTRATION FORM

IN ORDER TO REGISTER TO UNDERTAKE WORK FOR THE CITY OF SANTA CLARA, ACTING BY AND THROUGH ITS CITY COUNCIL, YOU MUST FILL OUT THIS FORM COMPLETELY. DO NOT LEAVE ANY BLANKS.

1. BIDDER'S CORPORATE NAME, ADDRESS, AND PHONE NUMBERS

Bidder's Company Name: _____

State where incorporated: _____

Contractor's License _____
License Number License Date Federal ID Number

Main Office Location: _____

City State Zip

Mailing Address: _____

City State Zip

Phone No. _____ Fax No. _____

- Type Business
- Sole Proprietor
 - Partnership
 - Non-Profit 501 C3
 - Corporation
 - Other (Please Explain)

DOCUMENT 00420

BIDDER REGISTRATION FORM

2. BIDDER'S CONTACT INFORMATION: The following contact information will be used for sending all notices after bid opening.

Contact Name: _____
Title: _____
Address: _____

City State Zip
Phone Number Fax Number
e-mail address _____

3. PRINCIPALS INTERESTED IN THIS BID: The following sheet may be duplicated as necessary in order to list all principals interested in this bid.

Principal Name: _____
Title: _____
Address: _____

City State Zip
Phone Number Fax Number

Principal Name: _____
Title: _____
Address: _____

City State Zip
Phone Number Fax Number

DOCUMENT 00420

BIDDER REGISTRATION FORM

Principal
Name: _____
Title: _____
Address: _____

City State Zip
Phone Number _____ Fax Number _____

Bidder: _____
Company Name
By: _____
Signature
Name: _____
Title: _____
Address: _____

City State Zip
Phone Number _____ Fax Number _____

NOTE: If the Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership. All signer(s) represent and warrant that they are authorized to sign this Bid on behalf of Bidder.

END OF DOCUMENT

DOCUMENT 00420

BIDDER REGISTRATION FORM

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DOCUMENT 00421

DECLARATION OF CONTRACTOR'S LICENSE STATUS

I, _____, declare under penalty of perjury under the laws of the State of California that the following is true and correct:

1. The State Contractor's license number for the signatory Contractor is:

_____.

2. The license expiration date is: _____.

Executed at on _____, 201__ at _____, California.

CONTRACTOR

[Contractor's Firm Name – Print or Type]

[Signatory's Name – Print or Type]

[Signature]

[Capacity/Title in Contracting Firm – Print or Type]

END OF DOCUMENT

DOCUMENT 00421

DECLARATION OF CONTRACTOR'S LICENSE STATUS

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DOCUMENT 00430

SUBCONTRACTORS LIST

Use this Document 00430 (Subcontractors and Sub-consultants List Form) for Subcontractors on Base Bid Work required to be listed by Law, and for all Design Sub-consultants.

Sub-consultant or Subcontractor _____

Address: _____

_____ City _____

_____ State _____

_____ Zip _____

Phone Number _____

License Number _____

Type of Work _____

Value of Work as a percentage of the Bid Amount _____

DOCUMENT 00430

SUBCONTRACTORS LIST

Sub-consultant or Subcontractor _____

Address: _____

_____	City	_____	City	_____	City
Phone Number	_____	Phone Number	_____		

Type of Work _____

Value of Work as a percentage of the Bid Amount _____

This sheet may be duplicated and reused as many times as necessary to completely list all subcontractors and sub-consultants.

DOCUMENT 00430

SUBCONTRACTORS LIST

Bidder: _____
Company Name

By: _____
Signature

Name: _____

Title: _____

Address: _____

_____ City State Zip

Phone Number _____ Fax Number _____

NOTE: If the Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If the Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership. All signer(s) represent and warrant that they are authorized to sign this Bid on behalf of Bidder.

END OF DOCUMENT

DOCUMENT 00430
SUBCONTRACTORS LIST

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DOCUMENT 00440

AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS

I, _____, being first duly sworn, depose and say to the City of Santa Clara ("City") that:

1. I am _____ [insert title or capacity] of _____ [insert entity name] ("Bidder").
2. I hereby state that I have read and understand the attached Document 00441 Ethical Standards for Contractors. I have examined appropriate business records, and I have made inquiry of those individuals potentially included within the definition of "Contractor" contained in Document 00441. I have authority to make these representations on my own behalf and on behalf of the legal entity herein identified.
3. Neither (a) Bidder nor (b) any individual(s) belonging to a category identified in footnote No. 1 of Document 00441 has been convicted of any one or more of the crimes identified in Document 00441 within the past five (5) years.
4. Notwithstanding award of any contract by City or performance thereunder, the City shall have all rights and remedies described in Document 00441.

The above assertions are true and correct and are made under penalty of perjury under the laws of the State of California.

Corporation, Partnership, etc.

Signature

Title

DOCUMENT 00440

AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS

Note: Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

STATE OF CALIFORNIA)

County of _____)

On _____, 201__, before me _____

_____ (here insert name and title of officer) a Notary Public in

and for the State of California, personally appeared _____,
personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s)
whose name(s) is/are subscribed to the within instrument and acknowledged to me that
he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their
signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s)
acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____

(Seal)

END OF DOCUMENT

DOCUMENT 00441

ETHICAL STANDARDS FOR CONTRACTORS

Termination of Contract for Certain Acts.

1. City may, at its sole discretion, terminate any contract with Contractor if any one or more of the following occurs:
 - A. If Contractor¹ does any of the following:
 1. Is convicted² of operating a business in violation of any Federal, State or local law or regulation;
 2. Is convicted of a crime punishable as a felony involving dishonesty;³
 3. Is convicted of an offense involving dishonesty or is convicted of fraud or a criminal offense in connection with: (1) obtaining; (2) attempting to obtain; or (3) performing a public contract or subcontract;
 4. Is convicted of any offense which indicates a lack of business integrity or business honesty which seriously and directly affects the present responsibility of a City contractor or subcontractor; or
 5. Made (or makes) any false statement(s) or representation(s) with respect to the contract; or
 - B. If fraudulent, criminal, or other seriously improper conduct of any officer, director, shareholder, partner, employee, or other individual associated with Contractor can be imputed to Contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of Contractor, with Contractor's knowledge, approval or acquiescence, Contractor's acceptance of the benefits derived from the conduct shall be evidence of such knowledge, approval, or acquiescence.

¹ For purposes of this Document 00441, the term "Contractor" (whether a person or a legal entity) means any of the following: an owner or co-owner of a sole proprietorship; a person who controls or who has the power to control a business entity; a general partner of a partnership; a principal in a joint venture; or a person who owns more than ten percent (10%) of the outstanding stock of a corporation and who is active in the day to day operations of that corporation.

² For purposes of this Document 00441, the terms "convicted" or "conviction" mean a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere within the past five (5) years.

³ For purposes of this Document 00441, the term "dishonesty" includes, without limitation, embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, failure to pay tax obligations, receiving stolen property, collusion or conspiracy.

DOCUMENT 00441

ETHICAL STANDARDS FOR CONTRACTORS

2. City may also terminate any contract with Contractor if any one or more of the following occurs:
 - A. If Contractor becomes "insolvent;"⁴
 - B. If City determines that Contractor no longer has the financial capability or business experience (including without limitation loss of personnel deemed essential by City) to perform successfully the terms of, or operate under, any contract with City; or
 - C. If City determines that Contractor fails to submit information, or submits false information, which is required to perform or be awarded a contract with City, including, but not limited to, Contractor's failure to maintain a required state issued license, failure to obtain a City business license (if applicable), or failure to purchase and maintain bonds and/or insurance policies required under any contract with City.
3. In the event a prospective Contractor (or bidder) is ruled ineligible (debarred) to participate in a contract award process, or a contract is terminated pursuant to the these provisions, Contractor may appeal City's action to the City Council by filing a written request with the City Clerk to have the matter heard within ten (10) days of the notice given by City. The matter will be heard within thirty (30) days of the filing of the appeal request with the City Clerk. Contractor shall have the burden of proof on the appeal. Contractor shall have the opportunity to present evidence, both oral and documentary, and argument.

END OF DOCUMENT

⁴ For purposes of this Document 00441, Contractor is "insolvent" if it is unable to pay its debts as they become due, transfers assets in fraud of creditors, makes an assignment for the benefit of creditors, files a petition under any Document or chapter of the federal Bankruptcy Code (11 U.S.C.), as amended, or under any similar law or statute of the United States or any state thereof, is adjudged bankrupt or insolvent in proceedings under such laws, or a receiver or trustee is appointed for all or substantially all of Contractor's assets.

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

1. GENERAL INFORMATION

In Document 00100 (Advertisement for Bids) the City of Santa Clara, a chartered municipal Corporation of the State of California ("City"), has indicated that it will receive sealed Bids for the Contract for the construction of the FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT CONTRACT #2403B. The Contract will require Contractor to construct the Project, all in accordance with the scope of Work set forth in the Contract.

City will accept Bids only from Bidders duly licensed in accordance with the California Business & Professions Code. Additionally, Bidder must meet the following requirements, at a minimum, in order to be considered by City to be qualified for award of the Contract:

Three (3) years experience as a continuously operating entity engaged in the performance of similar work.

Within the past five (5) years completed three (3) construction projects of a similar nature and complexity with a contract dollar amount of at least \$2.5 million each.

Evidence of a valid California "A" and "C-10" contractor's license for the Bidder and evidence of requisite licenses for Key Personnel of Bidder or any designated Subcontractor(s).

Bidder's compliance with the minimum qualification requirements in this Document 00450 will also be measured by the experience of the supervisory personnel who will have responsible charge of the various major components of the Work.

If Bidder subcontracts portions of the Work, City, in its determination of whether the minimum qualification requirements have been met, will consider the qualifications of the Subcontractor's supervisory personnel.

The qualifications of the Key Personnel are to be submitted with the SOQ, by providing the information described in paragraph G of this Document 00450.

2. REQUIRED CONTENTS OF SOQ SUBMISSION

- A. Transmittal Letter: The Transmittal Letter shall name the proposed prime contractor, its legal structure (i.e., corporation, partnership, limited partnership, joint venture), and all of the Subcontractors to be used on the Project, and the roles and responsibilities proposed for each firm. If a joint venture or partnership is proposed, Bidder shall identify each partner and/or member of the joint venture and their roles and responsibilities.
- B. Financial Capacity: Include audited or reviewed financial statements for the three (3) most recently completed fiscal years for Bidder and each member of any proposed consortium or joint venture. Also include audited or reviewed financial

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

statements for the three (3) most recently completed fiscal years for any parent company(ies) of Bidder and each member of any proposed consortium or joint venture.

- C. Capability to Provide Required Performance and Payment Bonds. Bidder shall include a letter from a surety duly licensed to do business in the State of California, having a financial rating from A. M. Best Company of [A-7] or better that the surety has agreed to provide Bidder with the required performance and payment bonds in accordance with the requirements set forth in Documents 00610 (Construction Performance Bond) and 00620 (Construction Labor and Material Payment Bond). Such performance and payment bonds shall be in the minimum penal sums provided therein. Bidder shall include authorization that gives the City the right to verify with the surety that the surety, based upon the Bid prices, will issue the required bonds under the conditions stated.
- D. Capability to Provide the Required Insurance. Bidder shall provide a letter from an insurance underwriter(s), having a financial rating from A. M. Best Company of [A-7] or better, confirming that the insurer will provide Bidder the required coverages and amounts specified in Document 00700 (General Conditions).
- E. Human and Physical Resources. Bidder shall identify, describe, and quantify for itself and separately for its "designated Subcontractor(s)" (as defined in Document 00200 Instructions to Bidders), the following technical resources for the construction work:
1. Description and location of manufacturing facilities, naming products and quantifying production capacity and current demand;
 2. Description of field organization(s), naming skills and equipment;
 3. Description of safety program, quality control procedures, and safety experience; and
 4. Evidence of a valid California "A" contractor's license and required licenses of all licensees of persons who are Key Personnel of the Bidder or any designated Subcontractor(s).
- F. Completed Questionnaire. Bidder shall include a completed "Statement of Qualification Questionnaire" in the form attached to this Document 00450 as Attachment "A." Bidder shall make sure its answers to the Questionnaire describe for itself, its Key Personnel proposed, and its designated Subcontractor(s), their public works construction projects of a value of at least \$1 million each. Add supplementary information if necessary.
- G. Resumes of Proposed Key Personnel. Bidder shall provide a resume for each named Key Personnel of Bidder, and Bidder's (including but not limited to the superintendent) designated Subcontractor(s), to include the following:

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

1. Name and proposed assignment of Key Personnel; do not include home addresses or phone numbers
 2. Years of experience;
 3. Education - degrees, schools and years obtained;
 4. Professional registration(s);
 5. Fluency in English;
 6. Experience directly related to above proposed assignment;
 7. At least two (2) client references, including contact names, addresses and telephone numbers; and
 8. Description of projects of a similar nature worked on in the past five (5) years.
- H. Litigation History. Description of litigation history for the past three (3) years, including names of involved parties, nature of dispute, and disposition.
3. **GENERAL CONDITIONS**
- A. General Conditions for Content. The SOQ shall be clear and concise to enable management-oriented personnel to make a thorough evaluation and arrive at a sound determination as to whether the SOQ meets City's requirements. To this end, the SOQ should be so specific, detailed and complete as to demonstrate clearly and fully that the Bidder has a thorough understanding of and has demonstrated knowledge of the requirements to perform the Work (or applicable portion thereof).
 - B. Explanations to SOQ. Any explanation requested by a Bidder regarding the meaning or interpretation of this Document 00450 must be requested in writing and with sufficient time allowed for a reply to reach Bidder before the submission of its SOQ. Oral explanations or instructions will not be binding. Any information provided to any prospective Bidder concerning this Document 00450 will be furnished to all prospective Bidders as an Addendum to the Bidding Documents.
 - C. Definitions. Except as set forth herein, all abbreviations and definitions of terms used in this Document 00450 are as set forth in Document 00700 (General Conditions) or Document 01420 (References and Definitions)

STATEMENT OF QUALIFICATION QUESTIONNAIRE FOLLOWS ON NEXT PAGE

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

ATTACHMENT "A"

Statement of Qualification Questionnaire

Bidders shall complete the entire Statement of Qualification Questionnaire and submit it in accordance with Document 00200 (Instructions to Bidders) and Document 00450 Statement of Qualifications). Failure to complete the questionnaire or inclusion of any false statement(s) shall be grounds for immediate disqualification.

CONTACT INFORMATION

Company Name: _____

Owner of Company: _____

Contact Person: _____

Address: _____

Phone: _____ Fax: _____

PART A: GENERAL INFORMATION

Complete Part A before proceeding to Part B.

1. Does Bidder possess a valid and current California Contractor's license(s) for the work proposed? Yes _____ No _____
2. Does Bidder have a minimum of \$1,000,000 liability insurance coverage? Yes _____ No _____
3. Has Bidder's license been revoked at any time in the last five years? Yes _____ No _____
4. Has Bidder been "default terminated" by an owner (other than for convenience), or has a Surety completed a contract for Bidder within the last five years? Yes _____ No _____
5. Has Bidder been cited more than twice for failure to pay prevailing wages in the last five years? Yes _____ No _____
6. Has Bidder attached copies of its reviewed or audited financial statements and accompanying notes for the latest three years? Yes _____ No _____

Bidder will be immediately disqualified if any answer to questions 1, 2 or 6 is No.

Bidder will be immediately disqualified if any answer to questions 3, 4 or 5 is Yes.

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

PART B: SAFETY, PREVAILING WAGE, DISPUTES AND BONDS

SAFETY

1. Has Cal/OSHA, Federal OSHA, the EPA or any Air Quality Management District cited Bidder in the past five years? Yes _____ No _____ If yes, attach description of each citation.

2. How often does Bidder require documented safety meetings be held for:

Field Supervisor Weekly ____ Bi-weekly ____ Monthly ____ Less than monthly ____
Employees Weekly ____ Bi-weekly ____ Monthly ____ Less than monthly ____
New Hires Weekly ____ Bi-weekly ____ Monthly ____ Less than monthly ____
Subcontractors Weekly ____ Bi-weekly ____ Monthly ____ Less than monthly ____

3. How often does Bidder conduct documented safety inspections?

Quarterly _____ Semi-annually _____ Annually _____ Other _____

4. Does Bidder have home office safety representatives who visit/audit the job site?

Quarterly _____ Semi-annually _____ Annually _____ Other _____

5. What is Bidder's Interstate Experience Modification Rate? _____. (A rating in excess of 1 will constitute grounds for disqualification as non-responsible.)

PREVAILING WAGE PROVISIONS

6. Has Bidder been fined, penalized or otherwise found to have violated any prevailing wage or labor code provision? If yes, attach description of each occurrence.
Yes _____ No _____

LICENSE PROVISIONS

7. Has Bidder changed names or license numbers in the past 10 years? If so, please state reason for change. Yes _____ No _____

Reason: _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

DISPUTES

8. Has Bidder had any claims, litigation, or disputes ending in mediation or arbitration, or termination for cause associated with any project in the past 10 years? If yes, attach description of each such instance including details of total claim amount, settlement amount, and owner's name and phone number. Yes _____ No _____

BONDING

9. Bonding Capacity - Provide documentation from Bidder's surety identifying the following:

Name of bonding company/surety: _____

Name of Surety Agent: _____

Surety Agent address: _____

Surety Agent phone number: _____

Is surety a California-admitted surety? Yes _____ No _____

Is surety listed in the current edition of the California Department of the Treasury's Listing of approved sureties? Yes _____ No _____

List surety's A.M. Best Rating: _____

What is Bidder's total bonding capacity? _____

What percentage rate does Bidder pay for bonds? _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

PART C: EXPERIENCE OF PRIME CONTRACTOR

The unique nature of this Project requires prior similar experience of the firm and the Key Personnel assigned. Summarize similar project experience below and provide the detailed project information requested:

Prime Contractor. List three projects with a construction cost of at least \$1,000,000 each completed in the past five years and indicate who were the Superintendent, the Foreman and the Project Manager.

Project Name	Construction Cost (\$)	Year complete	Name of Project Superintendent	Name of Project Manager	Name of Project Foreman

Bidder shall provide the following information about the three (3) projects named above. Names and references must be current and verifiable. If a separate sheet is used, it must contain all of the following information:

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

2. Project Name: _____
- Location: _____
- Owner: _____
- Owner Contact (name and phone number): _____
- Architect/Engineer: _____
- Architect/Engineer Contact (name and phone number): _____
- Const. Mgr. or Project Mgr. (name and phone number): _____
- Description of Project, Scope of Work Performed: _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- Total Construction Cost: _____
- Total Change Order Amount: _____
- Original Scheduled Date of Completion: _____
- Time Extensions Granted (number of Days): _____
- Actual Date of Completion: _____
- Number of Stop Notices filed by subcontractors or suppliers: _____

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STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

- 3. Project Name: _____
- Location: _____
- Owner: _____
- Owner Contact (name and phone number): _____
- Architect/Engineer: _____
- Architect/Engineer Contact (name and phone number): _____
- Const. Mgr. or Project Mgr. (name and phone number): _____
- Description of Project, Scope of Work Performed: _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- Total Construction Cost: _____
- Total Change Order Amount: _____
- Original Scheduled Date of Completion: _____
- Time Extensions Granted (number of Days): _____
- Actual Date of Completion: _____
- Number of Stop Notices filed by subcontractors or suppliers: _____

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

List Key Personnel that will be assigned to this Project:

Project Manager: _____

Project Superintendent: _____

Field Foreman: _____

Provide resumes for the individuals above identifying their specific experience for this project.

PART D: EXPERIENCE OF DESIGNATED SUBCONTRACTOR(S)

The unique nature of this Project requires prior similar project experience of the designated Subcontractor(s) and the Key Personnel assigned. Summarize similar project experience below and provide the detailed project information requested for each of the designated Subcontractor(s). Also expressly indicate which, if any, of the designated Subcontractor(s)' functions Bidder will perform itself:

Electrical Subcontractor:

List three projects with a construction cost of at least \$1,000,000 each completed in the past five years and indicate who were the Superintendent, the Foreman and the Project Manager.

Project name	Construction Cost (\$)	Year completed	Name of Project Superintendent	Name of Project Manager	Name of Project Foreman

Bidder shall provide the following information about the three (3) projects named above. Names and references must be current and verifiable. If a separate sheet is used, it must contain all of the following information:

1. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

2. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

3. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

List Key Personnel that will be assigned to this Project:

Project Manager: _____

Project Superintendent: _____

Project Foreman: _____

Provide resumes for the individuals above identifying their specific experience for this project.

Earthwork Subcontractor:

List three projects with a construction cost of at least \$1,000,000 each completed in the past five years and indicate who were the Superintendent, the Foreman and the Project Manager.

Project name	Construction Cost (\$)	Year completed	Name of Project Superintendent	Name of Project Manager	Name of Project Foreman

Bidder shall provide the following information about the three (3) projects named above. Names and references must be current and verifiable. If a separate sheet is used, it must contain all of the following information:

1. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

2. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

3. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

List Key Personnel that will be assigned to this Project:

Project Manager: _____

Project Superintendent: _____

Project Foreman: _____

Provide resumes for the individuals above identifying their specific experience for this project.

Structural/Concrete Subcontractor:

List three projects with a construction cost of at least \$1,000,000 each completed in the past five years and indicate who were the Superintendent, the Foreman and the Project Manager.

Project name	Construction Cost (\$)	Year completed	Name of Project Superintendent	Name of Project Manager	Name of Project Foreman

Bidder shall provide the following information about the three (3) projects named above. Names and references must be current and verifiable. If a separate sheet is used, it must contain all of the following information:

1. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____

Value of Change Orders: _____

Original Scheduled Date of Completion: _____

Time Extensions Granted (number of Days): _____

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

2. Project Name: _____

Location: _____

Owner: _____

Owner Contact (name and phone number): _____

Architect/Engineer: _____

Architect/Engineer Contact (name and phone number): _____

Prime Contractor: _____

Prime Contractor Contact (name and phone number): _____

Const. Mgr. or Project Mgr. (name and phone number): _____

Description of Project, Scope of Work Performed: _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Value of Construction Contract: _____
Value of Change Orders: _____
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of Days): _____
Actual Date of Completion: _____
Number of Stop Notices filed by subcontractors or suppliers: _____

3. Project Name: _____
Location: _____
Owner: _____
Owner Contact (name and phone number): _____
Architect/Engineer: _____
Architect/Engineer Contact (name and phone number): _____
Prime Contractor: _____
Prime Contractor Contact (name and phone number): _____
Const. Mgr. or Project Mgr. (name and phone number): _____
Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____
Value of Change Orders: _____
Original Scheduled Date of Completion: _____
Time Extensions Granted (number of Days): _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

Actual Date of Completion: _____

Number of Stop Notices filed by subcontractors or suppliers: _____

List Key Personnel that will be assigned to this Project:

Project Manager: _____

Project Superintendent: _____

Project Foreman: _____

Provide resumes for the individuals above identifying their specific experience for this project.

PART E: FINANCIAL INFORMATION

1. Has Bidder ever reorganized under the protection of the bankruptcy laws?

Yes ___ No ___ If yes, please state when _____

2. If Bidder has had the general liability carrier identified in Document 00420 (Bidder Registration and Safety Experience Form) for less than 5 years, please provide additional information below for balance of the past 5 years.

Agency Name: _____

Contact Name: _____

Phone Number: _____

Carrier: _____ A.M. Best Rating _____

Carrier: _____ A.M. Best Rating _____

Carrier: _____ A.M. Best Rating _____

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

3. Has Bidder ever had insurance terminated by a carrier? Yes _____ No _____
If yes, explain on separate signed sheet marked with correlating cross-reference to this paragraph of the questionnaire.

Bidder hereby declares under penalty of perjury that all the information provided in this questionnaire is true and correct.

SIGNATURE

TITLE

END OF DOCUMENT

DOCUMENT 00450

STATEMENT OF QUALIFICATIONS FOR CONSTRUCTION WORK

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DOCUMENT 00460

SCHEDULE OF MAJOR EQUIPMENT AND MATERIAL SUPPLIERS

The undersigned Bidder represents that, if awarded the Contract, the items of major equipment and materials specified below will be supplied by the manufacturers or suppliers specified below. By so indicating, bidder warrants that the equipment and materials manufacturer and/or supplied by the named manufacturer or supplier will be provided on the Project unless review of submittal information or performance under tests reveals that the equipment or material does not meet Contract requirements. Failure to indicate a manufacturer or supplier listed in the following schedule may render the Bid non-responsive and may be the basis for rejection of the Bid.

<u>Item</u>	<u>Manufacturer or Supplier</u>
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____
6.	_____
7.	_____
8.	_____

Bidder: _____

SIGNATURE

DATE

END OF DOCUMENT

DOCUMENT 00460

SCHEDULE OF MAJOR EQUIPMENT AND MATERIAL SUPPLIERS

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DOCUMENT 00481

NON-COLLUSION AFFIDAVIT

PUBLIC CONTRACT CODE §7106

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

STATE OF CALIFORNIA)

) ss.

COUNTY OF SANTA CLARA)

_____, being first duly sworn, deposes and says that he or she is _____ [Office of Affiant] of _____ [Name of Bidder], the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived or agreed with any bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding, and that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the Bid price of Bidder or any other bidder, or to fix any overhead, profit or cost element of the Bid price, or of that of any other bidder, or to secure any advantage against the City of Santa Clara, or anyone interested in the proposed contract; that all statements contained in the Bid are true; and further, that Bidder has not, directly or indirectly, submitted its Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, Bid depository, or to any member or agent thereof to effectuate a collusive or fraudulent Bid.

DOCUMENT 00481

NON-COLLUSION AFFIDAVIT

Executed under penalty of perjury under the laws of the State of California:

Bidder: _____
Company Name

By: _____
Signature

Print Name: _____

Title: _____

Date: _____

Subscribed and sworn before me _____

This _____ day of _____, 20__

Notary Public of the State of _____

In and for the County of _____

My Commission expires _____ (Seal)

If Bidder is a partnership or a joint venture, this affidavit must be signed and sworn to by every member of the partnership or venture.

If Bidder, including any partner or venturer of a partnership or joint venture is a corporation, this affidavit must be signed by the Chairman, President, or Vice President and by the Secretary, Assistant Secretary, Chief Financial Officer, or Assistant Treasurer.

If Bidder's affidavit on this form is made outside the State of California, the official position of the person taking such affidavit shall be certified according to law.

END OF DOCUMENT

DOCUMENT 00510

NOTICE OF AWARD

_____, 201__

DELIVERY VIA: Certified Mail

BIDDER'S NAME: _____

BIDDER'S ADDRESS: _____

ATTENTION: _____

CONTRACT REFERENCE: City of Santa Clara Contract #2403B

PROJECT REFERENCE: FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT

Congratulations, the intent of this letter is to inform you that the bid you submitted to the City of Santa Clara on _____, 201__, for the above referenced public works contract ("Contract"), has been received and reviewed by City staff. Your firm has been determined to be the lowest responsible and responsive bidder. Based on your bid and City staff recommendation, the Santa Clara City Council has awarded the Contract to your firm for the construction of the FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT (the "Project"). The Contract Price for this Contract is _____ thousand, _____ hundred and _____ dollars and _____ cents (\$_____).

1. However, before the City can execute this Contract and issue a Notice to Proceed to you to begin work on the Project, you must deliver the following documents to the Office of the City Clerk at 1500 Warburton Avenue, Santa Clara, CA 95050, within the next fifteen (15) days (on or before 5:00 p.m. on _____, 201__):
2. Two (2) complete originals of Contract Document 00520 – Agreement. Each copy must have original signature(s) of authorized representatives of your firm on the signature page.
3. One (1) complete original of Contract Document 00610 - Construction Performance Bond, which confirms that the required bond has been purchased in an amount equal to the Contract price. The bond must be fully executed by authorized representatives of your firm and your surety. The signature of the surety must be notarized and the notary form must be attached to Document 00610.
4. One (1) complete original of Contract Document 00620 - Construction Labor and Materials Payment Bond, which confirms that the required bond has been purchased in an amount equal to the Contract price. The bond must be fully executed by authorized representatives of your firm and your surety. The signature of the surety must be notarized and the notary form must be attached to Document 00620.

DOCUMENT 00510

NOTICE OF AWARD

5. One (1) completed original of Contract Document 00630 - Guaranty, with original signature(s) of authorized representatives of your firm on the signature page.
6. Deliver to the City the documentary evidence received or generated by you in preparation of the bid prices for this Contract for purposes of escrowing such documents as set forth in Document 00670 – Escrow Bid Documents.
7. In addition to delivering the above referenced documents directly to the City Clerk, you must also deliver the following documents, as set forth in Contract Document 00822 - Insurance Requirements, directly to the City's insurance compliance contractor, EBIX.
 - A. All of the Certificate(s) of Insurance showing proof that all of the required insurance policies have been purchased and are currently in effect;
 - B. All of the required insurance policy endorsements; and
 - C. Written confirmation that the insurance companies which have issued your insurance policies meet or exceed the required AM Best rating of "A-VI".

Please forward all insurance compliance information to:

EBIX Inc.

City of Santa Clara, Electric Department

P.O. 12010-S2

Hemet, CA 92546-8010

Telephone: (951)766-2280; or

Fax: (770) 325-0409

Email address: ctsantaclara@ebix.com

or

151 North Lyon Avenue

Hemet, CA 92543

DOCUMENT 00510

NOTICE OF AWARD

IMPORTANT NOTE REGARDING YOUR INSURANCE COMPLIANCE DOCUMENTS:

Please do not send the required insurance compliance documents directly to the City offices. Doing so will only delay the necessary review and the issuance of the Notice to Proceed.

IMPORTANT: Please note that failure to comply with any of the above referenced conditions within the time period specified above will entitle City, at its sole discretion, to: 1) consider your Bid abandoned; 2) annul this Notice of Award; and/or 3) declare your Bid security forfeited. Even if the City does not choose to exercise any of these options, any delay in providing said documentation beyond the deadline indicated above will not extend the Contract Time allowed for performing the Work as set forth in the Contract Documents. Any time delay caused by failure to comply with the required documentation set forth in this Notice of Award will be subtracted from the time allowed to perform the Work as specified in Document 00520, of the Contract Documents.

After a Notice to Proceed has been issued and upon commencement of the Work under this Contract, your firm, and each of your subcontractors, must certify and make available for inspection, payroll records on forms provided by the Division of Labor Standards Enforcement, in accordance with Section 1776 of the California Labor Code.

After you have complied with the conditions of this Document 00510 – Notice of Award, the City will execute the agreement return one fully signed copy of Contract Document 00520 - Agreement to you for your records.

Once again, congratulations on being awarded this Contract. We look forward to working with your firm on this Project. If you have any questions regarding this Notice of Award, please contact Kevin Keating at (408) 261-5459.

Sincerely,

JULIO J. FUENTES
City Manager
City of Santa Clara, California,
a chartered California municipal corporation

END OF DOCUMENT

DOCUMENT 00510

NOTICE OF AWARD

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DOCUMENT 00520

AGREEMENT

THIS AGREEMENT, dated this ____ day of _____, 201__, by and between

[Name of Contractor]
whose place of business is located at _____,

[Address of Contractor]

and the CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California ("City") acting under and by virtue of the authority vested in the City by the laws of the State of California.

WHEREAS, City has awarded to Contractor the following contract:

CONTRACT NUMBER 2403B

FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and City agree as follows:

ARTICLE 1. WORK

1. Contractor shall complete all Work specified in the Contract Documents, in accordance with the Specifications, Drawings, and all other terms and conditions of the Contract Documents.

ARTICLE 2. AGENCY AND NOTICES TO CITY

1. City has designated Director of Electric Utility to act as City's Representative, who will represent City in performing City's duties and responsibilities and exercising City's rights and authorities in Contract Documents. City may change the individual(s) acting as City's Representative(s), or delegate one or more specific functions to one or more specific City's Representatives, including without limitation engineering, architectural, inspection and general administrative functions, at any time with notice and without liability to Contractor. Each City's Representative is the beneficiary of all Contractor obligations to City, including without limitation, all releases and indemnities.
2. City has designated ITSELF to act as Consulting Engineer. City may change the identity of the Consulting Engineer at any time with notice and without liability to Contractor.
3. All notices or demands to City under the Contract Documents shall be to City's Representative at:

Director of Electric Utility
Silicon Valley Power
1500 Warburton Avenue
Santa Clara, California 95050

or to such other person(s) and address(es) as City shall provide to Contractor.

DOCUMENT 00520

AGREEMENT

ARTICLE 3. CONTRACT TIME AND LIQUIDATED DAMAGES

1. Contract Time. Contractor shall commence Work at the Site on the date established in the Notice to Proceed. City reserves the right to modify or alter the Commencement Date of the Work. Contractor shall achieve Substantial Completion of the entire Work (other than erosion control and non-substantial punch list items) by _____. Contract Time commences to run as provided in Document 00700 (General Conditions). Contractor shall achieve Final Completion of the entire Work and be ready for Final Payment in accordance with Document 01770 (Contract Closeout) by _____.
2. Liquidated Damages. City and Contractor recognize that time is of the essence of this Agreement and that City will suffer financial loss in the form of contract administration expenses (such as project management and consultant expenses), if all or any part of the Work is not completed within the times specified above, plus any extensions thereof allowed in accordance with the Contract Documents. Consistent with Article 15 of Document 00700 (General Conditions), Contractor and City agree that because of the nature of the Project, it would be impractical or extremely difficult to fix the amount of actual damages incurred by City because of a delay in completion of all or any part of the Work. Accordingly, City and Contractor agree that as liquidated damages for delay Contractor shall pay City:
 - A. \$5,000 for each Day that expires after the time specified herein for Contractor to achieve Substantial Completion of the entire Work until achieved.
 - B. \$7,500 for each Day that expires after the time specified herein for Contractor to achieve Final Completion of the entire Work, until achieved; provided that the amount will be \$1,000 per day until Substantial Completion of the entire Work is achieved.

These measures of liquidated damages shall apply cumulatively and except as provided below, shall be presumed to be the damages suffered by City resulting from delay in completion of the Work.

3. Liquidated damages for delay shall only cover administrative, overhead, interest on bonds, and general loss of public use damages suffered by City as a result of delay. Liquidated damages shall not cover the cost of completion of the Work, damages resulting from defective Work, lost revenues or costs of substitute facilities, or damages suffered by others who then seek to recover their damages from City (for example, delay claims of other contractors, subcontractors, tenants, or other third-parties), and defense costs thereof.

DOCUMENT 00520

AGREEMENT

ARTICLE 4. CONTRACT SUM

- A. City shall pay Contractor the Contract Sum for completion of Work in accordance with Contract Documents as set forth in Contractor's Bid, attached hereto:

CONTRACT SUM (Lump Sum Bid from 00400 – BID FORM)		\$
CONTRACT SUM (In words)	

ARTICLE 5. CONTRACTOR'S REPRESENTATIONS

1. In order to induce City to enter into this Agreement, Contractor makes the following representations and warranties:
 - A. Contractor has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions, and federal, state and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.
 - B. Contractor has examined thoroughly and understood all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, products specifications or reports, available for Bidding purposes, of physical conditions, including Underground Facilities, which are identified in Document 00320 (Geotechnical Data and Existing Conditions), or which may appear in the Drawings. Contractor accepts the determination set forth in these documents and Document 00700 (General Conditions) of the limited extent of the information contained in such materials upon which Contractor may be entitled to rely. Contractor agrees that except for the information so identified, Contractor does not and shall not rely on any other information contained in such reports and drawings.
 - C. Contractor has conducted or obtained and has understood all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Section 5 of this Document 00520) that pertain to the subsurface conditions, as-built conditions, Underground Facilities and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance or furnishing of Work, as Contractor considers necessary for the performance or furnishing of Work at the Contract Sum, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Document 00700 (General Conditions); and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

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AGREEMENT

- D. Contractor has correlated its knowledge and the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- E. Contractor has given City prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by City is acceptable to Contractor.
- F. Contractor is duly organized, existing and in good standing under applicable state law, and is duly qualified to conduct business in the State of California.
- G. Contractor has duly authorized the execution, delivery and performance of this Agreement, the other Contract Documents and the Work to be performed herein. The Contract Documents do not violate or create a default under any instrument, agreement, order or decree binding on Contractor.
- H. Contractor has listed the following Subcontractors pursuant to the Subcontractor Listing Law, California Public Contracting Code §4100 *et seq.* on Document 00430 (Subcontractors List)

ARTICLE 6. CONTRACT DOCUMENTS

- 1. Contract Documents consist of the following documents, including all changes, Addenda and modifications thereto:
 - A. Division 0 – Bidding Requirements
 - Document 00100 Advertisement for Bids
 - Document 00200 Instructions to Bidders
 - Document 00210 Indemnity and Release Agreement
 - Document 00250 Bid Contents, Evaluation, Selection and Award
 - Document 00320 Geotechnical Data and Existing Conditions
 - Document 00400 Bid Forms
 - Document 00411 Bond Accompanying Bid
 - Document 00420 Bidder Registration Form
 - Document 00421 Declaration of Contractor's License Status
 - Document 00430 Subcontractors List Form
 - Document 00440 Affidavit of Compliance with Ethical Standards
 - Document 00441 Ethical Standards for Contractors
 - Document 00450 Statement of Qualifications for Construction Work
 - Document 00460 Schedule of Major Equipment and Material Suppliers
 - Document 00481 Non-Collusion Affidavit
 - B. Division 0 – Contracting Requirements
 - Document 00510 Notice of Award
 - Document 00520 Agreement
 - Document 00550 Notice to Proceed

DOCUMENT 00520

AGREEMENT

Document 00610 Construction Performance Bond
Document 00620 Construction Labor and Material Payment Bond
Document 00630 Guaranty
Document 00650 Agreement and Release of Any and All Claims
Document 00654 Workers' Compensation Insurance Statement
Document 00660 Substitution Request Form
Document 00670 Escrow Bid Documents
Document 00680 Escrow Agreement for Security Deposit in Lieu of Retention

- C. Division 0 – Conditions of the Contract
Document 00700 General Conditions
Document 00800 Supplementary Conditions
Document 00805 Supplementary Conditions – Hazardous Materials
Document 00821 Insurance
Document 00822 Apprenticeship Program
Document 00900 Addenda
- D. Division 1 – General Requirements
Document 01100 – Summary of Work
Document 01200 – Measurement and Payment
Document 01250 – Modification Procedure
Document 01315 – Project Meetings
Document 01320 – Progress Schedules and Reports
Document 01330 – Submittal Procedures
Document 01350 – Special Procedures
Document 01410 – Regulatory Requirements
Document 01411 – Regulatory Requirements for Hazardous Materials
Document 01420 – References and Definitions
Document 01450 – Testing and Inspection
Document 01500 – Temporary Facilities and Controls
Document 01540 – Site Security
Document 01590 – City Mitigation Measures
Document 01600 – Product Requirements
Document 01620 – Product Options
Document 01715 – Existing Underground Facilities
Document 01731 – Cutting and Patching
Document 01740 – Cleaning
Document 01770 – Contract Closeout
Document 01780 – Project Record Documents
- E. Division 2 – Site Construction
Section 02000 – Supplemental General Requirements for Civil Improvements
Section 02050 – Site Demolition
Section 02060 – Asphalt Concrete Demolition
Section 02240 – Erosion Control
Section 02300 – Earthwork

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AGREEMENT

Section 02380 - Caissons
Section 02510 – Water System
Section 02513 – Asphalt Concrete Paving
Section 02585 – Utility Poles
Section 02590 – Site Grounding
Section 02620 – Subdrainage
Section 02630 – Storm Drainage System
Section 02785 – Signage, Stripping and Markings
Section 02810 – Irrigation
Section 02900 – Landscaping
Section 02970 – Landscape Maintenance

F. Division 3 – Concrete

Section 03100 – Cast-In-Place Concrete Formwork
Section 03200 – Concrete Reinforcement
Section 03300 – Cast-In-Place Concrete
Section 03370 – Concrete Curing

I. Division 16 – Electrical

Section 16120 - Wires and Cables
Section 16311 – Line Materials
Section 16390 – Grounding

G. Appendix

Appendix A – All plans and drawings listed on Document 00015 – List of Maps, Drawings, and Sketches

2. There are no Contract Documents other than those listed in this Document 00520, Article 6. Document 00320 (Geotechnical Data and Existing Conditions), and the information supplied therein, are not Contract Documents. The Contract Documents may only be amended, modified or supplemented as provided in Document 00700 (General Conditions).

ARTICLE 7. MISCELLANEOUS

1. Terms used in this Agreement are defined in Document 00700 (General Conditions) and Document 01420 (References and Definitions) and will have the meaning indicated therein.
2. It is understood and agreed that in no instance are the persons signing this Agreement for or on behalf of City or acting as an employee, agent, or representative of City, liable on this Agreement or any of the Contract Documents, or upon any warranty of authority, or otherwise, and it is further understood and agreed that liability of the City is limited and

DOCUMENT 00520

AGREEMENT

confined to such liability as authorized or imposed by the Contract Documents or applicable law.

3. Contractor shall not assign any portion of the Contract Documents, and may subcontract portions of the Contract Documents only in compliance with the Subcontractor Listing Law, California Public Contracting Code §4100 *et seq.*
4. The Contract Sum includes all allowances (if any).
5. In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. §15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time City tenders final payment to Contractor, without further acknowledgment by the parties.
6. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are deemed included in the Contract Documents and on file at City's office, and shall be made available to any interested party on request. Pursuant to Section 1861 of the Labor Code, Contractor represents that it is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor shall comply with such provisions before commencing the performance of the Work of the Contract Documents.
7. Should any part, term or provision of this Agreement or any of the Contract Documents, or any document required herein or therein to be executed or delivered, be declared invalid, void or unenforceable, all remaining parts, terms and provisions shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby. If the provisions of any law causing such invalidity, illegality or unenforceability may be waived, they are hereby waived to the end that this Agreement and the Contract Documents may be deemed valid and binding agreements, enforceable in accordance with their terms to the greatest extent permitted by applicable law. In the event any provision not otherwise included in the Contract Documents is required to be included by any applicable law, that provision is deemed included herein by this reference (or, if such provision is required to be included in any particular portion of the Contract Documents, that provision is deemed included in that portion).
8. This Agreement and the Contract Documents shall be deemed to have been entered into in the County of Santa Clara, State of California, and governed in all respects by California law (excluding choice of law rules). The exclusive venue for all disputes or litigation hereunder shall be in Santa Clara County. Both parties hereby waive their rights under California Code of Civil Procedure Section 394 to file a motion to transfer any action or

DOCUMENT 00520

AGREEMENT

proceeding arising out of the Contract Documents to another venue. Contractor accepts the Claims Procedure in Document 00700, Article 12, established under the California Government Code, Title 1, Division 3.6, Part 3, Chapter 5.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date first set forth above.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

Approved as to form:

RICHARD E. NOSKY, JR.
City Attorney

JULIO J. FUENTES
City Manager

Attest:

1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-0347

ROD DIRIDON JR.
City Clerk

"City"

*[NAME OF BUSINESS/COMPANY]
a _____ (Corp./Partnership/Trust, etc.)

By: _____
(Signature of person executing the Agreement on behalf of Contractor.)

(Please Print or Type Name)

Title: _____

Local Address: _____

Telephone: (____) _____ - _____

Fax: (____) _____ - _____

"Contractor"

END OF DOCUMENT

DOCUMENT 00550
NOTICE TO PROCEED

The Notice of Proceed for this contract will be correspondence from the City of Santa Clara to the Contractor and will be in a form substantially similar to that shown below.

Date: _____

Contact Name: _____

Contact Title: _____

Company Name: _____

Mailing Address: _____

_____ City _____ State _____ Zip

Contract Ref. PUBLIC WORKS CONTRACT #2403B

Project Ref. **FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT**

You are notified that the Contract Time under the above Contract will commence to run on _____ 201____. On that date, you are to start performing your obligations with respect to Work at the Site under the Contract Documents. In accordance with Article 3 of Document 00520 (Agreement), the dates of Substantial Completion and Final Completion for the entire Work are _____ and _____, respectively.

DOCUMENT 00550
NOTICE TO PROCEED

Before you may start any Work at the Site, you must:

1. Submit certified Safety Program and related information.
2. Submit copies of applicable permits
3. Submit approved fire protection plan, if applicable
4. Attend preconstruction conference.
5. [Additional Conditions as Necessary]

Silicon Valley Power

By: _____

Its: _____

END OF DOCUMENT

DOCUMENT 00610

CONSTRUCTION PERFORMANCE BOND

This Construction Performance Bond ("Bond"), dated _____, 201____, is issued in the amount of _____ Dollars, (\$_____), (the "Penal Sum ") which is equal to one hundred percent of the Contract Price, and is entered into by and between the Contractor and the Surety to ensure the faithful performance of the Construction Contract defined below. This Bond consists of this page and the Bond Terms and Conditions, Paragraphs 1 through 13, attached and incorporated by this reference. The Contractor and Surety are the parties to this Bond, which has been issued for the benefit of the City of Santa Clara, California, a chartered California municipal corporation ("City") and in compliance with the terms of the Construction Contract. Any singular reference to the Contractor, Surety, City or other party shall be considered plural where applicable.

The City of Santa Clara Construction Contract to which this Bond applies is:

CONTRACT 2403B THE FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT

Awarded _____, 201__ in the amount of \$_____ ("Contract Price") The Contractor and Surety each acknowledge and accept the terms and conditions of this Bond as evidenced by the following signatures of their representatives. The Contractor and Surety each specifically represent that the individual representatives who have signed below are duly authorized to execute this Bond on its behalf. It is the intent of the Parties that this Bond shall become operative on the date first set forth above.

CONTRACTOR AS PRINCIPAL:

SURETY:

Name: _____

Name: _____

Principal Place of Business:

Principal Place of Business:

Address: _____

Address: _____

City/State/Zip: _____

City/State/Zip: _____

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

(Please Note: Surety Signature must be notarized)

Please Apply Corporate Seal Here

Please Apply Corporate Seal Here)

Approved as to Form:

Date: _____

City Attorney

DOCUMENT 00610

CONSTRUCTION PERFORMANCE BOND

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to City for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.
2. If Contractor completely and properly performs all of its obligations under the Construction Contract, Surety and Contractor shall have no obligation under this Bond.
3. If there is no City Default, Surety's obligation under this Bond shall arise after:
 - A. City has declared a Contractor Default under the Construction Contract pursuant to the terms of the Construction Contract; and
 - B. City has agreed to pay the Balance of the Contract Price:
 1. To Surety in accordance with the terms of this Bond and the Construction Contract; or
 2. To a contractor selected to perform the Construction Contract in accordance with the terms of this Bond and the Construction Contract.
4. When City has satisfied the conditions of paragraph 3, Surety shall promptly (within 30 days) and at Surety's expense elect to take one of the following actions:
 - A. Arrange for Contractor, with consent of City, to perform and complete the Construction Contract (but City may withhold consent, in which case the Surety must elect an option described in paragraphs 4.2, 4.3 or 4.4, below); or
 - B. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; provided, that Surety may not select Contractor as its agent or independent contractor without City's consent; or
 - C. Undertake to perform and complete the Construction Contract by obtaining bids from qualified contractors acceptable to City for a contract for performance and completion of the Construction Contract, and, upon determination by City of the lowest responsible bidder, arrange for a contract to be prepared for execution by City and the contractor selected with City's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract; and, if Surety's obligations defined in paragraph 6, below, exceed the Balance of the Contract Price, then Surety shall pay to City the amount of such excess; or
 - D. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances, and, after investigation and consultation with City, determine in good faith its monetary obligation to City under paragraph 6, below, for the performance and completion of the Construction Contract and, as soon as practicable after the amount is determined, tender payment therefor to City with full explanation of the payment's calculation. If City accepts Surety's tender under this paragraph 4.4, City may still

DOCUMENT 00610

CONSTRUCTION PERFORMANCE BOND

hold Surety liable for future damages then unknown or unliquidated resulting from the Contractor Default. If City disputes the amount of Surety's tender under this paragraph 4.4, City may exercise all remedies available to it at law to enforce Surety's liability under paragraph 6, below.

5. If Surety does not proceed as provided in paragraph 4, above, then Surety shall be deemed to be in default on this Bond ten days after receipt of an additional written notice from City to Surety demanding that Surety perform its obligations under this Bond. At all times City shall be entitled to enforce any remedy available to City at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform work, protect work, mitigate damages, advance critical work to mitigate schedule delay, or coordinate work with other consultants or contractors.
6. Surety's monetary obligation under this Bond is limited by the Amount of this Bond identified herein as the Penal Sum. This monetary obligation shall augment the Balance of the Contract Price. Subject to these limits, Surety's obligations under this Bond are commensurate with the obligations of Contractor under the Construction Contract. Surety's obligations shall include, but are not limited to:
 - A. The responsibilities of Contractor under the Construction Contract for completion of the Construction Contract and correction of defective work;
 - B. The responsibilities of Contractor under the Construction Contract to pay liquidated damages, and for damages for which no liquidated damages are specified in the Construction Contract, actual damages caused by non-performance of the Construction Contract including, but not limited to, all valid and proper backcharges, offsets, payments, indemnities, or other damages;
 - C. Additional legal, design professional and delay costs resulting from Contractor Default or resulting from the actions or failure to act of the Surety under paragraph 4, above (but excluding attorney's fees incurred to enforce this Bond).
No right of action shall accrue on this Bond to any person or entity other than City or its successors or assigns.
7. Surety hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. Surety consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required thereunder, shall release or exonerate Surety on this Bond or in any way affect the obligations of Surety on this Bond.
8. Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction where a proceeding is pending between City and Contractor regarding the Construction Contract, or in the courts of the County of Santa Clara, or in a court of competent jurisdiction in the location in which the work is located. Communications from City to Surety under paragraph 3.1 of this Bond shall be deemed to include the necessary agreements under paragraph 3.2 of this Bond unless expressly stated otherwise.

DOCUMENT 00610

CONSTRUCTION PERFORMANCE BOND

9. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in Document 00520 (Agreement). Actual receipt of notice by Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.
10. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein.
11. Definitions.
 - A. Balance of the Contract Price: The total amount payable by City to Contractor pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved modifications to the Construction Contract.
 - B. Construction Contract: The agreement between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.
 - C. Contractor Default: Material failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract including, but not limited to, "default" or any other condition allowing a termination for cause as provided in Document 00700 (General Conditions).
 - D. City Default: Material failure of City, which has neither been remedied nor waived, to pay Contractor progress payments due under the Construction Contract or to perform other material terms of the Construction Contract, if such failure is the cause of the asserted Contractor Default and is sufficient to justify Contractor termination of the Construction Contract.
12. Surety shall submit following documents along with this Construction Performance Bond:
 - A. Verification that Surety is admitted to transact surety business the State of California; and
 - B. Copy of Surety's Certificate of authority issued by the insurance Commissioner of the State of California along with a statement that said Certificate has not been surrendered, revoked, cancelled, annulled or suspended.

END OF DOCUMENT

DOCUMENT 00620

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

This Construction Labor and Material Payment Bond ("Bond"), dated _____, 201__, is issued in the amount of _____ Dollars, (\$_____), (the "Penal Sum ") which is equal to one hundred percent of the Contract Price, and is entered into by and between the Contractor and the Surety to ensure the payment of claimants under the Construction Contract defined below. This Bond consists of this page and Bond Terms and Conditions, Paragraphs 1 through 14, attached and incorporated by this reference. The Contractor and Surety are the parties to this Bond, which has been issued for the benefit of the City of Santa Clara, California, a chartered California municipal corporation ("City") in compliance with the terms of the Construction Contract. Any singular reference to the Contractor, Surety, City or other party shall be considered plural where applicable.

The City of Santa Clara Construction Contract to which this Bond applies is:

CONTRACT 2403B THE FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT

Awarded _____, 201__ in the amount of \$_____ ("Contract Price") The Contractor and Surety each acknowledge and accept the terms and conditions of this Bond as evidenced by the following signatures of their representatives. The Contractor and Surety each specifically represent that the individual representatives who have signed below are duly authorized to execute this Bond on its behalf. It is the intent of the Parties that this Bond shall become operative on the date first set forth above.

CONTRACTOR AS PRINCIPAL:

SURETY:

Name: _____

Name: _____

Principal Place of Business:

Principal Place of Business:

Address: _____

Address: _____

City/State/Zip: _____

City/State/Zip: _____

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

(Please Note: Surety Signature must be notarized)

Please Apply Corporate Seal Here

Please Apply Corporate Seal Here)

Approved as to Form:

City Attorney

Date: _____

DOCUMENT 00620

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to City and to Claimants, to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to City, this obligation shall be null and void if Contractor:
 - A. Promptly makes payment, directly or indirectly, for all sums due Claimants; and
 - B. Defends, indemnifies and holds harmless City from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided City has promptly notified Contractor and Surety (at the address set forth on the signature page of this Bond) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to Contractor and Surety, and provided there is no City Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly through its Subcontractors, for all sums due Claimants. If Contractor or its Subcontractors, however, fail to pay any of the persons named in Section 3181 of the California Civil Code, or amounts due under the Unemployment Insurance Code with respect to Work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Contractor or Subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such Work and labor, then Surety shall pay for the same, and also, in case suit is brought upon this Bond, a reasonable attorney's fee, to be fixed by the court.
4. Consistent with the California Mechanic's Lien Law, Civil Code §3082, *et seq.*, Surety shall have no obligation to Claimants under this Bond unless the Claimant has satisfied all applicable notice requirements.
5. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety under this Bond.
6. Amounts due Contractor under the Construction Contract shall be applied first to satisfy claims, if any, under any Construction Performance Bond and second, to satisfy obligations of Contractor and Surety under this Bond.
7. City shall not be liable for payment of any costs, expenses, or attorney's fees of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

DOCUMENT 00620

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

8. Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations. Surety further hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Construction Contract, or to the Work to be performed thereunder, or materials or equipment to be furnished thereunder or the Specifications accompanying the same, shall in any way affect its obligations under this Bond, and it does hereby waive any requirement of notice or any such change, extension of time, alteration or addition to the terms of the Construction Contract or to the Work or to the Specifications or any other changes.
9. Suit against Surety on this Bond may be brought by any Claimant, or its assigns, at any time after the Claimant has furnished the last of the labor or materials, or both, but, per Civil Code §3249, must be commenced before the expiration of six months after the period in which stop notices may be filed as provided in Civil Code §3184.
10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to City shall be mailed or delivered as provided in Document 00520 (Agreement). Actual receipt of notice by Surety, City or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.
11. This Bond has been furnished to comply with the California Mechanic's Lien Law including, but not limited to, Civil Code §§3247, 3248, *et seq.* Any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirements shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
13. Definitions.
 - A. Claimant: An individual or entity having a direct contract with Contractor or with a Subcontractor of Contractor to furnish labor, materials or equipment for use in the performance of the Contract, as further defined in California Civil Code §3181. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a stop notice might be asserted. The term Claimant shall also include the Unemployment Development Department as referred to in Civil Code §3248(b).
 - B. Construction Contract: The agreement between City and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.

DOCUMENT 00620

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

- C. City Default: Material failure of City, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract, provided that failure is the cause of the failure of Contractor to pay the Claimants and is sufficient to justify termination of the Construction Contract.
14. Surety shall submit following documents along with this Construction Labor and Material Payment Bond:
- A. Verification that Surety is admitted to transact surety business in the State of California; and
 - B. Copy of Surety's Certificate of authority issued by the insurance Commissioner of the State of California along with a statement that said Certificate has not been surrendered, revoked, cancelled, annulled or suspended.

END OF DOCUMENT

DOCUMENT 00630

GUARANTY

TO THE CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California ("City"), for construction of

**THE FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT
SANTA CLARA, CALIFORNIA**

The undersigned guarantees all construction performed on this Project and also guarantees all material and equipment incorporated therein.

Contractor hereby grants to City for a period of one (1) year following the date of Final Completion, or such longer period specified in the Contract Documents, its unconditional warranty of the quality and adequacy of all of the Work including, without limitation, all labor, materials and equipment provided by Contractor and its Subcontractors of all tiers in connection with the Work.

Neither final payment nor use or occupancy of the Work performed by the Contractor shall constitute an acceptance of Work not done in accordance with this Guaranty or relieve Contractor of liability in respect to any express warranties or responsibilities for faulty materials or workmanship. Contractor shall remedy any defects in the Work and pay for any damage resulting therefrom, which shall appear within one year, or longer if specified, from the date of Final Completion.

If within one year after the date of Final Completion, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to City and in accordance with City's written instructions, correct such defective Work. Contractor shall remove any defective Work rejected by City and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, City may have the defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct defective Work, or defects are discovered outside the correction period, City shall have all rights and remedies granted by law.

Inspection of the Work shall not relieve Contractor of any of its obligations under the Contract Documents. Even though equipment, materials, or Work required to be provided under the Contract Documents have been inspected, accepted, and estimated for payment, Contractor shall, at its own expense, replace or repair any such equipment, material, or Work found to be defective or otherwise not to comply with the requirements of the Contract Documents up to the end of the guaranty period.

All abbreviations and definitions of terms used in this Agreement shall have the meanings set forth in the Contract Documents, including, without means of limitation, Document 01420 (References and Definitions).

The foregoing Guaranty is in addition to any other warranties of Contractor contained in the Contract Documents, and not in lieu of, any and all other liability imposed on Contractor under the Contract Documents and at law with respect to Contractor's duties, obligations, and

DOCUMENT 00630

GUARANTY

performance under the Contract Documents. In the event of any conflict or inconsistency between the terms of this Guaranty and any warranty or obligation of the Contractor under the Contract Documents or at law, such inconsistency or conflict shall be resolved in favor of the higher level of obligation of the Contractor.

Contractor's Name

Company Name

Signature

Title

Address

City/State/Zip

Date

END OF DOCUMENT

DOCUMENT 00650

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THIS AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS ("Agreement and Release"), made and entered into this ____ day of _____, 201__, by and between the _____ ("City"), and _____ ("Contractor"), whose place of business is at _____.

RECITALS

- 1. City and Contractor entered into Contract #2403B (the "Contract").
2. The Work under the Contract has been completed.

Now, therefore, it is mutually agreed between City and Contractor as follows:

AGREEMENT

- 1. Contractor will not be assessed liquidated damages except as detailed below:

Table with 2 columns: Description and Amount. Rows include Original Contract Sum, Modified Contract Sum, Payment to Date, Liquidated Damages, and Payment Due Contractor.

- 2. Subject to the provisions of this Agreement and Release, City will forthwith pay to Contractor the sum of \$ _____ Dollars and _____ Cents (\$ _____) under the Contract, less any amounts withheld under the Contract or represented by any Notice to Withhold Funds on file with City as of the date of such payment.

- 3. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against City arising from the Contract, except for the claims described in paragraph 4 of this Document 00650. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against City, and all if its agents, employees, consultants (including without limitation Consulting Engineer), inspectors, representatives, assignees and transferees except for the Disputed Claims set forth in paragraph 4 of this Document 00650. Nothing in this Agreement and Release shall limit or modify Contractor's continuing obligations described in paragraph 6 of this Document 00650.

- 4. The following claims are disputed (hereinafter, the "Disputed Claims") and are specifically excluded from the operation of this Agreement and Release:

DOCUMENT 00650

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

Claim No. Date Submitted Description of Claim Amount of Claim

(Insert information, including attachment if necessary)

5. Consistent with California Public Contract Code Section 7100, Contractor hereby agrees that, in consideration of the payment set forth in paragraph 2 of this Document 00650, Contractor hereby releases and forever discharges City, and all of its agents, employees, consultants, inspectors, assignees and transferees from any and all liability, claims, demands, actions or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract
6. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.
7. Contractor shall immediately defend, indemnify and hold harmless the City of Santa Clara, Santa Clara County, any of their Representatives, Engineers, and all of their agents, employees, consultants, inspectors, assignees and transferees, from any and all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities that may be asserted against them by any of Contractor's suppliers and/or Subcontractors of any tier and/or any suppliers to them for any and all labor, materials, supplies and equipment used, or contemplated to be used in the performance of the Contract, except for the Disputed Claims set forth in paragraph 4 of this Document 00650.
8. Contractor hereby waives the provisions of California Civil Code Section 1542, which provides as follows:

A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.
9. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable, and if any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal or other law, ruling, or regulation, then such provision, or part thereof shall remain in force and effect only to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.
10. Contractor represents and warrants that it is the true and lawful owner of all claims and other matters released pursuant to this Agreement and Release, and that it has full right, title and authority to enter into this instrument. Each party represents and warrants that it has been represented by counsel of its own choosing in connection with this Agreement and Release.
11. All rights of City shall survive completion of the Work or termination of the Contract, and execution of this Agreement and Release.

*** CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING ***

DOCUMENT 00650

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THE CITY OF SANTA CLARA,

a chartered Municipal Corporation of the State of California

RICHARD E. NOSKY, JR.
City Attorney

JULIO J. FUENTES
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-6771

ATTEST:

ROD DIRIDON, JR.
City Clerk

*INSERT CONTRACTOR'S NAME

*choose one: corporation/partnership/individual

By: _____
(Signature of Person executing the Agreement on behalf
of Contractor)

Name: _____

Title: _____

Local Address: _____

Telephone () _____

Fax: () _____

"CONTRACTOR"

END OF DOCUMENT

DOCUMENT 00650

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

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DOCUMENT 00654

WORKERS' COMPENSATION INSURANCE STATEMENT

Contractor hereby states the following:

1. California Labor Code Section 1861 - Certification by Contractor regarding Workers' Compensation Insurance Requirements

I am aware of the provisions of Section 3700 of the Labor Code of the State of California, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the Work under this Contract.

2. California Labor Code Section 3800 - Declaration verifying Workers' Compensation Insurance Coverage

In the event the Contractor is determined to be the lowest responsible and responsive bidder and is awarded this Contract by the City, Contractor shall verify under penalty of perjury, and provide evidence or confirmation of the existence and status of its Workers' Compensation Insurance Policy. Such information shall be provided by the Contractor in a form acceptable to the City Attorney or the City's insurance compliance representatives within the time period specified in Document 00510, Notice of Award, and shall include, but not be limited to, evidence or confirmation of the following:

- A. The Contractor has purchased and is maintaining a valid Workers' Compensation Insurance Policy in a form approved by the California Insurance Commissioner, and that said Workers' Compensation Insurance Policy is in full force and effect on behalf of the Contractor;
- B. The full deposit premium on the policy has been paid;
- C. The coverage afforded to the Contractor under its Workers' Compensation Insurance Policy is in accordance with the Workers' Compensation Law of California and complies with California statutory limits;
- D. Verification of the expiration date of the Contractor's Workers' Compensation Insurance Policy;
- E. Advance written notice shall be given to the City in the event of cancellation of the policy. The undersigned shall provide such notice to the City of Santa Clara, Office of the City Clerk at 1500 Warburton Avenue, Santa Clara, CA 95050 within the time period specified in Document 00821, Insurance; and
- F. The policy includes a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

DOCUMENT 00654

WORKERS' COMPENSATION INSURANCE STATEMENT

Bidder: _____
Company Name

By: _____
Signature

Print Name: _____

Title: _____

Date: _____

END OF DOCUMENT

DOCUMENT 00660

SUBSTITUTION REQUEST FORM

To: The City of Santa Clara, a chartered Municipal Corporation of the State of California ("City")

Project: FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT CONTRACT #2403B

Contractor: _____

Subcontractor/Supplier: _____

Drawing Sheet Reference/Detail No: _____

The undersigned Bidder submits for consideration the following equipment instead of the specified item for the above project:

Document	Paragraph	Specified Item
_____	_____	_____
_____	_____	_____
_____	_____	_____

Proposed Substitution: _____

The undersigned encloses the information required herein. If this Document 00660 is being submitted by a Bidder wishing to use "or equal" item(s) as provided in Document 00200 (Instructions to Bidders), the undersigned Bidder must also enclose the technical information (other than cost) otherwise required for a post-Award of Contract Request for Substitution ("RFS") under Document 01600 (Product Requirements). However, If this Document 00660 is being submitted under provisions of Contract Documents after Award of Contract, the undersigned Contractor must include all information required under Document 1600 (Product Requirements).

The undersigned has (a) attached manufacturer's literature, including complete technical data and laboratory test results, if applicable, (b) attached an explanation of why proposed substitution is a true equivalent to specified item, (c) included complete information on changes to Drawings and Specifications that the proposed substitution will require for its proper installation, and (d) filled in the blanks below:

DOCUMENT 00660

SUBSTITUTION REQUEST FORM

1. Does the substitution affect dimensions shown on Drawings?

2. Are the manufacturer's guarantees and warranties on the proposed substitution items identical to those on the specified items? If there are differences, please specify each and every difference in detail.

3. What effect does the substitution have on other contractors, trades, or suppliers?

4. What are the differences between the proposed substitution and the specified item? If proposed substitution has a color or pattern, provide a color board showing proposed substitution in relation to the other adjacent colors and patterns.

5. Will granting the requested substitution cause any schedule delay? (If yes, please explain)

The undersigned Bidder certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item.

DOCUMENT 00660

SUBSTITUTION REQUEST FORM

Submitted by:

For Use by City:

Bidder/Contractor

[note applicable]

____ Accepted ____ Accepted as Noted

____ Not Accepted ____ Received Too Late

Signature

Name

By: _____

City's Representative

Address

Date: _____

City/State/Zip

Remarks: _____

Telephone: _____

Date: _____

END OF DOCUMENT

DOCUMENT 00660
SUBSTITUTION REQUEST FORM

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DOCUMENT 00670

ESCROW BID DOCUMENTS

1. Requirements for Escrow Bid Documents.

- A. Within the time period established in Document 00200 -Instructions to Bidders and Document 00510 – Notice of Award, Contractor shall submit to City a set of Escrow Bid Documents as defined in paragraph 2 below. Escrow Bid Documents will be used only in the manner and for the purposes described in this Document 00670.
- B. The submission of the Escrow Bid Documents, as with the bonds and insurance documents required under Document 00200 (Instructions to Bidders), is considered an essential part of the Contract award. Should Contractor fail to make the submission within the allowed time specified, Contractor may be deemed to have failed to enter into the Contract, Contractor shall forfeit the amount of its Bid security accompanying Contractor's Bid, and City may award the Contract to the next lowest responsive responsible Bidder.
- C. NO PAYMENTS WILL BE MADE, NOR WILL CITY ACCEPT CHANGE ORDER REQUESTS UNTIL THE ABOVE-REQUIRED INFORMATION IS SUBMITTED AND APPROVED. ALTERNATIVELY, CITY MAY DECLARE THE BID NON-RESPONSIVE.
- D. Contractor shall submit the Escrow Bid Documents, in person by an authorized representative of the Contractor, to:

Kevin Keating
1500 Warburton Ave.
Santa Clara, CA 95050

2. Scope of Escrow Bid Documents.

- A. Within the time period specified in Document 00200 - Instructions to Bidders and Document 00510 – Notice of Award, Contractor shall submit one copy of all documentary information received or generated by Contractor in preparation of Bid prices for the Contract Documents, as specified in paragraphs 5 and 6 of this Document 00670. This material is referred to in this Document 00670 as the "Escrow Bid Documents." Contractor's Escrow Bid Documents will be held in escrow as provided in this Document 00670.
- B. Contractor represents and agrees, as a condition of award of the Contract, that the Escrow Bid Documents constitute all written information used in the preparation of its Bid, and that no other written Bid preparation information shall be considered in resolving disputes or claims or may be considered in legal proceedings. Contractor also agrees that nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract Documents. Contractor is advised that the Escrow Bid Documents will only be used as a guide in the resolution of disputes and claims.

DOCUMENT 00670

ESCROW BID DOCUMENTS

3. Ownership of Escrow Bid Documents.
 - A. The Escrow Bid Documents are, and shall always remain, the property of Contractor, subject to joint review by City and Contractor, as provided in this Document 00670.
 - B. City stipulates and expressly acknowledges that the Escrow Bid Documents constitute trade secrets. This acknowledgement is based on City's express understanding that the information contained in the Escrow Bid Documents is not known outside Contractor's business, is known only to a limited extent and only by a limited number of Contractor's employees, is safeguarded while in Contractor's possession, is extremely valuable to Contractor and could be extremely valuable to Contractor's competitors by virtue of it reflecting Contractor's contemplated construction techniques. City further acknowledges that the Escrow Bid Documents and the information contained in them are made available to City only because such action is an express pre-requisite to award of the Contract. City agrees to safeguard the Escrow Bid Documents, and all information contained in them, against disclosure to the fullest extent permitted by law, consistent with paragraph 4 of this Document 00670.
4. Escrow Bid Documents may be used in the determination of price adjustments and change orders and in the settlement of disputes and claims. If used in legal proceedings, Escrow Bid Documents shall be subject to an appropriate protective order limiting their disclosure.
5. Format and Contents of Escrow Bid Documents.
 - A. Contractor may submit Escrow Bid Documents in their usual cost-estimating format; a standard format is not required. Contractor shall prepare and submit the Escrow Bid Documents in English.
 - B. City requires Contractor to itemize clearly in the Escrow Bid Documents the estimated costs of performing the work of each Bid item contained in Contractor's Bid. Contractor shall separate Bid items into sub-items as required to present a detailed cost estimate and allow a detailed cost review. The Escrow Bid Documents shall include all Subcontractor bids or quotes, supplier bids or quotes, quantity take-offs, crews, equipment, calculations of rates of production and progress, copies of quotes from Subcontractors and suppliers, and memoranda, narratives, add/deduct sheets, and all other information used by Contractor to arrive at the prices contained in the Bid. Escrow Bid Documents shall include costs of scheduled maintenance, depreciation, fleet rental expense discounts and incentives, and similar cost adjustments if used by Contractor to calculate its Bid prices. Estimated costs shall be broken down into Contractor's usual estimate categories such as direct labor, repair labor, equipment ownership and operation, expendable materials, permanent materials and subcontract costs as appropriate. Plant and equipment and indirect costs should be detailed in Contractor's usual format. Contractor shall identify its allocation of indirect costs, contingencies, markup and other items to each Bid item.

DOCUMENT 00670

ESCROW BID DOCUMENTS

- C. Contractor shall identify all costs. For Bid items amounting to less than \$10,000, Contractor may estimate costs without a detailed cost estimate, provided that Contractor includes applicable labor, equipment, materials and subcontracts, and allocates applicable indirect costs, contingencies and markup.
 - D. Bid documents provided by City should not be included in the Escrow Bid Documents unless needed to comply with these requirements.
6. Submittal of Escrow Bid Documents.
- A. Contractor shall submit the Escrow Bid Documents within the time period set forth in and Document 00510 – Notice of Award. The container shall be clearly marked on the outside with Contractor's name, date of submittal, project name and the words "Escrow Bid Documents - Open only in the presence of Authorized Representatives of both City and Contractor." City will review the Escrow Bid Documents for initial compliance. City has three Days after receipt of Bidder's Escrow Bid Documents to demand additional information.
 - B. By submitting Escrow Bid Documents, Contractor represents that the material in the Escrow Bid Documents constitutes all the documentary information used in preparation of the Bid and that Contractor has personally examined the contents of the Escrow Bid Documents container and has found that the documents in the container are complete. Contractor agrees that it will not introduce or rely on any other documents to prove how it prepared its Bid.
 - C. If Contractor's proposal is based upon subcontracting any part of the Work, each Subcontractor whose total subcontract price exceeds five percent of the total Contract Sum proposed by Contractor, shall provide separate Escrow Documents to be included with those of Contractor. Such documents shall be opened and examined in the same manner and at the same time as the examination described above for Contractor.
 - D. If Contractor wishes to subcontract any portion of the Work after award, City retains the right to require Contractor to submit Escrow Documents for the Subcontractor before approval of the subcontract.
7. Storage, Examination, and Final Disposition of Escrow Bid Documents.
- A. The Escrow Bid Documents will be placed in escrow until Final Completion of Work on the Project, in a mutually agreeable institution. Contractor shall pay the cost of storage for the Escrow Bid Documents until that time. The storage facilities shall be the appropriate size for all the Escrow Bid Documents and located conveniently to both City's and, to the extent reasonably possible, Contractor's offices, but in no event outside the County of Santa Clara.

DOCUMENT 00670

ESCROW BID DOCUMENTS

- B. Both City and Contractor shall examine the Escrow Bid Documents, at any time deemed necessary by either City or Contractor, to assist in the negotiation of price adjustments and change orders or the settlement of disputes and claims. Examination of the Escrow Bid Documents is subject to the following conditions:
1. As trade secrets, the Escrow Bid Documents are proprietary and confidential under paragraph 3.b. of this Document 00670.
 2. City and Contractor (and any Subcontractor, to the extent Escrow Bid Documents are required by a Subcontractor) shall each designate in writing to the other party(s) at least seven Days prior to any examination, representatives who are authorized to examine the Escrow Bid Documents. Except as otherwise provided in a court order, no other persons shall have access to the Escrow Documents.
 3. Except as otherwise provided in a court order, access to the documents may take place only in the presence of duly designated representatives of both City and Contractor. If Contractor fails to designate a representative or appear for joint examination on seven Days' notice, then City's representative may examine the Escrow Bid Documents upon an additional three (3) days' notice.
- C. Following Final Completion of Work on the Project and achievement of final settlement, City shall direct the escrow agent holding the Escrow Bid Documents in writing to return those documents to Contractor.

END OF DOCUMENT

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

P.C.C. §22300

THIS ESCROW AGREEMENT ("Escrow Agreement") is made and entered into this ____ day of _____, 201__, by and between the CITY OF SANTA CLARA, a chartered Municipal Corporation of the State of California (hereinafter "City"), whose address is 1500 Warburton Avenue, Santa Clara, California 95050; _____ ("Contractor"), whose place of business is located at _____; and City, as escrow agent OR _____, a state or federally chartered bank in the State of California, whose place of business is located at _____ ("Escrow Agent").

For consideration hereinafter set forth, City, Contractor and Escrow Agent agree as follows:

- 1. Pursuant to Section 22300 of Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by City pursuant to Contract #2403B entered into between City and Contractor for the FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT in the amount of \$_____ dated _____, 201__ (the "Contract"). Alternatively, on written request of Contractor, City shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify City within ten Days of the deposit. The market value of the securities at the time of substitution shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between City and Contractor.

Securities shall be held in name of _____, and shall designate Contractor as the beneficial owner.

- 2. City shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified in paragraph 1 of this Document 00680.
- 3. When City makes payment(s) of retention earned directly to Escrow Agent, Escrow Agent shall hold said payment(s) for the benefit of Contractor until the time that the escrow created under this Escrow Agreement is terminated. Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when City pays Escrow Agent directly.
- 4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of City. Such expenses and payment terms shall be determined by City, Contractor, and Escrow Agent.

DOCUMENT 00680

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to City.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from City to Escrow Agent that City consents to withdrawal of amount sought to be withdrawn by Contractor.
7. City shall have the right to draw upon the securities in event of default by Contractor. Upon seven Days written notice to Escrow Agent from City of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by City.
8. Upon receipt of written notification from City certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.
9. Escrow Agent shall rely on written notifications from City and Contractor pursuant to paragraphs 5 through 8, inclusive, of this Document 00680 and City and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth.
10. Names of persons who are authorized to give written notice or to receive written notice on behalf of City and on behalf of Contractor in connection with the foregoing, and exemplars of their respective are as follows:

On behalf of City:

On behalf of Contractor:

Title

Title

Name

Name

Signature

Signature

Address

Address

City/State/Zip

City/State/Zip

DOCUMENT 00680

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

On behalf of Escrow Agent:

Title

Name

Signature

Address

City/State/Zip

DOCUMENT 00680

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

At the time the Escrow Account is opened, City and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Document 00680.

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

City

Contractor

Title

Title

Name

Name

Signature

Signature

Address

Address

City/State/Zip

City/State/Zip

On behalf of Escrow Agent:

REVIEWED AS TO FORM:

Title

Richard E. Nosky, Jr. City Attorney

Name

Signature

Date

Address

City/State/Zip

END OF DOCUMENT

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GENERAL CONDITIONS

1. GENERAL

A. Documents

Contract Documents are complementary; what is called for by one is as binding as if called for by all. Contract Documents shall not be construed to create a contractual relationship of any kind between (1) Engineer or any City's Representative and Contractor; (2) City and/or its representatives and (except as provided in paragraph 13.1 below) a Subcontractor, sub-Subcontractor, or supplier of any Project labor, materials, or equipment; or (3) between any persons or entities other than City and Contractor. City shall be deemed to be an intended third-party beneficiary of each agreement referenced in clause (2) above, and each such agreement shall so provide. Contractor is fully responsible for Contractor's own acts and omissions. Contractor is responsible for all acts and omissions of its Subcontractors, suppliers, and other persons and organizations performing or furnishing any of the Work, labor, materials, or equipment under a direct or indirect contract with Contractor.

B. Exercise of Contract Responsibilities

In exercising its responsibilities and authorities under the Contract Documents, City does not assume any duties or responsibilities to any Subcontractor or supplier and does not assume any duty of care to Contractor, Contractor's Subcontractors or suppliers. Except as expressly set forth in the Contract Documents, in exercising their respective responsibilities and authorities under the Contract Documents, neither Engineer nor any City's Representative assume any duties or responsibilities to any Subcontractor, sub-Subcontractor or supplier nor assume any duty of care to Contractor or any Subcontractor, sub-Subcontractor or suppliers.

C. Defined Terms

All abbreviations and definitions of terms used and not otherwise defined in this Document 00700 are set forth in Document 01420 (References and Definitions). This Document 00700 subdivides at first level into Articles, and then into paragraphs.

2. BIDDING

A. Investigation Prior To Bidding

1. Prior to bidding, Bidders shall perform the work, investigations, research and analysis required by Article 5 of Document 00520 (Agreement). Under the Contract Documents, Contractor is charged with all information and knowledge that a reasonable Bidder would ascertain from having performed the required work, investigations, research, and analysis. Bid

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prices shall include entire cost of all "incidental work" to complete the Work, as that term is defined in paragraph 1.C of this Document 00700.

2. Conditions Shown on Contract Documents: Information as to underground conditions, as-built conditions, or other conditions or obstructions indicated in the Contract Documents, e.g., on Drawings or in Specifications, has been obtained with reasonable care, and has been recorded in good faith. City warrants, and Contractor may rely on, the accuracy of only limited types of information as discussed below.

- a. Aboveground and as-built conditions: There is no express or implied warranty and no express or implied representation that any information as to aboveground conditions or as-built conditions indicated in the Contract Documents is correctly shown, or indicated, or complete. As a condition to bidding, Contractor shall verify by independent investigation all aboveground and as-built conditions. In submitting its Bid, Contractor shall rely on the results of its own independent investigation and shall not rely on City-supplied information regarding aboveground conditions and as-built conditions.
- b. Subsurface conditions: Contractor may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated in the Contract Documents. City is not responsible for (1) the completeness of any subsurface condition information for bidding or construction, (2) Contractor's conclusions or opinions drawn from any subsurface condition information, or (3) subsurface conditions that are not specifically shown. (For example, City is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown.)
- c. Conditions Shown in Reports and Drawings Supplied for Informational Purposes: Reference is made to Document 00320 (Geotechnical Data and Existing Conditions) for identification of geotechnical reports, "as built" information, and other drawings or other documents describing physical conditions in or relating to existing surface or subsurface conditions or structures at or contiguous to the Site. These materials are not Contract Documents and, except for any "technical data" regarding subsurface conditions specifically identified in Document 00320 (Geotechnical Data and Existing Conditions), and "Underground Facilities" data, as limited in Document 00320 (Geotechnical Data and Existing Conditions), Contractor shall not in any manner rely on the information in these materials. Subject to the foregoing, Contractor shall make its own independent investigation of all conditions affecting the Work and must not rely on information provided by City.

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B. Subcontractors

1. Consistent with Public Contract Code Sections 4101 *et seq.*, Contractor shall not substitute any other person or firm in place of any Subcontractor listed in the Bid. Subcontractors shall not assign or transfer their subcontracts or permit them to be performed by any other contractor without City's written approval. At City's request, Contractor shall provide City with a complete copy of all executed subcontracts or final commercial agreements with Subcontractors and/or suppliers.
2. Subcontract agreements shall preserve and protect the rights of City under the Contract Documents so that subcontracting will not prejudice such rights. To the extent of the Work to be performed by a Subcontractor, Contractor shall require the Subcontractor's written agreement (1) to be bound to the terms of Contract Documents and (2) to assume vis-à-vis Contractor all the obligations and responsibilities that Contractor assumes toward City under the Contract Documents. (These agreements include for example, and not by way of limitation, all warranties, claims procedures and rules governing submittals of all types to which Contractor is subject under the Contract Documents.)
3. Contractor shall provide for the assignment to City of all rights any Subcontractor may have against any manufacturer, supplier, or distributor for breach of warranties and guarantees relating to the Work performed by the Subcontractor under the Contract Documents.

3. CONTRACT AWARD AND COMMENCEMENT OF THE WORK

A. Award of Contract

City will make the Award of Contract by issuing a Notice of Award. As a condition to City signing Document 00520 (Agreement), however, Contractor shall deliver to City the executed agreements, forms, bonds and insurance documents required by Document 00200 (Instructions to Bidders) in the required quantities and within the required times.

B. Commencement of Work

The Contract Time will commence to run on the date indicated in the Notice to Proceed. See also paragraph 15.A.2 of this Document 00700. City may give a Notice to Proceed at any time within 30 Days after the Notice of Award. Contractor shall not do any Work at the Site prior to the date on which the Contract Time commences to run.

4. BONDS AND INSURANCE

A. Bonds

1. At or before the date indicated in Document 00200 (Instructions to Bidders), Contractor shall file with City the following bonds:

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- a. Corporate surety bond, in the form of Document 00610 (Construction Performance Bond), in the penal sum of 100% of the Contractor's Bid as accepted, to guarantee faithful performance of the Work; and
 - b. Corporate surety bond, in the form of Document 00620 (Construction Labor and Material Payment Bond), in the penal sum of 100% of the Contractor's Bid as accepted, to guarantee payment of wages for services engaged and of bills contracted for materials, supplies, and equipment used in performance of Contract Documents.
2. Sureties shall be satisfactory to City. Corporate sureties on these bonds and on bonds accompanying Bids shall be duly licensed to do business in the State of California and shall have an A.M. Best Company financial rating of A or better.

B. Insurance

See Document 00821 (Insurance), incorporated herein by this reference.

5. DRAWINGS AND SPECIFICATIONS

A. Intent

1. Drawings and Specifications are intended to describe a functionally complete and operable Project (and all parts thereof) to be constructed in accordance with the requirements of Contract Documents. Contractor shall perform any work, provide services and furnish any materials or equipment that may reasonably be inferred from the requirements of Contract Documents or from prevailing custom or trade usage as being required to produce this intended result. Contractor shall interpret words or phrases used to describe work (including services), materials or equipment that have well-known technical or construction industry or trade meaning in accordance with that meaning. Drawings' intent specifically includes the intent to depict construction that complies with all applicable laws, codes and standards.
2. As part of the "Work," Contractor shall provide all labor, materials, equipment, machinery, tools, facilities, services, employee training and testing, hoisting facilities, shop drawings, storage, testing, security, transportation, disposal, the securing of all necessary or required field dimensions, the cutting or patching of existing materials, notices, permits, documents, reports, agreements and any other items required or necessary to timely and fully complete Work described and the results intended by Contract Documents and, in particular, Drawings and Specifications. Divisions and Specification Documents and the identification on any Drawings shall not control Contractor in dividing Work among Subcontractors or suppliers or delineating the Work to be performed by any specific trade.

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3. Contractor shall perform reasonably implied parts of Work as "incidental work" although absent from Drawings and Specifications. Incidental work includes any work not shown on Drawings or described in Specifications that is necessary or normally or customarily required as a part of the Work shown on Drawings or described in Specifications. Incidental work includes any Work necessary or required to make each installation satisfactory, legally operable, functional, and consistent with the intent of Drawings and Specifications or the requirements of Contract Documents including required tasks to be performed under Division 1 of Specifications. Contractor shall perform incidental work without extra cost to City. Incidental work shall be treated as if fully described in Specifications and shown on Drawings, and the expense of incidental work shall be included in price Bid and Contract Sum.

B. Drawing Details

A typical or representative detail on Drawings shall constitute the standard for workmanship and material throughout corresponding parts of Work. Where necessary, and where reasonably inferable from Drawings, Contractor shall adapt such representative detail for application to such corresponding parts of Work. The details of such adaptation shall be subject to prior approval by City. Repetitive features shown in outline on Drawings shall be in exact accordance with corresponding features completely shown.

C. Interpretation of Drawings and Specifications

Should any discrepancy appear or any misunderstanding arise as to the import of anything contained in Drawings and Specifications, or should Contractor have any questions or requests relating to Drawings or Specifications, Contractor shall refer the matter to City, in writing. City will issue with reasonable promptness written responses, clarifications or interpretations as City may determine necessary, which shall be consistent with the intent of and be reasonably inferable from Contract Documents. Such written clarifications or interpretations shall be binding upon Contractor. If Contractor believes that a written response, clarification or interpretation justifies an adjustment in the Contract Sum or Contract Time, Contractor shall give City prompt written notice as provided in Document 01250 (Modification Procedures). If the parties are unable to agree to the amount or extent of the adjustment, if any, then Contractor shall perform the Work in conformance with City's response, clarification, or interpretation and may make a written claim for the adjustment as provided in Article 12 of this Document 00700.

D. Checking of Drawings

Before undertaking each part of Work, Contractor shall carefully study and compare Contract Documents and check and verify pertinent figures shown in the Contract Documents and all applicable field measurements. Contractor shall be responsible for any errors that might have been avoided by such comparison.

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Figures shown on Drawings shall be followed; Contractor shall not scale measurements. Contractor shall promptly report to City, in writing, any conflict, error, ambiguity or discrepancy that Contractor may discover. Contractor shall obtain a written interpretation or clarification from City before proceeding with any Work affected thereby. Contractor shall provide City with a follow-up correspondence every ten days until it receives a satisfactory interpretation or clarification.

E. Standards to Apply Where Specifications Are Not Furnished

The following general specifications shall apply wherever in the Specifications, or in any directions given by City in accordance with or supplementing Specifications, it is provided that Contractor shall furnish materials or manufactured articles or shall do work for which no detailed specifications are shown. Materials or manufactured articles shall be of the best grade, in quality and workmanship, obtainable in the market from firms of established good reputation. If not ordinarily carried in stock, the materials or manufactured articles shall conform to industry standards for first-class materials or articles of the kind required, with due consideration of the use to which they are to be put. Work shall conform to the usual standards or codes, such as those cited in Document 01420 (References and Definitions), for first-class work of the kind required. Contractor shall specify in writing to City the materials to be used or Work to be performed under this paragraph 5.E ten (10) Business Days prior to furnishing such materials or performing such Work.

F. Deviation from Specifications and Drawings

1. Contractor shall perform Work in accordance with Drawings and Specifications. Contractor may deviate from Drawings or the dimensions given in the Drawings, and may deviate from the Specifications, only upon City's advance written approval of the proposed deviation.
2. City may order that locations, lines and grades for Work vary from those shown on Drawings. Changes may be made in locations, lines or grades for Work under any item of Contract Documents. No payment in addition to unit price fixed in the Contract Documents for Work under respective items will be allowed on account of variations from Drawings in unit price items. In lump sum contracts, or where there are no unit price items covering Work affected by variations of locations, lines or grades, all changes in the Contract Documents will be made as set forth in Article 14 of this Document 00700.

G. Precedence of Documents

1. In the case of discrepancy or ambiguity in the Contract Documents, the following order of precedence shall prevail:
 - a. Shop drawings or submittals take precedence over design drawings.

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- b. Modifications in inverse chronological order (i.e., most recent first), and in the same order as specific portions they are modifying;
 - c. Document 00520 (Agreement), and terms and conditions referenced therein;
 - d. Document 00800 (Supplementary Conditions);
 - e. Document 00700 (General Conditions);
 - f. Division 1 Specifications;
 - g. Division 2 through 16 Specifications;
 - h. Drawings;
 - i. Written numbers over figures, unless obviously incorrect;
 - j. Figured dimensions over scaled dimensions;
 - k. Large-scale drawings over small-scale drawings.
2. Any conflict between Drawings and Division 2 through 16 Specifications will be resolved in favor of the document of the latest date (i.e., the most recent document), and if the dates are the same or not determinable, then in favor of Specifications.
 3. Any conflict between a bill or list of materials shown in the Contract Documents and the actual quantities required to complete Work required by Contract Documents, will be resolved in favor of the actual quantities.
 4. In the event the Specifications include divisions above Division 16 (e.g., Division 17 and above), then such divisions shall be included within the Contract Documents unless identified otherwise.

H. Ownership and Use of Drawings, Specifications and Contract Documents

Drawings, Specifications and other Contract Documents were prepared for use for Work of Contract Documents only. No part of Contract Documents shall be used for any other construction or for any other purpose except with the written consent of City. Any unauthorized use of Contract Documents is prohibited and at the sole liability of the user.

6. CONSTRUCTION BY CITY OR BY SEPARATE CONTRACTORS

A. City's Right To Perform Construction And To Award Separate Contracts

City may perform with its own forces, construction or operations related to the Project. City may also award separate contracts in connection with other portions of the Project or other construction or operations, on the Site or areas contiguous to the Site, under conditions similar to these Contract Documents, or may have utility owners perform other work. When separate contracts are awarded for different portions of the Project or other construction or operations on the Site, the term "Contractor" in these Contract Documents shall mean the Contractor herein.

B. Mutual Responsibility

1. Contractor shall afford all other contractors, utility owners and City (if City is performing work with its own forces), proper and safe access to the Site,

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and reasonable opportunity for the installation and storage of their materials. Contractor shall ensure that the execution of its Work properly connects and coordinates with others' work, and shall cooperate with them to facilitate the progress of the Work.

2. Contractor shall coordinate its Work with the work of other separate contractors, City, and utility owners. Contractor shall hold coordination meetings with other contractors, City and its representatives, and utility owners as required by Document 01315 (Project Meetings).
3. Unless otherwise provided in the Contract Documents, Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of other separate contractors, City or utility owners by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of City and the others whose work will be affected.
4. Contractor's duties and responsibilities are for the benefit of City and also for the benefit of such other contractors and utility owners working at the Site to the extent that there are comparable provisions for the benefit of Contractor in the direct contracts between City and such other contractors and utility owners.
5. To the extent that any part of Contractor's Work is to interface with work performed or installed by other contractors or utility owners, Contractor shall inspect and measure the in-place work. Contractor shall promptly report to City in writing any defect in in-place work that will impede or increase the cost of Contractor's interface unless corrected. City will require the Contractor responsible for the Defective Work to make corrections so as to conform to its contract requirements, or, if the defect is the result of an error or omission in the Contract Documents, issue a Change Order. If Contractor fails to measure, inspect and/or report to City in writing defects that are reasonably discoverable, Contractor shall bear all costs of accomplishing the interface acceptable to City. This provision shall be included in any and all other contracts or subcontracts for Work to be performed where such a conflict could exist.

C. City Authority Over Coordination

1. City will have authority over coordination of the activities of multiple contractors in cases where City performs work with its own forces or contracts with others for the performance of other work on the Project, or utilities work on the Site. City may at any time and in its sole discretion, designate a person or entity other than City to have authority over the coordination of the activities among the various contractors. City's authority with respect to coordination of the activities of multiple contractors and utility owners shall not relieve Contractor of its obligation to other contractors and utility owners to coordinate its Work with other contractors and utility owners as specified in paragraph 6.B of this Document 00700. Contractor shall promptly notify City in writing when another contractor on

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the Project fails to coordinate its work with the Work of Contract Documents.

2. Contractor shall suspend any part of the Work or carry on the same in such manner as directed by City when such suspension or prosecution is necessary to facilitate the work of other contractors or workers. No damages or claims by Contractor will be allowed if the suspension or Work change is due in whole or in part to Contractor's failure to perform its obligation to coordinate its Work with other contractors and utility owners. Damages or claims will be allowed only to the extent of fault by City if the suspension or Work change is due in whole or in part to another contractor's failure to coordinate its work with Contractor, other contractors, and utility owners. City reserves the right to back charge Contractor for any damages or claims incurred by other contractors as a result of Contractor's failure to perform its obligations to coordinate with other contractors and utility owners. City may deposit the funds retained with a Court of competent jurisdiction pursuant to applicable interpleader procedures and Contractor releases City of further liability regarding such funds.

7. CITY AND PAYMENT

A. City's Representative(s)

City's Representative(s) will have limited authority to act on behalf of City as set forth in the Contract Documents. Except as otherwise provided in these Contract Documents or subsequently identified in writing by City, City will issue all communications to Contractor through City's Representative and Contractor shall issue all communications to City through City's Representative in a written document delivered to City. Should any direct communications between Contractor and City's consultants, architects or engineers not identified in Article 2 of Document 00520 (Agreement) occur during field visits or by telephone, Contractor shall immediately confirm them in a written document copied to City.

B. Means and Methods of Construction

Subject to those rights specifically reserved in the Contract Documents, City will not supervise, or direct, or have control over, or be responsible for, Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or Contractor's failure to comply with laws and regulations applicable to the furnishing or performance of Work. City will not be responsible for Contractor's failure to perform or furnish the Work in accordance with Contract Documents.

C. Receipt and Processing of Applications for Payment

As required by Document 01200 (Measurement and Payment), Contractor shall prepare the schedules, submit Applications for Payment and warrant title to all

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Work covered by each Application for Payment. City will review Contractor's Applications for Payment and make payment thereon, and Contractor shall make payments to Subcontractors, suppliers and others, as required by Document 01200 (Measurement and Payment).

8. CONTROL OF THE WORK

A. Supervision of Work By Contractor

1. Contractor shall supervise, inspect, and direct Work competently and efficiently, devoting the attention and applying such personal skills and expertise as may be required and necessary to perform Work in accordance with Contract Documents. Contractor shall be solely responsible for and have control and charge of construction means, methods, techniques, sequences and procedures, safety precautions and programs in connection with the Work. Contractor shall be responsible to see that the completed Work complies accurately with Contract Documents.
2. Contractor shall keep on the Site at all times during Work progress a competent resident Superintendent, who shall not be replaced without City's express written consent. The Superintendent shall be Contractor's representative at the Site and shall have complete authority to act on behalf of Contractor. All communications to and from the Superintendent shall be as binding as if given to or by Contractor.

B. Observation of Work By City

1. Work shall be performed under City's general observation and administration. Contractor shall comply with City's directions and instructions in accordance with the terms of Contract Documents, but nothing contained in these General Conditions shall be taken to relieve Contractor of any obligations or liabilities under the Contract Documents. City's failure to review or, upon review, failure to object to any aspect of Work reviewed, shall not be deemed a waiver or approval of any non-conforming aspect of Work.
2. City may engage an independent consultant or engineer (collectively for purposes of this paragraph 8.B, "Engineer") to assist in administering the Work. If so engaged, Engineer will advise and consult with City, but will have authority to act on behalf of City only to extent provided in the Contract Documents or as set forth in writing by City. Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with Work. Engineer will not be responsible for or have control over the acts or omissions of Contractor, Subcontractors or their agents or employees, or any other persons performing Work.

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3. Engineer may review Contractor's submittals, such as Shop Drawings, Product Data, and Samples, but only for conformance with design concept of Work and with information given in the Contract Documents.
4. Engineer may visit the Site at intervals appropriate to stage of construction to become familiar generally with the progress and quality of Work and to determine in general if Work is proceeding in accordance with Contract Documents. Based on its observations, Engineer may recommend to City that it disapprove or reject Work that Engineer believes to be defective or will not produce a complete Project that conforms to Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by Contract Documents. City will also have authority to require special inspection or testing of Work, whether or not the Work is fabricated, installed or completed.
5. Engineer may conduct inspections to recommend to City the dates that Contractor has achieved Substantial Completion and Final Acceptance, and will receive and forward to City for review written warranties and related documents required by Contract Documents.

C. Access To Work

During performance of Work, City and its agents, consultants, and employees may at any time enter upon Work, shops or studios where any part of the Work may be in preparation, or factories where any materials for use in Work are being or are to be manufactured, and Contractor shall provide proper and safe facilities for this purpose, and shall make arrangements with manufacturers to facilitate inspection of their processes and products to such extent as City's interests may require. Other contractors performing work for City may also enter upon Work for all purposes required by their respective contracts. Subject to the rights reserved in the Contract Documents, Contractor shall have sole care, custody, and control of the Site and its Work areas.

D. Existing Utilities

Drawings may indicate above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, chemical, hot water, and other similar items and utilities, and additional information may be on file at the regional notification center, "Underground Service Alert" ("USA"). Contractor shall locate these known existing installations before proceeding with trenching or other operations that may cause damage, shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum. Additional utilities whose locations are unknown to City are suspected to exist. Contractor shall be alert to their existence; if they are encountered, Contractor shall immediately report to City for disposition of the same. In addition to reporting if any utility is damaged, Contractor shall take appropriate action as provided in this Document 00700. Additional compensation or extension of time on account of utilities not shown or otherwise brought to Contractor's attention, including

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reasonable action taken to protect or repair damage, shall be determined as provided in this Document 00700.

1. At no additional cost to City, Contractor shall incorporate into the Work main or trunk line utilities identified in the Contract Documents and other utilities or underground structures known or reasonably discernible and that will remain in service, including reasonable adjustments to the design location (including minor relocations) of the existing or new installations. Contractor shall take immediate action to restore any in service installations damaged by Contractor's operations. Should City determine that Contractor has not responded in a timely manner or not diligently pursued completion of the Work, City may restore service and deduct the costs of such action by City from the amounts due under the Contract.
2. Consistent with Government Code Section 4215, as between City and Contractor, City will be responsible for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Site only if such utilities are not identified in the Contract Documents or Document 00320 (Geotechnical Data and Existing Conditions). City will compensate for the cost of locating and repairing damage not due to Contractor's failure to exercise reasonable care, removing and relocating such main or trunk line utility facilities not indicated in the Contract Documents or Document 00230 (Existing Conditions) with reasonable accuracy, and equipment on the Project necessarily idled during such work.
3. Prior to performing Work at the Site, Contractor shall lay out the locations of known underground utilities that are to remain in service and other significant known underground installations. At no additional cost to City, prior to commencing other Work in proximity to such known underground utilities or installations that can be readily inferred from adjacent surface improvements, Contractor shall further locate, by carefully excavating with small equipment, potholing and principally by hand, such utilities or installations that are to remain and that are subject to damage. This obligation applies to all utilities (including, but not limited to, those referenced in paragraph 8.D.3 of this Document 00700).
4. Nothing in this Document 00700 shall be deemed to require City to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred by Contractor from the presence of an underground transmission main or other visible facilities, such as buildings, new asphalt, meters and junction boxes, on or adjacent to the Site. Contractor shall immediately secure all available information and notify City and utility, in writing, of its discovery, while performing Work under the Contract Documents, of any utility facilities not identified in the Drawings and Specifications.

E. Underground Facilities

1. Before commencing work of digging trenches or excavation, Contractor shall review all information available regarding subsurface conditions,

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including but not limited to information supplied in Document 00320 (Geotechnical Data and Existing Conditions), and subject to the terms and conditions of these documents, Contractor shall also comply with Government Code Sections 4216 to 4216.9, and in particular Section 4216.2 which provides, in part:

“Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center at least two working days, but no more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator, and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated. The regional notification center shall provide an inquiry identification number to the person who contacts the center and shall notify any member, if known, who has a subsurface installation in the area of the proposed excavation.”

2. Contractor shall contact USA, and schedule the Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Contractor is charged with knowledge of all subsurface conditions reflected in USA records. Prior to commencing excavation or trenching work, Contractor shall provide City with copies of all USA records secured by Contractor. Contractor shall advise City of any conflict between information provided in Document 00320 (Geotechnical Data and Existing Conditions), the Drawings and that provided by USA records. Contractor's excavation shall be subject to and comply with the Contract Documents, including without limitation Paragraphs 2.A and 8.D of this Document 00700.
3. The cost of all of the following will be included in the Contract Sum and Contractor shall have full responsibility for (a) reviewing and checking all available information and data including, but not limited to, Document 00320 (Geotechnical Data and Existing Conditions) and information on file at USA; (b) locating all Underground Facilities shown or indicated in the Contract Documents, available information, or indicated by visual observation including, but not limited to, and by way of example only, engaging qualified locating services and all necessary backhoeing and potholing; (c) coordination of the Work with the owners of such Underground Facilities during construction; and (d) the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.
4. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated in the materials supplied by City or in information on file at USA or is otherwise reasonably available to Contractor, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby (and in no event later than seven Days), and prior to performing any Work in connection therewith (except in an emergency as required by Article 16 of this

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Document 00700), identify the owner of such Underground Facility and give written notice to that owner and to City. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

5. Contractor shall be allowed an increase in the Contract Sum or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any Underground Facility that is owned and was built by City only where the Underground Facility:
 - a. Was not shown or indicated in the Contract Documents or in the information supplied pursuant to Document 00320 (Geotechnical Data and Existing Conditions) or in information on file at USA; and
 - b. Contractor did not know of it; and
 - c. Contractor could not reasonably have been expected to be aware of it or to have anticipated it from the information available. (For example, if surface conditions such as pavement repairs, valve covers, or other markings, indicate the presence of an Underground Facility, then an increase in the Contract Price or an extension of the Contract Time will not be due, even if the Underground Facility was not indicated in the Contract Documents, in the information supplied to Contractor pursuant to Document 00320 Geotechnical Data and Existing Conditions, in information on file at USA, or otherwise reasonably available to Contractor.)
6. Contractor shall bear the risk that Underground Facilities not owned or built by City may differ in nature or locations shown in information made available by City pursuant to Document 00320 (Geotechnical Data and Existing Conditions), in information on file at USA, or otherwise reasonably available to Contractor. Underground Facilities are inherent in construction involving digging of trenches or other excavations and Contractor is to apply its skill and industry to verify the information available.

9. WARRANTY, GUARANTY, AND INSPECTION OF WORK

A. Warranty and Guaranty

1. General Representations and Warranties: Contractor represents and warrants that it is and will be at all times fully qualified and capable of performing every Phase of the Work and to complete Work in accordance with the terms of Contract Documents. Contractor warrants that all construction services shall be performed in accordance with generally accepted professional standards of good and sound construction practices and all requirements of Contract Documents. Contractor warrants that Work, including but not limited to each item of materials and equipment incorporated therein, shall be new, of suitable grade of its respective kind for its intended use, and free from defects in design, engineering, materials, construction and workmanship. Contractor warrants that Work shall conform in all respects with all applicable requirements of federal, state and local laws, applicable construction codes and standards, licenses, and permits, Drawings and Specifications and all descriptions set forth therein,

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and all other requirements of Contract Documents. Contractor shall not be responsible, however, for the negligence of others in the specification of specific equipment, materials, design parameters and means or methods of construction where that is specifically shown and expressly required by Contract Documents.

2. **Extended Guarantees:** Any guarantee exceeding one (1) year provided by the supplier or manufacturer of any equipment or materials used in the Project shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials and shall supply City with all warranty and guarantee documents relative to equipment and materials incorporated in the Project and guaranteed by their suppliers or manufacturers.
3. **Environmental and Toxics Warranty:** The covenants, warranties and representations contained in this paragraph 9.2 are effective continuously during Contractor's Work on the Project and following cessation of labor for any reason including, but not limited to, Project completion. Contractor covenants, warrants and represents to City that:
 - a. To Contractor's knowledge after due inquiry, no lead or asbestos-containing materials were installed or discovered in the Project at any time during Contractor's construction thereof. If any lead or asbestos-containing materials were discovered, Contractor made immediate written disclosure to City.
 - b. To Contractor's knowledge after due inquiry, no electrical transformers, light fixtures with ballasts or other equipment containing PCBs are or were located on the Project at any time during Contractor's construction thereof.
 - c. To Contractor's knowledge after due inquiry, no storage tanks for gasoline or any other toxic substance are or were located on the Project at any time during Contractor's construction thereof. If any such materials were discovered, Contractor made immediate written disclosure to City.
 - d. Contractor's operations concerning the Project are and were not in violation of any applicable environmental federal, state, or local statute, law or regulation dealing with hazardous materials substances or toxic substances and no notice from any governmental body has been served upon Contractor claiming any violation of any such law, ordinance, code or regulation, or requiring or calling attention to the need for any work, repairs, construction, alteration, or installation on or in connection with the Project in order to comply with any such laws, ordinances, codes, or regulations, with which Contractor has not complied. If there are any such notices with which Contractor has complied, Contractor shall provide City with copies thereof.

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B. Inspection of Work

1. All materials, equipment, and workmanship used in Work shall be subject to inspection and testing at all times during construction and/or manufacture in accordance with the terms of Contract Documents. Work and materials, and manufacture and preparation of materials, from beginning of construction until final completion and acceptance of Work, shall be subject to inspection and rejection by City, its agents, representatives or independent contractors retained by City to perform inspection services, or governmental agencies with jurisdictional interests. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and program so that they may comply therewith as applicable. Upon request or where specified, City shall be afforded access for inspection at the source of supply, manufacture or assembly of any item of material or equipment, with reasonable accommodations supplied for making such inspections.
2. Contractor shall give City timely notice of readiness of Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
3. If applicable laws or regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, and furnish City with the required certificates of inspection, or approval. City will pay the cost of initial testing and Contractor shall pay all costs in connection with any follow-up or additional testing. Contractor shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for the acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.
4. If Contractor covers any Work, or the work of others, prior to any required inspection, test or approval without written approval of City, Contractor shall uncover the Work at City's request. Contractor shall bear the expense of uncovering Work and replacing Work.
5. In any case where Contractor covers Work contrary to City's request, Contractor shall uncover Work for City's observation or inspection at City's request. Contractor shall bear the cost of uncovering Work.
6. Whenever required by City, Contractor shall furnish tools, labor and materials necessary to make examination of Work that may be completed or in progress, even to extent of uncovering or taking down portions of finished Work. Should Work be found unsatisfactory, cost of making examination and of reconstruction shall be borne by Contractor. If Work is found to be satisfactory, City, in manner herein prescribed for paying for alterations, modifications, and extra Work, except as otherwise herein specified, will pay for examination.

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7. Inspection of the Work by or on behalf of City, or City's failure to do so, shall not under any circumstances be deemed a waiver or approval of any non-conforming aspect of the Work. Contractor shall have an absolute duty, in the absence of a written Change Order signed by City, to perform Work in conformance with the Contract Documents.
8. Any inspection, evaluation, or test performed by or on behalf of City relating to the Work is solely for the benefit of City, and shall not be relied upon by Contractor. Contractor shall not be relieved of the obligation to perform Work in accordance with the Contract Documents, nor relieved of any guaranty, warranty, or other obligation, as a result of any inspections, evaluations, or tests performed by City, whether or not such inspections, evaluations, or tests are permitted or required under the Contract Documents. Contractor shall be solely responsible for testing and inspecting Work already performed to determine whether such Work is in proper condition to receive later Work.

C. Correction of Defective Work

1. If Contractor fails to supply sufficient skilled workers, suitable materials or equipment, or to furnish or perform the Work in such a way that the completed Work will conform to Contract Documents, City may order Contractor to replace any Defective Work, or stop any portion of Work to permit City (at Contractor's expense) to replace such Defective Work. These City rights are entirely discretionary on the part of the City, and shall not give rise to any duty on the part of City to exercise the rights for the benefit of Contractor or any other party.
2. City may direct Contractor to correct any Defective Work or remove it from the Site and replace it with Work that is not defective and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting from the correction or removal. Contractor shall be responsible for any and all claims, costs, losses and damages caused by or resulting from such correction or removal. A Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, City may decide the proper amount or, in its discretion may elect to leave the Contract Sum unchanged and deduct from moneys due Contractor, all such claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with City's calculations, it may make a claim as provided in Article 12 of this Document 00700. City's rights under this paragraph 9.C.2 shall be in addition to any other rights it may have under the Contract Documents or by law.
3. Correction Period: If within one year after the date of Final Acceptance, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to City and in accordance with City's written instructions, correct such Defective Work. Contractor shall remove

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any Defective Work rejected by City and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, City may have the Defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct Defective Work, or defects are discovered outside the correction period, City shall have all rights and remedies granted by law.

4. In special circumstances where a part of the Work is occupied or a particular item of equipment is placed in continuous service before Final Acceptance of all the Work, the correction period for that part of Work or that item may start to run from an earlier date if so provided by Change Order.
5. Where Defective Work or rejected Work (and damage to other Work resulting therefrom) has been corrected, removed, or replaced under this provision after the commencement of the correction period, the correction period hereunder with respect to such Work shall be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. Acceptance and Correction of Defective Work By City

1. City may accept Defective Work. Contractor shall pay all claims, costs, losses and damages attributable to City's evaluation of and determination to accept such Defective Work. If City accepts any Defective Work prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, City may deduct from moneys due Contractor, all claims, costs, losses, damages, expenses and liabilities attributable to the Defective Work. If Contractor disagrees with City's calculations, Contractor may make a claim as provided in Article 12 of this Document 00700. If City accepts any Defective Work after final payment, Contractor shall pay to City, an appropriate amount as determined by City.
2. City may correct and remedy deficiency if, after five Days' written notice to Contractor, Contractor fails to correct Defective Work or to remove and replace rejected Work in accordance with paragraph 9.C.2 of this Document 00700; or provide a plan for correction of Defective Work acceptable to City; or perform Work in accordance with Contract Documents. In connection with such corrective and remedial action, City may exclude Contractor from all or part of the Site; take possession of all or part of Work and suspend Contractor's Work related thereto; take possession of all or part of Contractor's tools, appliances, construction equipment and machinery at the Site; and incorporate in Work any materials and equipment stored at the Site or for which City has paid

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Contractor but which are stored elsewhere. Contractor shall allow City, its representatives, agents, employees, and other contractors and Engineer's consultants access to the Site to enable City to exercise the rights and remedies under this paragraph 9.D.2. Contractor shall be responsible for all claims, costs, losses, damages, expenses and liabilities incurred or sustained by City in exercising such rights and remedies. A Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, City may deduct from moneys due Contractor, all claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with City's calculations, Contractor may make a claim as provided in Article 12 of this Document 00700.

E. Rights Upon Inspection or Correction

1. Contractor shall not be allowed an extension of Contract Time because of any delay in the performance of Work attributable to the exercise by City of its rights and remedies under this Article 9. Where City exercises its rights under this Article 9, it retains all other rights it has by law or under the Contract Documents including, but not limited to, the right to terminate Contractor's right to proceed with the Work under the Contract Documents and/or make a claim or back charge where a Change Order cannot be agreed upon.
2. Inspection by City shall not relieve Contractor of its obligation to have furnished material and workmanship in accordance with Contract Documents. Payment for Work completed through periodic progress payments or otherwise shall not operate to waive City's right to require full compliance with Contract Documents and shall in no way be deemed as acceptance of the Work paid therefor. Contractor's obligation to complete the Work in accordance with Contract Documents shall be absolute, unless City agrees otherwise in writing.

F. Samples And Tests Of Materials And Work

Contractor shall furnish, in such quantities and sizes as may be required for proper examination and tests, samples or test specimens of all materials to be used or offered for use in connection with Work. Contractor shall prepare samples or test specimens at its expense and furnish them to City. Contractor shall submit all samples in ample time to enable City to make any necessary tests, examinations, or analyses before the time it is desired to incorporate the material into the Work.

G. Proof Of Compliance Of Contract Provisions

In order that City may determine whether Contractor has complied or is complying with requirements of Contract Documents not readily enforceable through inspection and tests of Work and materials, Contractor shall at any time, when

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requested, submit to City properly authenticated documents or other satisfactory proofs of compliance with all applicable requirements.

H. Acceptance

Inspection by City or its authorized agents or representatives, any order or certificate for the payment of money, any payment, acceptance of the whole or any part of Work by City, any extension of time, any verbal statements on behalf of City or its authorized agents or representatives shall not operate as a waiver or modification of any provision of the Contract Documents, or of any power reserved to City herein or therein or any right to damages provided in the Contract Documents. Any waiver of any breach of the Contract Documents shall not be held to be a waiver of any other subsequent breach.

10. CONTRACTOR'S ORGANIZATION AND EQUIPMENT

A. Contractor's Legal Address

Address and facsimile number given in Contractor's Bid are hereby designated as Contractor's legal address and facsimile number. Contractor may change its legal address and facsimile number by notice in writing, delivered to City, which in conspicuous language advises City of a change in legal address or facsimile number, and which City accepts in writing. Delivery to Contractor's legal address or depositing in any post office or post office box regularly maintained by the United States Postal Service, in a wrapper with postage affixed, directed to Contractor at legal address or of any drawings, notice, letter or other communication, shall be deemed legal and sufficient service thereof upon Contractor. Facsimile to Contractor's designated facsimile number of any letter, memorandum, or other communication on standard or legal sized paper, with proof of facsimile transmission, shall be deemed legal and sufficient service thereof upon Contractor.

B. Contractor's Office At The Work Site

Contractor shall maintain an office at the Site, which office shall be headquarters of a Contractor representative authorized to transmit to and receive from City, communications, instructions or Drawings. Communications, instructions, or Drawings given to Contractor's representative or delivered at the Site office in representative's absence shall be deemed to have been given to Contractor.

C. Contractor's Superintendents or Forepersons

Contractor shall at all times be represented on Site by one or more superintendents or forepersons authorized and competent to receive and carry out any instructions that City may give, and shall be liable for faithful observance of instructions delivered to Contractor or to authorized representative or representatives on Site.

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D. Proficiency In English

Supervisors, security guards, safety personnel and employees who have unescorted access to the Site shall possess proficiency in the English language in order to understand, receive and carry out oral and written communications or instructions relating to their job functions, including safety and security requirements.

E. Contractor's and Subcontractors' Employees

Contractor shall employ, and shall permit its Subcontractors to employ, only competent and skillful personnel to do Work. If City notifies Contractor that any of its employees, or any of its Subcontractors' employees on Work is incompetent, unfaithful, disorderly or profane, or fails to observe customary standards of conduct or refuses to carry out any provision of the Contract Documents, or uses threatening or abusive language to any person on Work representing City, or violates sanitary rules, or is otherwise unsatisfactory, and if City requests that such person be discharged from Work, then Contractor or its Subcontractor shall immediately discharge such person from Work and the discharged person shall not be re-employed on the Work except with consent of City.

F. Contractor To Supply Sufficient Workers and Materials

1. Unless otherwise required by City under the terms of Contract Documents, Contractor shall at all times keep on the Site materials and employ qualified workers sufficient to prosecute Work at a rate and in a sequence and manner necessary to complete Work within the Contract Time. This obligation shall remain in full force and effect notwithstanding disputes or claims of any type.
2. At any time during progress of Work should Contractor directly or indirectly (through Subcontractors) refuse, neglect, or be unable to supply sufficient materials or employ qualified workers to prosecute the Work as required, then City may require Contractor to accelerate the Work and/or furnish additional qualified workers or materials as City may consider necessary, at no cost to City. If Contractor does not comply with the notice within three Business Days of date of service thereof, City shall have the right (but not a duty) to provide materials and qualified workers to finish the Work or any affected portion of Work, as City may elect. City may, at its discretion, exclude Contractor from the Site, or portions of the Site or separate work elements during the time period that City exercises this right. City will deduct from moneys due or which may thereafter become due under the Contract Documents, the sums necessary to meet expenses thereby incurred and paid to persons supplying materials and doing Work. City will deduct from funds or appropriations set aside for purposes of Contract Documents the amount of such payments and charge them to Contractor as if paid to Contractor. Contractor shall remain liable for resulting delay,

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including liquidated damages and indemnification of City from claims of others.

3. Exercise by City of the rights conferred upon City in paragraph 10.F.2 of this Document 00700, is entirely discretionary on the part of City. City shall have no duty or obligation to exercise the rights referred to in paragraph 10.F.2 of this Document 00700 and its failure to exercise such rights shall not be deemed an approval of existing Work progress or a waiver or limitation of City's right to exercise such rights in other concurrent or future similar circumstances. The rights conferred upon City under paragraph 10.F.2 of this Document 00700 are cumulative to City's other rights under any provision of the Contract Documents.

G. Contractor To List Trades Working

Contractor shall list the trades working on the Site and their scheduled activities on a daily basis, and provide a copy of that list to City

H. Contractor's Use of the Site

Contractor shall not make any arrangements with any person to permit occupancy or use of any land, structure or building within the limits of the Work, for any purpose whatsoever, either with or without compensation, in conflict with any agreement between City and any owner, former owner or tenant of such land, structure or buildings. Contractor may not occupy City-owned property outside the limit of the Work as indicated on the Drawings unless it obtains prior approval from City.

11. PROSECUTION AND PROGRESS OF THE WORK

A. Schedules And Examinations Of Contract Documents

1. Contractor shall submit schedules and reports, Shop Drawings and Submittals in the appropriate quantity and within the required time, arrange conferences and meetings and proceed with the Work in accordance with Contract Documents, including Documents 01315 (Project Meetings), 01320 (Progress Schedules and Reports), and 01330 (Submittal Procedures).
2. Contractor shall submit to City for review and discussion at the Preconstruction Conference described in Document 01315 (Project Meetings):
 - a. Progress schedules and reports as required by Documents 01320 (Progress Schedules and Reports) and 01330 (Submittal Procedures). Contractor shall utilize Progress Schedule in planning, scheduling, coordinating, performing and controlling Work (including all activities of Subcontractors, assigned contractors, equipment vendors and suppliers). Contractor shall update Progress Schedule on a monthly basis to depict accurately the

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- actual progress of Work and for evaluating and preparing Contractor's monthly progress payments. Contractor's failure to submit and maintain an acceptable progress schedule may, in City's discretion, and without limiting the materiality of Contractor's other obligations under the Contract Documents, constitute grounds to declare Contractor in material breach of the Contract Documents
- b. Within 14 Days after the Notice of Award, a preliminary schedule of Shop Drawing and Sample submittals that shall list each required submittal and the times for submitting, reviewing and processing such submittal, as required by Document 01330 (Submittal Procedures). If no such schedule is agreed upon, then all Shop Drawings, Samples and product data submittals shall be completed and submitted within 21 Days after receipt of Notice of Award from City.
 - c. Within 14 Days after the Notice of Award, a preliminary Schedule of Values for all the Work which shall include quantities and prices of items aggregating the Contract Sum and shall subdivide each Schedule of Values into component activities in sufficient detail to serve as the basis for progress payments during construction. Such Schedule of Values shall include an appropriate amount of overhead and profit applicable to each item of Work, a line item for Project Record Documents, and a line item for Project scheduling, and shall conform to Document 01200 (Measurement and Payment).
3. Unless otherwise provided in the Contract Documents, at least 15 Days before submission of the first application for payment, a conference attended by Contractor, City, and others as appropriate, will be held to review for acceptability the schedules submitted in accordance with paragraph 11.C.2 of this Document 00700 and first reviewed at the Preconstruction Conference. Contractor shall have an additional seven Days to make corrections and adjustments and to complete and resubmit the schedules. Schedules shall be updated and completed as required by Documents 01200 (Measurement and Payment), 01320 (Progress Schedules and Reports) and 01330 (Submittal Procedures). No progress payment shall be due or owing to Contractor until the schedules are submitted to and acceptable to City and/or Engineer as meeting the requirements of the Contract Documents, including Documents 01200 (Measurement and Payment), 01320 (Progress Schedules and Reports) and 01330 (Submittal Procedures). City's acceptance of Contractor's schedules will not create any duty of care or impose on City any responsibility for the sequencing, scheduling or progress of Work nor will it interfere with or relieve Contractor from Contractor's full responsibility therefor.
 4. Before commencing any portion of Work, Contractor shall inform City in writing as to time and place at which Contractor wishes to commence Work, and nature of Work to be done, in order that proper provision for inspection

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of Work may occur, and to assure measurements necessary for record and payment. Information shall be given to City a reasonable time in advance of time at which Contractor proposes to begin Work, so that City may complete necessary preliminary work without inconvenience or delay to Contractor.

5. Contractor shall submit submittals and Shop Drawings to City (or Engineer if City so designates) for review in strict accordance with Document 01330 (Submittal Procedures). Submission of a Shop Drawing shall constitute Contractor's representation that all requirements of Document 01330 (Submittal Procedures) have been complied with. All submittals will be identified as City may require and in the number of copies specified in Document 01330 (Submittal Procedures).
6. Contractor shall not perform Work that requires submission of a Shop Drawing or Sample or other submittal prior to submission and favorable review of the Shop Drawing or Sample or submittal. Where a Shop Drawing or Sample or other submittal is required by Contract Documents or the final Schedule of Shop Drawing and Sample Submittals accepted by City, any related Work performed prior to City's approval of the pertinent submittal shall be at the sole expense, responsibility and risk of Contractor.

B. Cost Data

1. Contractor shall maintain full and correct information as to the number of workers employed in connection with each subdivision of Work, the classification and rate of pay of each worker in form of certified payrolls, the cost to Contractor of each class of materials, tools and appliances used by Contractor in Work, and the amount of each class of materials used in each subdivision of Work. Contractor shall provide City with monthly summaries of this information. If Contractor maintains or is capable of generating summaries or reports comparing actual Project costs with Bid estimates or budgets, Contractor shall provide City with a copy of such report upon City's request and whenever it is generated.
2. Contractor shall maintain daily job reports recording all significant activity on the job, including the number of workers on Site, Work activities, problems encountered and delays. Contractor shall provide City with copies for each Day Contractor works on the Project, to be delivered to City either the same Day or the following morning before starting work at the Site. Contractor shall take monthly progress photographs of all areas of the Work. Contractor shall maintain copies of all correspondence with Subcontractors and records of meetings with Subcontractors.
3. City shall have the right to audit and copy Contractor's books and records of any type, nature or description relating to the Project (including but not limited to financial records reflecting in any way costs claimed on the Project), and to inspect the Site, including Contractor's trailer, or other job Site office, and this requirement shall be contained in the subcontracts of Subcontractors working on Site. By way of example, City shall have the right to inspect and obtain copies of all Contract Documents, planning and

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design documents, Bid proposal and negotiation documents (subject to Document 00670 Escrow Bid Documents, cost records and job cost variance reports, design modification proposals, value engineering or other cost reduction proposals, revisions made to the original design, job progress reports, photographs, and as-built drawings maintained by Contractor. City and any other applicable governmental entity shall have the right to inspect all information and documents maintained under this paragraph 11.B at any time during the Project and for a period of five years following Substantial Completion. This right of inspection shall not relieve Contractor of its duties and obligations under the Contract Documents. This right of inspection shall be specifically enforceable in a court of law, either independently or in conjunction with enforcement of any other rights in the Contract Documents.

4. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Contract Modifications, Change Orders, Work Directives, Force Account orders, and written interpretations and clarifications in good order and annotated to show all changes made during construction. These Project Record Documents, together with all approved Samples and a counterpart of all approved Shop Drawings, shall be maintained and available to City for reference. Upon completion of the Work, Contractor shall deliver to City, the Project Record Documents, Samples and Shop Drawings and as-built drawings.

12. CLAIMS BY CONTRACTOR

A. General

1. Contract Interpretation Disputes: Should it appear to Contractor that Work to be performed or any of the matters relative to Contract Documents (including without limitation Drawings or Specifications) are not satisfactorily detailed or explained therein, or should any questions arise as to the meaning or intent of Contract Documents (including without limitation Drawings or Specifications), Contractor shall give written notice to City. Contractor shall bear all costs incurred in giving notice. City will render a determination regarding the issue, which shall be final. If Contractor disagrees with City's decision, Contractor's sole and exclusive remedy is to file a claim in accordance with this Article 12. Contractor shall diligently prosecute the Disputed Work (as defined below to Final Completion pending resolution of any claim.
2. Work Disputes: Contractor shall give written notice to City of any dispute arising under the Contract Documents respecting the true value of any Work performed, the implementation of Work required by Contract Documents, any Work omitted, any extra Work that Contractor may be required to perform or time extensions, respecting the size of any payment to Contractor during the performance of Contract Documents, or of compliance with Contract Documents procedures. City will render a determination regarding the issue, which shall be final. If Contractor

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disagrees with City's decision, Contractor's sole and exclusive remedy is to file a claim in accordance with this Article 12. Pending the resolution of any claim, Contractor shall diligently prosecute the Disputed Work to Final Completion.

3. The claim notice and documentation procedure described in this Article 12 applies to all claims and disputes arising under the Contract Documents, including without limitation any claim or dispute by any Subcontractor or material supplier. All Subcontractor and supplier claims of any type shall be brought only through Contractor as provided in this Article 12. Under no circumstances shall any Subcontractor or supplier make any direct claim against City.
4. "Claim" means a written demand or written assertion by Contractor seeking, as a matter of right, the payment of money, the adjustment or interpretation of Contract Documents terms, or other relief arising under or relating to Contract Documents. In order to qualify as a "claim," the written demand must state that it is a claim submitted under this Article 12.
5. A voucher, invoice, proposed change, Application for Payment, cost proposal, RFI, change order request, or other routine or authorized form of request for payment is not a claim under the Contract Documents. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a claim under the Contract Documents by submitting a separate claim in compliance with claim submission requirements.
6. The provisions of this Article 12 apply under the California Government Code, Title 1, Division 3.6, Part 3, Chapter 5 and survive termination, breach or completion of the Contract Documents. Contractor shall bear all costs incurred in the preparation and submission of a claim.

B. Procedure

1. Should any clarification, determination, action or inaction by City or Engineer, Work, or any other event, in the opinion of Contractor, exceed the requirements of or not comply with Contract Documents, or otherwise result in Contractor seeking additional compensation in time or money or damages for any reason (collectively "Disputed Work"), then Contractor and City will make good faith attempts to resolve informally any and all such issues, claims and/or disputes. Before commencing the Disputed Work, or within seven Days after Contractor's first knowledge of the Disputed Work, whichever is earlier, Contractor shall file a written notice and cost proposal for the Disputed Work with City stating clearly and in detail its objection and reasons for contending the Work or interpretation is outside the requirements of Contract Documents. If a written notice and cost proposal for Disputed Work is not issued within this time period, or if Contractor proceeds with the Disputed Work without first having given the notice required by this paragraph 12.B.2, Contractor shall waive its rights to further claim on the specific issue.

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2. City will review Contractor's timely notice and cost proposal for Disputed Work and provide a decision. If, after receiving the decision, Contractor disagrees with it or still considers the Work required of it to be outside of the requirements of Contract Documents, it shall so notify City, in writing, within seven Days after receiving the decision, by submitting a notice of potential claim, stating that a formal claim will be issued. Within 30 Days of receiving the decision, Contractor shall submit its claim in the form specified herein and all arguments, justification, cost or estimates, schedule analysis, and detailed documentation supporting its position. Contractor's failure to furnish notification within seven Days and all justifying documentation within 30 Days will result in Contractor waiving its right to the subject claim. If Disputed Work persists longer than 30 Days, then Contractor shall, every 30 Days until the Disputed Work ceases, submit to City a document titled "Claim Update" that shall update and quantify all elements of the claim as completely as possible. Contractor's failure to submit a Claim Update or to quantify costs every 30 Days shall result in waiver of the claim for that 30-Day period. Claims or Claim Updates stating that damages, total damages (direct and indirect), schedule input and/or any time extension will be determined at a later date shall not comply with this paragraph 12.2.B and shall result in Contractor waiving its claim(s).
3. Upon receipt of Contractor's formal claim including all arguments, justifications, cost or estimates, schedule analysis, and documentation supporting its position as previously stipulated, City or its designee will review the issue and render a final determination. If Contractor's claims submitted in accordance with this Article 12 at Project completion total less than \$375,000, then claims resolution shall proceed in the manner prescribed by Article 1.5, Chapter 1, Part 3 of Division 2 of the California Public Contract Code.
4. Claims shall be calculated in the same manner as Change Orders per Document 01250 (Modification Procedures). EXCEPT WHERE PROVIDED BY LAW, OR ELSEWHERE IN THESE CONTRACT DOCUMENTS (IF APPLICABLE), CITY SHALL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES, AND CONTRACTOR SHALL NOT INCLUDE THEM IN ITS CLAIMS. CONTRACTOR SHALL BE LIMITED IN ITS RECOVERY ON CLAIMS TO THE CHANGE ORDER CALCULATIONS SET FORTH IN DOCUMENT 01250 (MODIFICATION PROCEDURES).

C. Claim Format

1. Contractor shall submit the claim justification in the following format:
 - a. Cover letter and certification;
 - b. Summary of claim, including underlying facts, entitlement, schedule analysis, quantum calculations, contract provisions supporting relief;

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- c. List of documents relating to claim including Specifications, Drawings, clarifications/requests for information, schedules, notices of delay, cost calculations and any others;
- d. Chronology of events and correspondence;
- e. Analysis of claim merit;
- f. Analysis of claim cost; and
- g. Attach supporting documents referenced in paragraph 12.C.1.c.

D. Exclusive Remedy

Contractor's performance of its duties and obligations specified in this Article 12 and submission of a claim as provided in this Article 12 is Contractor's sole and exclusive remedy for disputes of all types pertaining to the payment of money, extension of time, the adjustment or interpretation of Contract Documents terms or other contractual or tort relief arising from Contract Documents. This exclusive remedy and the limitation of liability (expressed herein and elsewhere throughout Contract Documents) apply notwithstanding the completion, termination, suspension, cancellation, breach or rescission of the Work or Contract Documents, negligence or strict liability by City, its representatives, consultants or agents, or the transfer of Work or the Project to City for any reason whatsoever. Contractor waives all claims of waiver, estoppel, release, bar, or any other type of excuse for non-compliance with the claim submission requirements. Compliance with the notice and claim submission procedures described in Article 12 is a condition precedent to the right to commence litigation, file a Government Code Claim, or commence any other legal action. Claim(s) or issue(s) not raised in a timely protest and timely claim submitted under this Article 12 may not be asserted in any Government Code Claim, subsequent litigation, or legal action. City shall not have deemed to waive any provision under this Article 12, if at City's sole discretion, a claim is accepted in a manner not in accord with this Article 12.

E. Mediation

All Contractor claims not subject to the claim resolution procedures set forth in Document 01410 (Regulatory Requirements) shall, as a condition precedent to litigation (or if otherwise permitted by the Contract Documents, arbitration) thereon, first be mediated. Mediation shall be non-binding and utilize the services of a mediator mutually acceptable to the parties and, if the parties cannot agree, a mediator selected by the American Arbitration Association from its panel of approved mediators trained in construction industry mediation. All statutes of limitation shall be tolled from the date of the demand for mediation until a date two weeks following the mediation's conclusion. All unresolved Contractor claims shall be submitted to the same mediator. The cost of mediation shall be equally shared.

F. Subcontractor Claims

Contractor shall present as its claims all Subcontractor, sub-Subcontractor and supplier claims of any type, and prove them under the terms of the Contract

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Documents. City shall not be directly liable to any Subcontractor, any supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages or extra costs of any type arising out of or resulting from the Project.

13. LEGAL AND MISCELLANEOUS

A. Laws And Regulations

1. Contractor shall keep fully informed of and shall comply with all laws, ordinances, regulations and orders of any properly constituted authority affecting the Contract Documents, Work and persons connected with Work, and shall protect and indemnify City and its officers, employees, consultants and agents against any claim or liability, including attorney's fees, arising from or based on violation of law, ordinance, regulation or order, whether by Contractor or by Subcontractors, employees or agents. Authorized persons may at any time enter upon any part of Work to ascertain compliance of all applicable laws, ordinances, regulations and orders.
2. Whenever Drawings and Specifications require larger sizes or higher standards than are required by any applicable law, ordinance, regulation or order, Drawings and Specifications shall govern. Whenever Drawings and Specifications require something that will violate such laws, ordinances, regulations or orders, then such laws, ordinances, regulations or orders shall govern.

B. Permits And Taxes

Contractor shall procure all permits and licenses applicable to the Work (including environmental matters to the extent applicable), pay all charges and fees, including fees for street opening permits, comply with, implement and acknowledge effectiveness of all permits, initiate and cooperate in securing all required notifications or approvals therefore, and give all notices necessary and incident to due and lawful prosecution of Work, unless otherwise provided herein. City will pay applicable building permits, school, sanitation and water fees, except as otherwise provided in the Contract Documents. Contractor shall pay all sales and/or use taxes levied on materials, supplies, or equipment purchased and used on or incorporated into Work, and all other taxes properly assessed against equipment or other property used in connection with Work, without any increase in the Contract Sum. Contractor shall make necessary arrangements with proper authorities having jurisdiction over roads, streets, pipelines, navigable waterways, railroads, and other works in advance of operations, even where City may have already obtained permits for the Work.

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C. Responsibility Of Contractor And Indemnification

1. City and each of its officers, employees, consultants and agents including, but not limited to the Board, Engineer and each City's Representative, shall not be liable or accountable in any manner for loss or damage that may happen to any part of the Work; loss or damage to materials or other things used or employed in performing the Work; injury, sickness, disease, or death of any person; or damage to property resulting from any cause whatsoever except their sole negligence, willful misconduct or active negligence, attributable to performance or character of the Work, and Contractor releases all of the foregoing persons and entities from any and all such claims.
2. To the furthest extent permitted by law (including without limitation California Civil Code Section 2782), Contractor shall assume defense of, and indemnify and hold harmless, City and each of its officers, employees, consultants (including without limitation Consulting Engineer) and agents, including but not limited to the Board, Engineer and each City's Representative, from claims, suits, actions, losses and liability of every kind, nature and description, including but not limited to claims and fines of regulatory agencies and attorney's fees and consultant's fees, directly or indirectly arising out of, connected with or resulting from performance of the Work, failure to perform the Work, or condition of the Work which is caused in whole or part by any act or omission of Contractor, Subcontractors, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether it is caused in part by the negligence of City or by any person or entity required to be indemnified hereunder.
3. With respect to third-party claims against Contractor, Contractor waives any and all rights to any type of express or implied indemnity against City and each of its officers, employees, consultants and agents including, but not limited to City, the Board, Engineer and each City's Representative.
4. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its Subcontractors of any tier, or the officers or agents of any of them.
5. To the furthest extent permitted by law (including, without limitation, Civil Code Section 2782), the indemnities, releases of liability and limitations of liability, claims procedures, and limitations of remedy expressed throughout Contract Documents shall apply even in the event of breach of contract, negligence (active or passive), fault or strict liability of the party(ies) indemnified, released, or limited in liability, and shall survive the termination, rescission, breach, abandonment, or completion of the Work or the terms of the Contract Documents. If Contractor fails to perform any of these defense or indemnity obligations, City may in its discretion back charge Contractor for City's costs and damages resulting therefrom and withhold such sums from progress payments or other contract moneys which may become due.

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6. The indemnities in the Contract Documents shall not apply to any indemnified party to the extent of its sole negligence or willful misconduct; nor shall they apply to City or other indemnified party to the extent of its active negligence.

D. Concealed Or Unknown Conditions

1. If either of the following conditions is encountered at Site when digging trenches or other excavations that extend deeper than four feet below the surface, Contractor shall give a written Notice of Differing Site Conditions to City promptly before conditions are disturbed, except in an emergency as required by paragraph 16.D of this Document 00700, and in no event later than seven Days after first observance of:

- a. Subsurface or Latent physical conditions which differ materially from those indicated in the Contract Documents; or
- b. Unknown physical conditions of an unusual nature or which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

In response to Contractor's Notice of Differing Site Conditions under this paragraph 13.D.1, City will investigate the identified conditions, and if they differ materially and cause increase or decrease in Contractor's cost of, or time required for, performance of any part of the Work, City will issue either a Request for Proposal or a Construction Change Directive under the procedures described in the Contract Documents, including without limitation Document 01250 (Modification Procedures). If City determines that physical conditions at the Site are not Latent or are not materially different from those indicated in Contract Documents or that no change in terms of the Contract Documents is justified, City will so notify Contractor in writing, stating reasons

2. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed Latent or materially different Site conditions (whether above or below grade) if:
 - a. Contractor knew of the existence of such conditions at the time Contractor submitted its Bid; or
 - b. Contractor should have known of the existence of such conditions as a result of having complied with the requirements of Contract Documents, including without limitation paragraphs 2.A.1 and 8.D of this Document 00700; or
 - c. The information or conditions claimed by Contractor to be Latent or materially different consist of information, conclusions, opinions or deductions of the kind that paragraph 2.A.1 of this Document 00700 precludes reliance upon; or
 - d. Contractor was required to give written Notice of Differing Site Conditions and failed to do so within the time required.
3. If City and Contractor are unable to agree on entitlement to or as to the amount or length of any adjustment in the Contract Sum or Contract Time

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required under this paragraph 13.D, Contractor shall proceed with the Work as directed by City and may make a claim as provided in Article 12 of this Document 00700.

E. Notice Of Hazardous Waste Or Materials Conditions

1. Contractor shall give a written Notice of Hazardous Materials Condition to City promptly, before any of the following conditions are disturbed (except in an emergency as required by paragraph 16.D of this Document 00700), and in no event later than 24 hours after first observance of any:
 - a. Material that Contractor believes may be hazardous waste or hazardous material, as defined in Section 25117 of the Health and Safety Code (including, without limitation, asbestos, lead, PCBs, petroleum and related hydrocarbons, and radioactive material) that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law ("hazardous material"); or
 - b. Other material that may present an imminent substantial danger to persons or property exposed thereto in connection with Work at the Site ("other materials").
2. Except as otherwise provided in the Contract Documents or as provided by applicable law, Contractor shall not be required to give any notice for the disturbance or observation of any such hazardous materials or other materials where such matter is disturbed or observed as part of the scope of Work under the Contract Documents (such as hazardous waste or hazardous material investigation, remediation or disposal activities which are identified as the subject of Work under the Contract Documents), where Contractor complies with all requirements in the Contract Documents and applicable law respecting such materials.
3. Contractor's Notice of Hazardous Materials Condition shall indicate whether the hazardous materials or other materials were shown or indicated in the Contract Documents to be within the scope of Work, and whether the hazardous materials or other materials were brought to the Site by Contractor, its Subcontractors, suppliers, or anyone else for whom Contractor is responsible.
4. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed hazardous waste or materials if:
 - a. Contractor knew of the existence of such hazardous materials or other materials at the time Contractor submitted its Bid; or
 - b. Contractor should have known of the existence of such hazardous material or other materials as a result of its having the responsibility to obtain additional or supplementary examinations, investigation, explorations, tests, studies, and data concerning the conditions at or contiguous to the Site prior to submitting its Bid; or
 - c. Contractor failed to give the written notice within the time required by paragraph 13.E.1 of this Document 00700.

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5. If City determines that conditions involve hazardous materials or other materials and that a change in Contract Document terms is justified, City will issue either a Request for Proposal or Construction Change Directive under the procedures described in the Contract Documents, including without limitation Document 01250 (Modification Procedures). If City determines that conditions do not involve hazardous materials or other materials or that no change in Contract Document terms is justified, City will notify Contractor in writing, stating the reasons for its determination.
6. If City and Contractor are unable to agree on entitlement to or as to the amount or length of any adjustment in the Contract Sum or Contract Time required under this paragraph 13.E Contractor shall proceed with the Work as directed by City and may make a claim as provided in Article 12 of this Document 00700.
7. In addition to the parties' other rights under paragraph 13.E.5 of this Document 00700, if Contractor does not agree to resume Work based on a reasonable belief that it is unsafe, or does not agree to resume Work under special conditions, City may order the disputed portion of Work deleted from the Work, or performed by others, or City may invoke its right to terminate Contractor's right to proceed under the Contract Documents in whole or in part, for convenience or for cause as the facts may warrant. If Contractor does not agree with City's determination of any adjustment in the Contract Sum or Contract Time as a result, Contractor may make a claim as provided in Article 12 of this Document 00700.

F. Suspension Of Work

1. City may, without cause, order Contractor in writing to suspend, delay or interrupt Work in whole or in part for such period of time as City may determine. An adjustment shall be made for increases in cost of performance of Work of the Contract Documents caused by any such suspension, delay or interruption, calculated using the measures set forth in Document 01250 (Modification Procedures). No adjustment shall be made to extent that:
 - a. Performance is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor is responsible; or
 - b. An equitable adjustment is made or denied under any other provision of Contract Documents; or
 - c. The suspension of Work was the direct or indirect result of Contractor's failure to perform any of its obligations hereunder. Adjustments made in cost of performance may have a mutually agreed fixed or percentage fee; if the parties cannot agree, Contractor may file a claim under Article 12 of this Document 00700.

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G. Termination Of Contract For Cause

1. City may declare Contractor in default of Contract Documents and City may terminate Contractor's right to proceed under the Contract Documents for cause:
 - a. Should Contractor make an assignment for the benefit of creditors; admit in writing its inability to pay its debts as they become due; file a voluntary petition in bankruptcy; be adjudged a bankrupt or insolvent; be the subject of an involuntary petition in bankruptcy which is not dismissed within 60 Days; file a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any present or future statute, law, or regulation; file any answer admitting or not contesting the material allegations of a petition filed against Contractor in any such proceeding; or seek, consent to, or acquiesce in, the appointment of any trustee, receiver, custodian or liquidator of Contractor or of all or any substantial part of its properties or if Contractor, its directors or shareholders, take action to dissolve or liquidate Contractor; or
 - b. Should Contractor commit a material breach of the Contract Documents. If City declares Contractor in default due to material breach, however, City must allow Contractor an opportunity to cure such breach within ten (10) days of the date of notice from City to Contractor providing notice of the default; or, if such breach is curable but not curable within such ten (10) day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of ten (10) days, Contractor must provide City within the ten (10) day period with a written plan acceptable to City to cure said breach which includes, for example, evidence of necessary resources, Subcontractor commitments, schedules and recovery schedules meeting Contract Document requirements and showing a realistic and achievable plan to cure the breach. Contractor must then diligently commence and continue such cure according to the written plan); or
 - c. Should Contractor violate or allow (by a Subcontractor or other person or entity for which Contractor is responsible) a violation of any valid law, statute, regulation, rule, ordinance, permit, license or order of any governmental agency applicable to the Project or Work and does not cure (or cause to be cured) such violation within ten (10) days of the date of the notice from City to Contractor demanding such cure; or, if such violation is curable but not curable within such ten (10) day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of ten (10) days, Contractor shall provide City within the ten (10) day period with a written plan to cure said violation acceptable to City, and then

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- diligently commence and continue performance of such cure according to the written plan.)
2. If City at any time reasonably believes that Contractor is or may be in default under the Contract Documents as provided in paragraph 13.G.A of this Document 00700, City may in its sole discretion notify Contractor of this fact and request written assurances from Contractor of performance of Contract Documents and a written plan from Contractor to remedy any default under the terms of Contract Documents which City may advise Contractor of in writing. Contractor shall, within ten (10) days of City's request, deliver a written cure plan which meets the requirements of the written plan deliverable under paragraph 13.G.1.b of this Document 00700. Failure of Contractor to provide such written assurances of performance and the required written plan, within ten Days of request, will constitute a material breach of Contract Documents sufficient to justify termination for cause.
 3. In event of termination for cause, City will immediately serve written notice thereof upon Surety and Contractor. Surety shall have the rights and obligations set forth in Document 00610 (Construction Performance Bond). Subject to the Surety's rights under the Performance Bond (which rights are waived upon a default thereunder), City may take over the Work and prosecute it to completion by contract or by any other methods it may deem advisable.
 4. In the event of termination by City as provided in paragraph 13.G.1 of this Document 00700 for cause:
 - a. City will compensate Contractor for the value of the Work delivered to City upon termination as determined in accordance with the Contract Documents, subject to all rights of offset and back charges, and provided that Contractor provides City with updated as-builts and Project Record Documents showing the Work performed up to the date of termination. However, City will not compensate Contractor for its costs in terminating the Work or any cancellation charges owed to third parties.
 - b. Contractor shall deliver to City possession of the Work in its then condition including, but not limited to, all designs, engineering, Project records, Project Record Documents, cost data of all types, Drawings and Specifications and contracts with vendors and Subcontractors, all other documentation associated with the Project, and all construction supplies and aids dedicated solely to performing the Work which, in the normal course of construction, would be consumed or only have salvage value at the end of the construction period. Contractor shall remain fully liable for the failure of any Work completed and materials and equipment provided through the date of such termination to comply with the provisions of the Contract Documents. The provisions of this paragraph 13.G.4 shall not be interpreted to diminish any right which City may have to claim and recover damages for any breach of Contract Documents or otherwise, but rather, Contractor shall

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compensate City for all loss, cost, damage, expense, and/or liability suffered by City as a result of such termination and failure to comply with Contract Documents.

- c. City's rights under paragraph 13.G.4.b shall be specifically enforceable to the greatest extent permitted by law. City shall, to the extent applicable, have all other rights and remedies set forth in any Bidding Document.
5. City may terminate portions or parts of the Work for cause, provided these portions or parts (1) have separate geographic areas from parts or portions of the Work not terminated or (2) are limited to the work of one or more specific trades or Subcontractors. In such case, Contractor shall cooperate with a completing contractor as required under Article 6 of this Document 00700.
6. In the event a termination for cause is later determined to have been made wrongfully or without cause, then the termination shall be treated as a termination for convenience, and Contractor shall have the recovery rights specified in paragraph 13.H. Any Contractor claim arising out of a termination for cause, however, shall be made in accordance with Article 12 of this Document 00700. No other loss cost, damage, expense or liability may be claimed, requested or recovered by Contractor.

H. Termination of Contract For Convenience

1. City may terminate performance of the Work under the Contract Documents in accordance with this clause in whole, or from time to time in part, whenever City shall determine that termination is in City's best interest. Termination shall be effected by City delivering to Contractor notice of termination specifying the extent to which performance of the Work under the Contract Documents is terminated and the effective date of the termination.
2. After receiving a notice of termination under paragraph 13.H.1 of this Document 00700, and except as otherwise directed by City, Contractor shall:
 - a. Stop Work under the Contract Documents on date and to extent specified in notice of termination;
 - b. Place no further orders or subcontracts for materials, services, or facilities except as necessary to complete portion of Work under the Contract Documents which is not terminated;
 - c. Terminate all orders and subcontracts to extent that they relate to performance of Work terminated by the notice of termination;
 - d. Assign to City in manner, at times, and to extent directed by City, all right, title, and interest of Contractor under orders and subcontracts so terminated. City shall have the right, in its sole discretion, to settle or pay any or all claims arising out of termination of orders and subcontracts;
 - e. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with approval or ratification

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- of City to extent City may require. City's approval or ratification shall be final for purposes of this paragraph 13.H;
- f. Transfer title to City, and deliver in the manner, at the times, and to the extent, if any, directed by City, all fabricated or unfabricated parts, Work in process, completed Work, supplies, and all other material produced as part of, or acquired in connection with performance of, Work terminated by the notice of termination, and completed or partially completed drawings, drawings, specifications, information, and other property which, if the Project had been completed, would have been required to be furnished to City;
 - g. Use its best efforts to sell, in manner, at times, to extent, and at price or prices that City directs or authorizes, any property of types referred to in paragraph 13.H.2.f of this Document 00700, but Contractor shall not be required to extend credit to any purchaser, and may acquire any such property under conditions prescribed and at price or prices approved by City. Proceeds of transfer or disposition shall be applied to reduce payments to be made by City to Contractor under the Contract Documents or shall otherwise be credited to the price or cost of Work covered by Contract Documents or paid in such other manner as City may direct;
 - h. Complete performance of the part of the Work which was not terminated by the notice of termination; and
 - i. Take such action as may be necessary, or as City may direct, to protect and preserve all property related to Contract Documents which is in Contractor's possession and in which City has or may acquire interest.
3. After receipt of a notice of termination under paragraph 13.H.1 of this Document 00700, Contractor shall submit to City its termination claim, in form and with all certifications required by Article 12 of this Document 00700. Contractor's termination claim shall be submitted promptly, but in no event later than 6 months from effective date of the termination. Contractor and City may agree upon the whole or part of the amount or amounts to be paid to Contractor because of a total or partial termination of Work under this paragraph 13.H. If Contractor and City fail to agree on the whole amount to be paid to Contractor because of the termination of the Work under this paragraph 13.H, City's total liability to Contractor by reason of the termination shall be the total (without duplication of any items) of:
 - a. The reasonable cost to Contractor, without profit, for all Work performed prior to the effective date of the termination, including Work done to secure the Project for termination. Reasonable cost may not exceed the applicable percentage completion values derived from the progress schedule and the schedule of values. Deductions shall be made for cost of materials to be retained by Contractor, cost of Work defectively performed, amounts realized by sale of materials, and for other appropriate credits against cost

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- of Work. Reasonable cost will include reasonable allowance for Project overhead and general administrative overhead not to exceed a total of ten percent of direct costs of such Work. When, in City's opinion, the cost of any item of Work is excessively high due to costs incurred to remedy or replace defective or rejected Work, reasonable cost to be allowed will be the estimated reasonable cost of performing the Work in compliance with requirements of Contract Documents and excessive actual cost shall be disallowed.
- b. A reasonable allowance for profit on cost of Work performed as determined under paragraph 13.H.3.a of this Document 00700, provided that Contractor establishes to City's satisfaction that Contractor would have made a profit had the Project been completed, and provided further that the profit allowed shall not exceed 5 percent of cost.
 - c. Reasonable costs to Contractor of handling material returned to vendors, delivered to City or otherwise disposed of as directed by City.
 - d. A reasonable allowance for Contractor's internal administrative costs in preparing termination claim.
 - e. Except as provided in this paragraph 13.H.3 of this Document 00700, City shall not be liable for costs incurred by Contractor or Subcontractors after receipt of a notice of termination. Such non-recoverable costs include, but are not limited to, anticipated profits on Work not performed as of the date of termination, post-termination employee salaries, post-termination general administrative expenses, post-termination overhead or unabsorbed overhead, costs of preparing and submitting Contractor's Bid, attorney's fees of any type, and all costs relating to prosecution of claim or lawsuit.
 - f. City shall have no obligation to pay Contractor under this paragraph 13.H unless and until Contractor provides City with updated and acceptable as-builts and Project Record Documents for Work completed prior to termination.
4. In arriving at the amount due Contractor under this clause, there shall be deducted in whole (or in the appropriate part[s] if the termination is partial):
- a. All unliquidated advances or other payments on account previously made to Contractor, including without limitation all payments applicable to the terminated portion of Contract Documents;
 - b. Any claim which City may have against Contractor in connection with Contract Documents; and
 - c. The agreed price for, or proceeds of sale of, any materials, supplies, or other things kept by Contractor or sold under provisions of this paragraph 13.H, and not otherwise recovered by or credited to City.

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I. Contingent Assignment Of Subcontracts

1. Contractor hereby assigns to City each Subcontract for a portion of the Work, provided that:
 - a. The assignment is effective only after City's termination of Contractor's right to proceed under the Contract Documents (or portion thereof relating to that Subcontract) pursuant to paragraphs 13.G or 13.H of this Document 00700.
 - b. The Assignment is effective only for the Subcontracts which City expressly accepts by notifying the Subcontractor in writing;
 - c. The assignment is subject to the prior rights, if any, of the Surety, obligated by Document 00610 (Construction Performance Bond) provided under the Contract Documents, where the Surety exercises its rights to complete the Contract;
 - d. After the effectiveness of an assignment, Contractor shall, at its sole cost and expense (except as otherwise provided in paragraphs 13.G or 13.H of this Document 00700), sign all instruments and take all actions reasonably requested by City to evidence and confirm the effectiveness of the assignment in City; and
 - e. Nothing in this paragraph 13.I shall modify or limit any of Contractor's obligations to City arising from acts or omissions occurring before the effectiveness of any Subcontract assignment, including but not limited to all defense, indemnity and hold-harmless obligations arising from or related to the assigned Subcontract.

J. Remedies and Contract Integration

1. Subject to Contract Documents provisions regarding Contractor claims, claim review, and claim resolution, and subject to the limitations therein, the exclusive jurisdiction and venue for resolving all claims, counter-claims, disputes and other matters in question between City and Contractor arising out of or relating to Contract Documents, any breach thereof or the Project shall be the applicable court of competent jurisdiction located in the State of California, County of Santa Clara. All City remedies provided in the Contract Documents shall be taken and construed as cumulative and not exclusive; that is, in addition to each and every other remedy herein provided; and in all instances City shall have any and all other equitable and legal rights and remedies which it would have according to law.
2. The Contract Documents, any Contract Modifications and Change Orders shall represent the entire and integrated agreement between City and Contractor regarding the subject matters hereof and thereof and shall constitute the exclusive statement of the terms of the parties' agreement. The Contract Documents, and any Contract Modifications and Change Orders, shall supersede any and all prior negotiations, representations or agreements, written or oral, express or implied, that relate in any way to the subject matter of the Contract Documents or written modifications. City and Contractor represent and agree that, except as otherwise expressly

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provided in the Contract Documents, they are entering into the Contract Documents and any subsequent written modification in sole reliance upon the information set forth or referenced in the Contract Documents or Contract Modifications and the parties are not and will not rely on any other information.

3. In any proceeding to enforce the Contract Documents, Contractor and City agree that the finder of fact shall receive detailed instructions on the meaning and operation of the Contract Documents, including their conditions, limitations of liability and remedies clauses, claims procedures and any other provisions impacting major defenses and theories of liability of the parties. Detailed findings of fact shall be requested, to verify Contract enforcement.
4. Either party's waiver of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of the Contract Documents at any time shall not in any way affect, limit, modify or waive that party's right thereafter to enforce or compel strict compliance with every term, covenant, condition or other provision hereof, any course of dealing or custom of the trade or oral representations notwithstanding.

K. Patents

Fees or claims for any patented invention, article or arrangement that may be used upon or in any manner connected with performance of the Work or any part thereof shall be included in the Bid price for doing the Work. Contractor shall defend, indemnify and hold harmless City and each of its officers, employees, consultants (including without limitation Consulting Engineer) and agents, including, but not limited to, the Board and each City's Representative, from all damages, claims for damages, costs or expenses in law or equity, including attorney's fees, arising from or relating to any claim that any article supplied or to be supplied under the Contract Documents infringes on the patent rights, copyright, trade name, trademark, service mark, trade secret or other intellectual property right of any person or persons or that the person or entity supplying the article does not have a lawful right to sell the same. Such costs or expenses for which Contractor agrees to indemnify and hold harmless the above indemnities include but are not limited to any and all license fees, whether such fees are agreed by any indemnitee or ordered by a court or administrative body of any competent jurisdiction.

L. Substitution for Patented and Specified Articles

Except as noted specifically in Specifications, whenever in Specifications, material or process is designated by patent or proprietary name or by name of manufacturer, such designation shall be deemed to be used for purpose of facilitating description of material and process desired, and shall be deemed to be followed by the words "or equal" and Contractor may offer any substitute material or process that Contractor considers equal in every respect to that so designated and if material or process offered by Contractor is, in opinion of City, equal in every respect to that so designated, its use will be approved. However, Contractor may

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utilize this right only by timely submitting Document 00660 (Substitution Request Form) as provided in Document 00200 (Instructions to Bidders). A substitution will be approved only if it is a true "equal" item in every aspect of its design and quality, including but not limited to its dimensions, weights, service requirements, durability, functioning, impact on contiguous construction elements, overall schedule and design.

M. Interest of Public Officers

No representative, officer, or employee of City, no member of the governing body of the locality in which the Project is situated, no member of the locality in which City was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the Project, during the tenure of the official or for one year thereafter, shall, as principal, agent, attorney or otherwise, be directly or indirectly interested, in the Contract Documents or the proceeds thereof.

N. Limit of Liability

CITY, AND EACH OF ITS OFFICERS, BOARD MEMBERS, EMPLOYEES, CONSULTANTS (INCLUDING WITHOUT LIMITATION CONSULTING ENGINEER) AND AGENTS INCLUDING, BUT NOT LIMITED TO, AND ENGINEER EACH OTHER CITY REPRESENTATIVE SHALL HAVE NO LIABILITY TO CONTRACTOR FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, EXCEPT TO THE LIMITED EXTENT THAT THESE CONTRACT DOCUMENTS OR APPLICABLE PUBLIC CONTRACTING STATUTES MAY SPECIFY THEIR RECOVERY.

O. Severability

Any provisions or portions thereof of Contract Documents that are prohibited by, unlawful, or unenforceable under any applicable law of any jurisdiction shall as to such jurisdiction be ineffective without affecting other provisions or portions thereof in the Contract Documents.

14. MODIFICATIONS OF CONTRACT DOCUMENTS

A. Alterations, Modifications And Force Account Work

1. No modification or deviation from the Drawings and Specifications will be permitted except by written Contract Modification.
2. City may, without notice to the sureties, make alterations, deviations, additions to, or deletions from Contract Documents; increase or decrease the quantity of any item or portion of the Work; expand, contract or otherwise change the Contract Time; delete any item or portion of the Work; and require extra Work. Contractor shall perform such Work under applicable provisions of the Contract Documents, unless specifically

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provided otherwise at the time the change is ordered. In the case of any ordered extra Work, Owner reserves the right to furnish all or portions of associated labor, material, and equipment, which Contractor shall accept and use without payment for costs, markup, profit, or otherwise for such City-furnished labor, materials, and equipment.

3. Changes affecting the Contract Time or Contract Sum of the Work shall be set forth in a written Change Order that shall specify:
 - a. The Work performed in connection with the change to be made;
 - b. The amount of the adjustment of the Contract Sum, if any, and the basis for compensation for the Work ordered; and
 - c. The extent of the adjustment in the Contract Time, if any.
4. A Change Order will become effective when signed by City. If City exercises its right to decide disputed issues pertaining to changed Work as set forth in Articles 12 and 14 of this Document 00700, then the resulting Change Order shall be effective when signed by City, notwithstanding that Contractor has not signed it.
5. Changes not affecting the Contract Time or Contract Sum of the Work, in City's discretion, may be set forth in a written RFI-Reply executed by City. Execution of such an RFI-Reply constitutes Contractor's agreement to make the specified change without change to the Contract Sum or the Contract Time.
6. Changes or deviations from Contract Documents affecting the Contract Time or Contract Sum of the Work shall not be made without the authority of an effective Change Order or Construction Change Directive as provided in Document 01250 (Modification Procedures), except in cases of emergency discussed in Article 16 of this Document 00700.
7. If changes ordered in design, workmanship or materials are of such a nature as to increase or decrease the cost of any part of the Work, the price fixed in the Contract Documents shall be increased or decreased by the amount that Contractor and City may agree upon as a reasonable and proper allowance for the cost increase or decrease. If an agreement cannot be reached, then City will reach a determination, which shall be final, subject to Contractor's rights under Article 12 of this Document 00700. In all cases Contractor shall perform the changed Work as directed by City subject to Contractor's rights under Article 12 of this Document 00700.
8. Contractor shall, upon City's request, permit inspection of the original unaltered Bid estimate, subcontract agreements, purchase orders relating to the change, and documents substantiating all costs associated with its cost proposal or claims arising from changes in the Work.
9. Changes in the Work made pursuant to this Article 14 and extensions of Contract Time necessary by reason thereof shall not in any way release the guarantees and warranties given by Contractor pursuant to provisions of the Contract Documents, nor shall such changes in the Work relieve or release the Sureties of bonds executed pursuant to said provisions. The Sureties, in executing such bonds, shall be deemed to have expressly agreed to any such change in the Work and to any extension of time made by reason thereof.

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10. Procedures for Modifications of Contract Documents and for calculating the cost of extra Work are given in Document 01250 (Modification Procedures). Regarding delay and impact costs of any nature, Contractor may not seek delay compensation for on-Site or off-Site costs based on formulas, e.g., "Eichlay" or other formula. Rather, Contractor shall prove actual costs resulting from such delays. If Contractor requests compensation for delay to the construction, then Contractor shall prove and document actual costs plus markup per the cost categories and procedures in Document 01250 (Modification Procedures) in order to request, claim or prove compensation for delay.
11. Change Orders in excess of City's approved limit must be approved by the City Council and a performance bond rider covering the changed Work executed before proceeding with the changed Work. Contractor is charged with knowledge of City's approved Change Order limits and procedures in effect at the applicable time.

15. TIME ALLOWANCES

A. Time Allowances For Performance Of Contract Documents

1. When Contractor and City have signed the Contract Documents, City will serve a Notice to Proceed upon Contractor to that effect, either by depositing notice in a post office or post office box regularly maintained by United States Postal Service in a pre-paid wrapper directed to Contractor at legal address or (at City's option) by delivery by other means at legal address
2. The start date for Contract Time shall be on the date indicated in the applicable Notice to Proceed. If no date is indicated, the start date for Contract Time shall be the fifth Day from the date that Contractor receives, by hand delivery or facsimile transmission, City's written Notice to Proceed, unless the Notice to Proceed is served by mail only, in which case the start date for Contract Time shall be the fifth Day following the mailing date. The total number of Days for completion of the Work under the Contract Documents shall be as provided in Document 00520 (Agreement).

B. Entitlement to Change Of Contract Time

1. The Contract Time may only be changed by Change Order or by Contract Modification, and all time limits stated in the Contract Documents are of the essence of Contract Documents.
2. The Contract Time will be adjusted in an amount equal to the time lost due to:
 - a. Changes in the Work ordered by City;
 - b. Acts or neglect by City, Engineer, any City's Representative, utility owners or other contractors performing other work, provided that Contractor has fully and completely performed its responsibilities under the Contract Documents; or

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- c. Fires, floods, epidemics, abnormal weather conditions beyond the parameters otherwise set forth in this paragraph 15.B, earthquakes, civil or labor disturbances, strikes or acts of God, provided damages resulting therefrom are not the result of Contractor's failure to protect the Work as required by Contract Documents.
3. The Contract Time shall not be extended for any cause identified in paragraph 15.B.2 above, however, unless:
 - a. Contractor actually has been prevented from completing any part of the Work within the Contract Time due to delay that is beyond Contractor's control and due to reasons for which Contractor is not responsible (delays attributable to and within the control of a Subcontractor, or its subcontractors, or supplier shall be deemed to be delays within the control of Contractor);
 - b. A claim for delay is made as provided herein; and
 - c. Contractor submits a Time Impact Evaluation as required under Document 01320 (Progress Schedules and Reports) that demonstrates actual delay to critical Work activities that actually delay the progress of the Work in the amount of time requested.
4. Where Contractor is prevented from completing any part of the Work within the Contract Time due to delay beyond the control of both City and Contractor (including, but not limited to, adverse weather of all types and acts of other contractors or utilities), an extension of Contract Time, in an amount equal to the time lost due to such delay (without compensation), shall be Contractor's sole and exclusive remedy for such delay.
5. Delays due to abnormal or adverse weather conditions will not be allowed for weather conditions that fall within the parameters listed in this paragraph 15.B.5. Adverse weather delays may be allowed only if the number of workdays of adverse weather exceeds these parameters on a monthly basis and Contractor proves that adverse weather actually caused delays. Contractor shall give written notice of intent to claim an adverse weather day within one Day of the adverse weather day occurring. Rain parameters are as follows, pro-rated in the individual month Contractor starts and finishes Work:
January, 6; February, 6; March, 5; April, 3; May, 1; June, 0; July, 0; August, 0; September, 0; October, 2; November, 4; and December, 5.
In order to qualify as an adverse weather delay with respect to the foregoing parameters, daily rainfall must exceed .1 of an inch or more at the Livermore, California station, as measured by the National Oceanic & Atmospheric Administration, and Contractor shall prove that the rain actually caused delay as set forth in paragraph 15.B.7 of this Document 00700.
6. Contractor shall include the foregoing rain parameters as a monthly activity in its progress schedule. As Work on the critical path is affected by rain, Contractor shall notify City and request that the days be moved to the affected activities. Any adverse weather days remaining shall be considered Project float.

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7. Adverse weather delay for rain shall be recognized for the actual period of time Contractor proves it was delayed by rain exceeding the specified parameters. For example, and not by way of limitation, if rain exceeding the specified parameters does not in fact delay Contractor's progress on the critical path, then no time extension shall be recognized; and conversely, if Contractor proves that rain exceeding the specified parameters causes delay to Contractor for a period longer than the number of rain days incurred (e.g., if it rains during grading work) , then Contractor shall be entitled to a time extension equal to the actual period of such delay.
8. Contractor shall take reasonable steps to mitigate potential weather delays, such as dewatering the Site, and covering Work and material that could be affected adversely by weather. Failure to do so shall be cause for City to not grant a time extension due to adverse weather, where Contractor could have avoided or mitigated the potential delay by exercising reasonable care.

C. Notice of Delay

Within seven Days of the beginning of any delay, Contractor shall notify City in writing, by submitting a notice of potential claim, of all anticipated delays resulting from the delay event in question. Any request for extension of time shall be accompanied by Contractor's written statement that the adjustment claimed is the entire adjustment to which the claimant is entitled as a result of the occurrence of said event, and shall include a written schedule document that demonstrates delay to the critical path using a Time Impact Evaluation as specified in Document 01320 (Progress Schedules). City will determine all claims and adjustments in the Contract Time. No claim for an adjustment in the Contract Time will be valid and such claim will be waived if not submitted in accordance with the requirements of this paragraph 15.C.

D. Time Extensions and/or Damages Entitlements For Delays

1. Contractor may receive a time extension and be compensated for delays caused directly and solely by City.
2. Contractor may receive a time extension without compensation for delays resulting in whole or in part from causes beyond the reasonable control of Contractor and City, e.g. adverse weather conditions exceeding Contract Documents parameters, earthquakes, Acts of God and epidemics. In such cases, a time extension without compensation shall constitute Contractor's sole and exclusive remedy for such delays.
3. Contractor shall not be entitled to any time extension or compensation including, but not limited to, extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays caused in whole or in part by Contractor's failure to perform its obligations under the Contract Documents, or during periods of delay concurrently caused by Contractor and either City or others.

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4. Contractor shall not be entitled to damages for delay to the Work caused by the following reasons:
 - a. City's right to sequence the Work in a manner which would avoid disruption to City's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities required by Contract Documents; City's enforcement of any government act or regulation; or the provisions of the Contract Documents;
 - b. For changed Site conditions that are beyond the parties' contemplation, except that City may approve direct costs associated with unknown conditions (but not costs or damages which result from such delays); and
 - c. Extensive requests for clarifications to Contract Documents or Contract Modifications thereto, provided such clarifications or Contract Modifications are processed by City or its consultants in a reasonable time commensurate with Contract Documents requirements.

E. Liquidated Damages

1. Time is of the essence. Execution of Contract Documents by Contractor shall constitute acknowledgement by Contractor that Contractor understands, has ascertained and agrees that City will actually sustain damages in the amount fixed in the Contract Documents for each and every Day during which completion of Work required is delayed beyond expiration of time fixed for completion or extensions of time allowed pursuant to provisions hereof. Contractor and City agree that specified measures of liquidated damages shall be presumed to be the damages actually sustained by City as defined below, and that because of the nature of the Project, it would be impracticable or extremely difficult to fix the actual damages.
2. Liquidated damages shall be considered not as a penalty but as agreed monetary damage sustained by City for increased Project administration expenses, including extra inspection, construction management and architectural and engineering expenses related to the Project and Contract Documents because Contractor failed to perform and complete Work within time fixed for completion or extensions of time allowed pursuant to provisions hereof. Liquidated damages shall not be deemed to include within their scope additional damages or administrative costs arising from Defective Work, lost revenues, interest expenses, cost of completion of the Work, cost of substitute facilities, claims and fines of regulatory agencies, damages suffered by others or other forms of liability claimed against City as a result of delay (e.g., delay or delay related claims of other contractors, subcontractors or tenants), and defense costs thereof. Contractor shall be fully responsible for the actual amount of any such damages it causes, in addition to the liquidated damages otherwise due City.

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3. City may deduct from any money due or to become due to Contractor subsequent to time for completion of entire Work and extensions of time allowed pursuant to provisions hereof, a sum representing then-accrued liquidated damages. Should Contractor fall behind the approved Progress Schedule, City may deduct liquidated damages based on its estimated period of late completion. City need not wait until Final Completion to withhold liquidated damages from Contractor's progress payments. Should money due or to become due to Contractor be insufficient to cover aggregate liquidated damages due, then Contractor forthwith shall pay the remainder of the assessed liquidated damages to City.

16. WORKING CONDITIONS AND PREVAILING WAGES

A. Use of Site/Sanitary Rules

1. All portions of the Work shall be maintained at all times in neat, clean and sanitary condition. Contractor shall furnish toilets for use of Contractor's and Subcontractors' employees on the Site where needed, and their use shall be strictly enforced. All toilets shall be properly secluded from public observation, and shall be located, constructed and maintained subject to City's approval.
2. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Site and land areas identified in and permitted by Contract Documents and other land and areas permitted by applicable laws and regulations, rights of way, permits and easements or as designated by City, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, any improvement located thereon, or to the owner or occupant thereof resulting from the performance of Work.
3. During the progress of the Work, Contractor shall keep the Site and the Project free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish and debris from and about the Site as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the premises clean and ready for occupancy by City at Substantial Completion of Work. Contractor shall restore to original condition all property not designated for alteration by Contract Documents.
4. Contractor shall not load nor permit any part of any structure or pavement to be loaded in any manner that will endanger the structure or pavement, nor shall Contractor subject any part of Work or adjacent property to stresses or pressures that will endanger it. Contractor shall conduct all necessary existing conditions investigation regarding structural, mechanical, electrical or any other system existing, shall perform Work consistent with such existing conditions, and shall have full responsibility

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for insufficiencies or damage resulting from insufficiencies of existing systems, equipment or structures to accommodate performing the Work.

B. Protection of Work, Persons, Property and Operations

1. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with Work. Contractor shall comply with all safety requirements specified in any safety program established by City, or required by state, federal or local laws and ordinances. Contractor shall be responsible for all damage to Work, property or structures, all injuries to persons, and all damage and interruptions to City's operations, arising from the performance of Work of the Contract Documents. Except as otherwise expressly approved by City in writing, Contractor shall at all times perform all Work in a manner which does not interrupt, damage or otherwise adversely impact any existing City facilities or operations.
2. Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.
3. Contractor shall remedy all damage, injury, loss or interruption to any property or operations referred to in paragraph 16.B.1 of this Document 00700, caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, supplier, or any other person or organization directly or indirectly employed by any of them to perform or furnish any Work or anyone for whose acts any of them may be liable. Contractor's duties and responsibility for safety and for protection of Work shall continue until such time as all the Work is completed and Final Acceptance of the Work. City and its agents do not assume any responsibility for collecting any indemnity from any person or persons causing damage to Contractor's Work.
4. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
5. City may, at its option, retain such moneys due under the Contract Documents as City deems necessary until any and all suits or claims against Contractor for injury to persons, property or operations shall be settled and City receives satisfactory evidence to that effect.

C. Responsibility For Safety And Health

1. Contractor shall ensure that its and each tier of Subcontractors' employees, agents and invitees comply with applicable health and safety laws while at

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the Site. These laws include the Occupational Safety and Health Act of 1970 and rules and regulations issued pursuant thereto, and City's safety regulations as amended from time to time. Contractor shall comply with all City directions regarding protective clothing and gear.

2. Contractor shall be fully responsible for the safety of its and its Subcontractors' employees, agents and invitees on the Site. Contractor shall notify City, in writing, of the existence of hazardous conditions, property or equipment at the Site that are not under Contractor's control. Contractor shall be responsible for taking all the necessary precautions against injury to persons or damage to the property of Contractor, Subcontractors or persons from recognized hazards until the responsible party corrects the hazard.
3. Contractor shall confine all persons acting on its or its Subcontractors' behalf to that portion of the Site where Work under the Contract Documents is to be performed: City designated routes for ingress and egress thereto and any other City designated area. Except those routes for ingress and egress over which Contractor has no right of control, within such areas, Contractor shall provide safe means of access to all places at which persons may at any time have occasion to be present.

D. Emergencies

In emergencies affecting the safety or protection of persons or Work or property at the Site or adjacent thereto, Contractor, without special instruction or authorization from City, is obligated to act to prevent threat and damage, injury or loss, until directed otherwise by City. Contractor shall give City prompt written notice if Contractor believes that any significant changes in Work or variations from Contract Documents have been caused thereby. If City determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Change Order or Construction Change Directive will be issued to document the consequences of such action.

E. Use Of Roadways And Walkways

Contractor shall not unnecessarily interfere with use of any roadway, walkway or other facility for vehicular or pedestrian traffic. Before beginning any interference and only with City's prior concurrence, Contractor may provide detour or temporary bridge for traffic to pass around or over the interference, which Contractor shall maintain in satisfactory condition as long as interference continues. Unless otherwise provided in the Contract Documents, Contractor shall bear the cost of these temporary facilities.

F. Nondiscrimination

No person or entity shall discriminate in the employment of persons upon public works because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sexual preference, or

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gender of such persons, except as provided in Section 12940 of the Government Code. Every contractor for public works violating the provisions of Section 1735 of the Labor Code is subject to all the penalties imposed for a violation of Chapter 1, Part 7, Division 2 of the Labor Code.

G. Prevailing Wages

1. Contractor shall pay to persons performing labor in and about Work provided for in the Contract Documents an amount equal to or more than the general prevailing rate of per diem wages for (1) work of a similar character in the locality in which the Work is performed and (2) legal holiday and overtime work in said locality. The per diem wages shall be an amount equal to or more than the stipulated rates contained in a schedule that has been ascertained and determined by the Director of the State Department of Industrial Relations and City to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this Contract. Contractor shall also cause a copy of this determination of the prevailing rate of per diem wages to be posted at each Site.
2. Contractor shall forfeit, as a penalty to City, Fifty Dollars (\$50.00) for each laborer, workman, or mechanic employed in performing labor in and about the Work provided for in the Contract Documents for each Day, or portion thereof, that such laborer, workman or mechanic is paid less than the said stipulated rates for any work done under the Contract Documents by him or her or by any Subcontractor under him or her, in violation of Articles 1 and 2 of Chapter 1 of Part 7 of Division II of the California Labor Code. The sums and amounts which shall be forfeited pursuant to this paragraph 16.G.2 and the terms of the Labor Code shall be withheld and retained from payments due to Contractor under the Contract Documents, pursuant to this Document 00700 and the Labor Code, but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the State Department of Industrial Relations or by City. The Labor Commissioner pursuant to Labor Code Section 1775 shall determine the final amount of forfeiture.
3. Contractor shall insert in every subcontract or other arrangement which Contractor may make for performance of work or labor on Work provided for in the Contract, provision that Subcontractor shall pay persons performing labor or rendering service under subcontract or other arrangement not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed in the Labor Code.
4. Contractor stipulates that it shall comply with all applicable wage and hour laws, including without limitation Labor Code Section 1813.

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H. Environmental Controls

Contractor shall comply with all rules, regulations, ordinances, and statutes that apply to any work performed under the Contract Documents including, without limitation, any toxic, water and soil pollution controls and air pollution controls specified in Government Code, Section 11017. Contractor shall be responsible for insuring that Contractor's employees, Subcontractors and the public are protected from exposure to airborne hazards or contaminated water, soil or other toxic materials used during or generated by activities on the Site or associated with the Project.

I. Shoring Safety Plan

1. At least five Days in advance of excavating any trench five feet or more in depth, Contractor shall submit to City a detailed plan showing the shoring, bracing and sloping design and other provisions to be made for worker protection from the hazard of caving ground during the excavation, as required by Labor Code Section 6705. A civil or structural engineer registered in California shall prepare and sign any plan that varies from the shoring system standards established by the State Construction Safety Orders.
2. During the course of Work, Contractor shall be responsible for determining where sloping, shoring, and/or bracing is necessary and the adequacy of the design, installation, and maintenance of all shoring and bracing for all excavation, including any excavation less than five feet in depth. Contractor will be solely responsible for any damage or injuries that may result from excavating or trenching. City's acceptance of any drawings showing the shoring or bracing design or work schedule shall not relieve Contractor of its responsibilities under this paragraph 16.I.

J. Emergency Water Shut-off Plan

1. The Contractor will provide an emergency water shut-off plan to the City prior to beginning any excavation work.

K. Emergency Sewer By-Pass Plan

1. The Contractor will provide an emergency sewer by-pass plan to the City prior to beginning any excavation work.

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SUPPLEMENTARY CONDITIONS

1. SUMMARY

This document includes requirements that supplement the paragraphs of Document 00700 (General Conditions).

2. SUPPLEMENTS

A. Supplement to Paragraph 15 (Time Allowances)

1. A new Paragraph 15.A.1, reading in full as follows, is hereby added 15.A.1. See Document 01100 (Summary) paragraph 1.7 for certain limitations on Contractor's rights under this paragraph 15.B.

B. Supplement to Paragraph 16.C (Responsibility For Safety And Health)

1. A new Paragraph 16.C.1, reading in full as follows, is hereby added

16.C.1 Contractor shall ensure that its and each tier of Subcontractors' employees, agents and invitees comply with City requirements regarding protective clothing and gear. The present requirement is to wear Flame Resistant clothing rated at a minimum risk category of 2 and a minimum arc rating of 8 cal/cm². Such clothing shall be worn whenever Contractor's employees or Subcontractor's employees are working within energized substations.

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INSURANCE

THE CITY'S INSURANCE REQUIREMENTS ARE NOT NEGOTIABLE. ANY ALTERATIONS TO THIS DOCUMENT WILL BE CONSIDERED NON-RESPONSIVE.

Without limiting the Contractor's indemnification of the City, and prior to commencing any of the Services required under this Agreement, the Contractor shall purchase and maintain in full force and effect, at its sole cost and expense, the following insurance policies with at least the indicated coverages, provisions and endorsements:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

1. Commercial General Liability Insurance policy which provides coverage at least as broad as Insurance Services Office form CG 00 01. Policy limits are subject to review, but shall in no event be less than, the following:

- \$5,000,000 Each occurrence
- \$5,000,000 General Aggregate
- \$5,000,000 Products/Completed Operations Aggregate
- \$5,000,000 Personal Injury
- \$5,000,000 Project Aggregate

2. Exact structure and layering of the coverage shall be left to the discretion of Contractor; however, any excess or umbrella policies used to meet the required limits shall be at least as broad as the underlying coverage and shall otherwise follow form.
3. The following provisions shall apply to the Commercial Liability policy as well as any umbrella policy maintained by the Contractor to comply with the insurance requirements of this Agreement:
 - a. Coverage shall be on a "pay on behalf" basis with defense costs payable in addition to policy limits;
 - b. There shall be no cross liability exclusion which precludes coverage for claims or suits by one insured against another; and
 - c. Coverage shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of liability

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B. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business automobile liability insurance policy which provides coverage at least as broad as ISO form CA 00 01 with policy limits a minimum limit of not less than one million dollars (\$1,000,000) each accident using, or providing coverage at least as broad as, Insurance Services Office form CA 00 01. Liability coverage shall apply to all owned, non-owned and hired autos

In the event that the Work being performed under this Agreement involves transporting of hazardous or regulated substances, hazardous or regulated wastes and/or hazardous or regulated materials, Contractor and/or its subcontractors involved in such activities shall provide coverage with a limit of two million dollars (\$2,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage Policy of Environmental Impairment Endorsement MCS90 or Insurance Services Office endorsement form CA 99 48, which amends the pollution exclusion in the standard Business Automobile Policy to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto.

C. WORKERS' COMPENSATION

1. Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars (\$1,000,000) policy limit Bodily Injury by disease, one million dollars (\$1,000,000) each accident/Bodily Injury and one million dollars (\$1,000,000) each employee Bodily Injury by disease.
2. The indemnification and hold harmless obligations of Contractor included in this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any subcontractor under any Workers' Compensation Act(s), Disability Benefits Act(s) or other employee benefits act(s).
3. This policy must include a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

D. COMPLIANCE WITH REQUIREMENTS

All of the following clauses and/or endorsements, or similar provisions, must be part of each commercial general liability policy, and each umbrella or excess policy.

1. Additional Insureds. City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents are hereby added as additional insureds in respect to liability arising out of Contractor's work for City, using Insurance Services Office (ISO) Endorsement CG 20 10 11 85 or the combination of CG 20 10 03 97 and CG 20 37 10 01, or its equivalent.

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2. Primary and non-contributing. Each insurance policy provided by Contractor shall contain language or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance which the Indemnities may possess, including any self-insurance or self-insured retention they may have. Any other insurance Indemnities may possess shall be considered excess insurance only and shall not be called upon to contribute with Contractor's insurance.
3. Cancellation.
 - (a) Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided due to non-payment of premiums shall be effective until written notice has been given to City at least ten (10) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least ten (10) days prior to the effective date of non-renewal.
 - (b) Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided for any cause save and except non-payment of premiums shall be effective until written notice has been given to City at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.
4. Other Endorsements. Other endorsements may be required for policies other than the commercial general liability policy if specified in the description of required insurance set forth in Sections A through D of this Exhibit C, above.

E. ADDITIONAL INSURANCE RELATED PROVISIONS

Contractor and City agree as follows:

1. Contractor agrees to ensure that subcontractors, and any other party involved with the Services who is brought onto or involved in the performance of the Services by Contractor, provide the same minimum insurance coverage required of Contractor, except as with respect to limits. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this Agreement. Contractor agrees that upon request by City, all agreements with, and insurance compliance documents provided by, such subcontractors and others engaged in the project will be submitted to City for review.

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INSURANCE

2. Contractor agrees to be responsible for ensuring that no contract used by any party involved in any way with the project reserves the right to charge City or Contractor for the cost of additional insurance coverage required by this Agreement. Any such provisions are to be deleted with reference to City. It is not the intent of City to reimburse any third party for the cost of complying with these requirements. There shall be no recourse against City for payment of premiums or other amounts with respect thereto.
3. The City reserves the right to withhold payments from the Contractor in the event of material noncompliance with the insurance requirements set forth in this Agreement.

F. EVIDENCE OF COVERAGE

Prior to commencement of any Services under this Agreement, Contractor, and each and every subcontractor (of every tier) shall, at its sole cost and expense, purchase and maintain not less than the minimum insurance coverage with the endorsements and deductibles indicated in this Agreement. Such insurance coverage shall be maintained with insurers, and under forms of policies, satisfactory to City and as described in this Agreement. Contractor shall file with the City all certificates and endorsements for the required insurance policies for City's approval as to adequacy of the insurance protection.

G. EVIDENCE OF COMPLIANCE

Contractor or its insurance broker shall provide the required proof of insurance compliance, consisting of Insurance Services Office (ISO) endorsement forms or their equivalent and the ACORD form 25-S certificate of insurance (or its equivalent), evidencing all required coverage shall be delivered to City, or its representative as set forth below, at or prior to execution of this Agreement. Upon City's request, Contractor shall submit to City copies of the actual insurance policies or renewals or replacements. Unless otherwise required by the terms of this Agreement, all certificates, endorsements, coverage verifications and other items required to be delivered to City pursuant to this Agreement shall be mailed to:

City of Santa Clara Electric Department

c/o EBIX - Insurance Compliance

P.O. 12010-S2

or 151 North Lyon Avenue

Hemet, CA 92546-8010

Hemet, CA 92543

Telephone: (951)766-2280; or

Fax: (951)766-2299

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INSURANCE

H. QUALIFYING INSURERS

All of the insurance companies providing insurance for Contractor shall have, and provide written proof of, an A. M. Best rating of at least A minus 6 (A- VI) or shall be an insurance company of equal financial stability that is approved by the City or its insurance compliance representatives.

END OF DOCUMENT

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APPRENTICESHIP PROGRAM

1. Contractor and Subcontractors shall comply with the requirements of California Labor Code Sections 1776, 1777.5, and 1777.6 concerning the employment of apprentices by Contractor or Subcontractors. Willful failure to comply may result in penalties, including loss of the right to Bid on or receive public works contracts.
2. Section 1777.5, as amended, requires a Contractor or Subcontractor employing tradespersons in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of a public works project and which administers the apprenticeship program in that trade for a certification of approval. The certificate shall also fix the ratio of apprentices to journeypersons that will be used in performance of the Contract. The ratio of work performed by apprentices to journeypersons in such cases shall not be less than one hour of apprentices work for every five hours of labor performed by journeypersons (the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeypersons), except:
 - A. When unemployment for the previous three-month period in the area exceeds an average of 15 percent;
 - B. When the number of apprentices in training in the area exceeds a ratio of one to five;
 - C. When a trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally; or
 - D. Assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyperson.
3. Contractor is required to make contributions to funds established for administration of apprenticeship programs if Contractor employs registered apprentices or journeypersons in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.
4. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of the California Department of Industrial Relations, or from the Division of Apprenticeship Standards and its branch offices.

END OF DOCUMENT

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APPRENTICESHIP PROGRAM

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SUMMARY OF WORK

DOCUMENT 01100
SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes summary of Work including:
1. WORK COVERED BY CONTRACT DOCUMENTS
 2. BID ITEMS, ALLOWANCES, AND ALTERNATES
 3. WORK UNDER OTHER CONTRACTS (N/A)
 4. FUTURE WORK (N/A)
 5. WORK SEQUENCE
 6. WORK DAYS AND HOURS
 7. COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK
 8. MAINTENANCE, PRODUCT HANDLING, AND PROTECTION
 9. PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS
 10. CONTRACTOR USE OF PREMISES
 11. LINES AND GRADES
 12. PROTECTION OF EXISTING STRUCTURES AND UTILITIES
 13. DAMAGE TO EXISTING PROPERTY
 14. DUST CONTROL
 15. PARKING
 16. LAYDOWN/STAGING AREA
 17. PERMITS
 18. PUNCH LIST VERIFICATION
 19. ACTUAL DAMAGES FOR VIOLATIONS
 20. UNFAVORABLE CONSTRUCTION CONDITIONS
 21. WORK ALONG SERRA – BROKAW TRANSMISSION LINE
 22. CONSTRUCTION SITE ACCESS
 23. SPECIFICATION DATA SHEETS AND SCHEDULES
 24. SITE ADMINISTRATION
 25. PRODUCTS ORDERED IN ADVANCE
 26. CITY-FURNISHED PRODUCTS

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SUMMARY OF WORK

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work comprises all required civil, structural and electrical work, including installation of City's furnished equipment along City's Fairview Substation 60 kV Transmission Line Loop-in, Santa Clara, California.
- B. Furnish all labor, materials, equipment, services, permits, temporary controls and construction facilities, and all general conditions, seismic requirements, general requirements and incidentals required to complete the Work in its entirety as described in the Contract Documents. The Work includes, but is not necessarily limited to the following items as listed with Section 00400 as Schedule of Bid Prices:
1. **Contractor Mobilization/Demobilization** – This item is to cover all materials, labor, supervision and contractor management of all prime and subcontracted construction forces associated with the mobilization and demobilization of personnel, equipment, and other associated project site appurtenances. Such appurtenances should include but are not limited to such construction-related temporary facilities as; construction water, sanitary facilities, lay-down yard, job site security, debris control, fire protection, project signage, field office trailers and permit acquisition.
 2. **Install/Re-Establish Restorative Landscaping & Hardscape** – Contractor to replace & maintain until self-supporting/propagating all landscaping and/or ancillary landscaping and hardscape support features (e.g. sprinklers, drip systems, vegetation training, support features, walking paths, curbs, pavement, etc.) disrupted, removed and/or damaged as a result of the work associated with this contract. All vegetation, landscaping hardscape, curb, pavement, etc. damaged and/or removed shall be replaced by like type, size and quantity as that material which was damaged/removed at the contractor's sole expense.
 3. **Installation and Maintenance of SWPPP Best Management Practices** - This item is to include all costs associated with the installation and maintenance of all SWPPP and NPDES "Best Management Practices" in accordance with applicable local, state and federal agency standards and guidelines and project documents.
 4. **Install and Maintain Traffic Control** – This item is to cover all materials, labor, supervision, equipment, subcontractor cost, and permitting to; develop, submit and obtain all traffic control approvals and permitting from the City of Santa Clara, install, erect and maintain the traffic control features in accordance with the previously approved City specifications, guidelines and plans as required for the duration of the project.
 5. **Excavate, Install & Backfill Foundation #1** – Provide all materials, labor, equipment and supervision to; excavate the foundation; provide and place reinforcing steel; transport and place owner-provided anchor bolts; form, place concrete and strip formwork; place and grade backfill for foundation #1 at the location and dimensions/elevations noted on the contract documents.
 6. **Excavate, Install & Backfill Foundation #2** – Provide all materials, labor, equipment and supervision to; excavate the foundation; provide and place reinforcing steel; transport and place owner-provided anchor bolts; form, place

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concrete and strip formwork; place and grade backfill for foundation #2 at the location and dimensions/elevations noted on the contract documents.

7. **Excavate, Install & Backfill Foundation #3** – Provide all materials, labor, equipment and supervision to; excavate the foundation; provide and place reinforcing steel; transport and place owner-provided anchor bolts; form, place concrete and strip formwork; place and grade backfill for foundation #3 at the location and dimensions/elevations noted on the contract documents.
8. **Excavate, Install & Backfill Foundation #4** – Provide all materials, labor, equipment and supervision to; excavate the foundation; provide and place reinforcing steel; transport and place owner-provided anchor bolts; form, place concrete and strip formwork; place and grade backfill for foundation #4 at the location and dimensions/elevations noted on the contract documents.
9. **Transport, Assemble, Frame, & Erect Structure #1** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the tubular steel pole section(s), anchor bolt cage, insulators and conductor attachment hardware from the city's storage facility(ies) to the project site; assemble the tubular steel pole structure and frame the structure with the insulators and conductor attachment hardware; attach the structure onto the appropriate and corresponding foundation.
10. **Transport, Assemble, Frame, & Erect Structure #2** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the tubular steel pole section(s), anchor bolt cage, insulators and conductor attachment hardware from the city's storage facility(ies) to the project site; assemble the tubular steel pole structure and frame the structure with the insulators and conductor attachment hardware; attach the structure onto the appropriate and corresponding foundation.
11. **Transport, Assemble, Frame, & Erect Structure #3** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the tubular steel pole section(s), anchor bolt cage, insulators and conductor attachment hardware from the city's storage facility(ies) to the project site; assemble the tubular steel pole structure and frame the structure with the insulators and conductor attachment hardware; attach the structure onto the appropriate and corresponding foundation.
12. **Transport, Assemble, Frame, & Erect Structure #4** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the tubular steel pole section(s), anchor bolt cage, insulators and conductor attachment hardware from the city's storage facility(ies) to the project site; assemble the tubular steel pole structure and frame the structure with the insulators and conductor attachment hardware; attach the structure onto the appropriate and corresponding foundation.
13. **Transport Materials and Re-Frame Structure "A"** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the insulators and conductor attachment hardware from the city's storage facility(ies) to the project

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site; remove existing materials as necessary; re-frame the structure with the new insulators and conductor attachment hardware, and re-string/attach conductors.

14. **Transport Materials and Re-Frame Structure "B"** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the insulators and conductor attachment hardware from the city's storage facility(ies) to the project site; remove existing materials as necessary; re-frame the structure with the new insulators and conductor attachment hardware, and re-string/attach conductors.
 15. **Transport Materials and Re-Frame Structure "C"** – Provide all labor, equipment, supervision, and incidentals necessary to; transport the insulators and conductor attachment hardware from the city's storage facility(ies) to the project site; remove existing materials as necessary; re-frame the structure with the new insulators and conductor attachment hardware, and re-string/attach conductors.
 16. **Fabricate, Paint and Install New Pole Cap(s) Assemblies** – Fabricate, paint, and install the pole cap assemblies per contract documents and drawings.
 17. **Install and Maintain Traffic Control** – Contractor to arrange for the design, permitting, erection, maintenance and removal of all pedestrian and vehicular traffic control, stringing guard structures and devices and facilities as required for the project. All structures, devices and demarcations thereto shall be in conformance with all local, state and national safety guidelines and industry practices. If conflicts occur between jurisdictions, the most stringent of the jurisdictional guidelines shall prevail and be implemented.
 18. **String, Sag and Terminate New 715-T13 ACCR "Stilt" Conductor** - The work under this section shall consist of furnishing all labor, equipment, supervision and incidentals to install the Owner furnished 715 kcmil ACCR conductor and all other materials required for the installation of said conductor. This work shall consist of but is not limited to setting up the pulling sites, setting up the stringing equipment on the structures, pulling the line through, splicing at the appropriate locations (if required), sagging, and clipping in. The contractor shall be responsible for providing a 100 ton press, dies and any other miscellaneous material required for this operation as well as the above mentioned operations.
 19. All Other Work (work not otherwise separately provided for in the above noted items if cumulatively worth in excess of \$5,000) – Contractor to identify, list and establish value of all work necessary for the complete installation of the project as specified and illustrated within the contract documents and drawings. If all expense is captured items 1 – 18, this line item is to have a \$0.00 value.
- C. Descriptions of Unit Price Items and Basis of Measurement for Payment: In the event there is a need to adjust the scope of selected features of the project, by adding or deleting quantities, Unit Price Items will be used to adjust the contract price. Unit Price items shall include general conditions, general requirements, materials, labor, and equipment necessary to complete each Unit Price Item as shown and specified:
1. **3-Man Crew**– This contract unit price paid per hour for a three (3) man crew and shall include compensation for furnishing all labor, materials, tools, equipment,

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vehicle(s), incidentals, and personnel to perform work during the work efforts as may be required.

2. **5-Man Crew**– This contract unit price paid per hour for a five (5) man crew and shall include compensation for furnishing all labor, materials, tools, equipment, vehicle(s), incidentals, and personnel to perform work during the work efforts as may be required.
3. **Switching Assist** – This contract unit price paid per occurrence shall include compensation for furnishing all labor, materials, tools, equipment, vehicle(s), incidentals and personnel to assist the City's electrical utility, Silicon Valley Power, in the switching operations necessary during construction. This price shall be for three (3) hours of work at a time performed by a three (3) man crew.

D. Contingency Reserve:

E. Allowances:

F. Alternates:

1.3 WORK UNDER OTHER CONTRACTS

Work at the site performed by others includes the following: Various testing contractors.

1.4 FUTURE WORK (N/A)

1.5 WORK SEQUENCE

- A. Construct Work in stages and at times to accommodate City operation requirements during the construction period; coordinate construction schedule and operations with City.
- B. Contractor acknowledges that shoring may be required to maintain a safe excavation and protect facilities or pipelines, including both existing and recently constructed under this Contract. All expenses for shoring of excavations for construction of basins and pipelines shall be included in the appropriate bid items.

1.6 WORK DAYS AND HOURS

- A. Work Days and hours: Monday-Friday inclusive, 7:30 a.m.-4:30 p.m. local time.
- B. Work at the Site on weekends or holidays is not permitted, unless Contractor requests otherwise from City in writing at least 48 hours in advance. It will be at the City's sole discretion as to whether or not to approve the request for weekend work. In the case of Work by Contractor after normal working hours, Contractor shall be responsible for any additional inspection costs incurred by the City. Such costs may be withheld from any succeeding monthly progress payment.
- C. Connections to Existing Facilities. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from City or the owning utility prior to undertaking connections.

Contractor shall protect facilities against deleterious substances and damage.

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1.7 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK

- A. Coordinate with City and any City forces, or other contractors and forces, as required by Document 00700 (General Conditions), paragraph 6.
- B. Employ a full time coordinator to constantly review Contract Documents, submittals, changes, and prepare overlay drawings as necessary to avoid conflicts, errors, omissions and untimely construction.
- C. Existing utilities and facilities must be kept in continuous operation throughout the construction period except for shutdown times previously agreed upon by City. Scheduling of shutdown times shall be coordinated with City by Contractor in strict accordance with Paragraph 1.6, Work Days and Hours. Contractor shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period.
- D. Contractor shall coordinate the transmission line construction schedule with the schedule of Silicon Valley Power for normal power service installation.

1.8 MAINTENANCE, PRODUCT HANDLING, AND PROTECTION

- A. Transport, deliver, handle, and store materials and equipment at the Site in such a manner as to prevent the breakage, damage or intrusions of foreign matter or moisture, and otherwise to prevent damage.
- B. Hazardous substance compliance: Provide City with copies of the OSHA Material Safety Data Sheets (MSDS) for all products containing a hazardous substance, examples: Adhesives, paints, sealants, and the like.
- C. Packaging: Provide packaged material in manufacturer's original containers with seals unbroken and labels intact until incorporated into the Work.
- D. Remove all damaged or otherwise unsuitable material and equipment promptly from the Site.
- E. Protection: Protect all finished surfaces.
- F. Asbestos Removal: If, during the progress of the Work, suspected asbestos-containing products are identified, Contractor shall stop work in the affected area and engage an asbestos removal Subcontractor to verify the materials and, if necessary, encapsulate, enclose, or remove and dispose of all asbestos in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor – Occupational Safety and Health Administration, the state asbestos regulating agency, and any local government agency. Payment for such work will be made by Change Order.

Asbestos Removal Subcontractor's Qualifications. The Subcontractor for asbestos removal shall be regularly engaged in this type of activity and shall be familiar with the regulations that govern this work. The Subcontractor shall demonstrate to the satisfaction of City that it has successfully completed at least three asbestos removal projects, which it has the necessary staff and equipment to perform the work, and that it has an approved site for disposal of the asbestos. Liability insurance covering the

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asbestos abatement work shall be provided as specified in the Supplementary Conditions.

Asbestos Removal Methods. The asbestos removal Subcontractor shall submit a work plan of its proposed removal procedure to City before beginning work and shall certify that the methods are in full compliance with the governing regulations. The work plan shall cover all aspects of the removal, including health and safety of employees and building occupants, hygiene facilities, employee certification, clearance criteria, transportation and disposal, enclosure techniques, and other techniques appropriate for the proposed work.

- G. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices bid and no direct or additional payment will be made therefor.

1.9 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. Allow City to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.
- B. Possession, use of Work, and placement and installation of equipment by City shall not in any way evidence the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from City occupancy.
- D. Make available, in areas occupied, on a 24-hour per day and 7-day per week basis if required, any utility services, heating, and cooling in condition to be put in operation at the time of occupancy.
 - 1. Responsibility for operation and maintenance of said equipment shall remain with Contractor.
 - 2. Make, and City shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
 - 3. Itemized list noted above shall be basis for commencement of warranty period for equipment.
 - 4. City shall pay for utility cost arising out of occupancy by City during construction.
- E. Use and occupancy by City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.
- F. Prior to date of Final Acceptance of the Work by City, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in Document 00700 (General Conditions).
- G. Use by City of Work or part thereof as contemplated by this Section 01100 shall in no case be construed as constituting acceptance of Work or any part thereof. Such use

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shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by City of any of the conditions thereof.

- H. City may specify in the Contract Documents that portions of the Work, including electrical and mechanical systems or separate structures, shall be substantially completed on dates described in paragraph 6 of Document 0100. Notify City in writing when Contractor considers any such part of the Work ready for its intended use and substantially complete and request City to issue a Certificate of Substantial Completion for that part of the Work.

1.10 CONTRACTOR USE OF PREMISES

- A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws.
- B. Do not unreasonably encumber Project Site with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of products stored on premises.
- D. Move any stored products that interfere with operations of City or other contractor.
- E. Parking, storage, staging, and work areas shall be coordinated with the City, and comply with all other Contract documents requirements.

1.11 LINES AND GRADES

- A. All Work shall be done to the lines, grades, and elevations indicated on the Drawings.
- B. City shall provide basic horizontal and vertical control points to be used as datums for the Work. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work.
- C. Contractor shall provide at its cost an experienced instrument person, competent assistants, and such instruments, tools, stakes and other materials required to complete the survey, layout, and measurement work. In addition, Contractor shall furnish at its cost competent persons and such tools, stakes, and other materials as City (and/or any Engineer) may require in establishing or designating control points, or in checking survey, layout, and measurement work performed by Contractor.
- D. Contractor shall keep City informed, a reasonable time in advance, of the times and places at which it wishes to do Work, so that any checking deemed necessary by City may be done with minimum inconvenience to City and minimum delay to Contractor.
- E. Contractor shall remove and reconstruct Work which is improperly located.

1.12 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings may indicate existing above- and below-grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other similar items and utilities that are known to City.
- B. Contractor shall locate these known existing installations before proceeding with trenching or other operations which may cause damage, shall maintain them in service

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where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum.

- C. Additional utilities whose locations are unknown to City are suspected to exist. Contractor must be alert to their existence. If additional utilities are encountered, Contractor must immediately report to City for disposition.
- D. In addition to reporting, if a utility is damaged, Contractor must take appropriate action as provided in Document 00700 (General Conditions).
- E. Additional compensation or extension of time on account of utilities not indicated or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in Document 00700 (General Conditions).

1.13 DAMAGE TO EXISTING PROPERTY

- A. Contractor will be responsible for any damage to existing structures, Work, materials, or equipment because of its operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, City.
- B. Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection.
- C. Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or workers to or from the Work. Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement. The contractor shall bear all costs associated with all damages and the repair thereof associated with

1.14 DUST CONTROL

- A. Contractor shall take reasonable measures to prevent unnecessary dust. The following items shall be specifically implemented to control dust:
 - 1. All construction locations with active excavation shall be watered at least twice daily.
 - 2. Cover all trucks hauling soil, sand, and other loose materials; or require all trucks to maintain at least two feet of freeboard.
 - 3. Pave, apply water daily, or apply non-toxic soil stabilizers on all un-paved access roads, parking areas, and staging areas at construction site.
 - 4. Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites during earthwork activities.
 - 5. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)
 - 6. Limit the speed of all construction vehicles to 5 miles per hour while on un-paved roads at the Site.

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- B. Buildings or operating facilities which may be affected adversely by dust shall be adequately protected from dust. Existing and new machinery, motors, instrument panels, or similar equipment shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens

1.15 PARKING

Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, City's operations, or construction activities.

1.16 LAYDOWN/STAGING AREA

Offsite areas for laydown/staging have not been secured by the City. It is the Contractor's responsibility to secure laydown/staging areas. The City may facilitate conversations between the Contractor and adjacent property owners for laydown/staging areas.

1.17 PERMITS

Applicable permits: Permits, agreements, or written authorizations that are known by the City to apply to this project are listed below:

- A. Cal/OSHA Permit. The Contractor shall obtain, as applicable, a permit as required by Cal/OSHA for each of the following:
- Construction or demolition of any building, structure, or scaffolding for falsework more than three stories high, or the equivalent height (36 feet).
- B. Storm Water Pollution Prevention Plan (SWPPP) and Permit. Contractor is responsible for the cost associated with the plan development, installation, and maintenance of all best management practices associated with the Storm Water Pollution Prevention Plan and permit as necessary for the project.

All other permits that may be required, such as electrical, mechanical, fire prevention, irrigation, grading, slope protection, tree cutting, etc., have not been applied for and shall be obtained by Contractor. Applicable permit fees will be reimbursed to the extent specified in Document 00700 (General Conditions).

1.18 PUNCH LIST VERIFICATION

A punch list examination will be performed upon Substantial Completion of Work. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, Contractor shall reimburse City for these visits.

1.19 ACTUAL DAMAGES FOR VIOLATIONS

- A. In addition to damages which are impracticable or extremely difficult to determine, for which liquidated damages will be assessed as described in paragraph 15.5 of Document 00700 (General Conditions), City may incur actual damages resulting from loss of use of any permit described in this Section 01100, or from use in violation of

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legal or regulatory requirements where the violations result from Contractor's activities.

- B. Contractor shall be liable for and shall pay City the amount of any actual losses in addition to liquidated damages or other remedies provided by the Contract Documents.
- C. The amount of liquidated damages provided in paragraph 15.5 of Document 00700 is not intended to include, nor does the amount include, any damages incurred by City for reasons other those listed in that paragraph. Any money due or to become due to Contractor may be retained by City to cover both the liquidated and the actual damages described above and, should such money not be sufficient to cover such damages, City shall have the right to recover the balance from Contractor or its sureties.

1.20 UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to Work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

1.21 WORK AT NORTHWEST AND FAIRVIEW SUBSTATIONS

The project includes modifications of or additions to existing Northwest Substation and future Fairview Substation facilities. It is imperative that existing facilities continue to operate, in compliance with permit requirements, throughout the duration of contract work. The Contractor shall carry out construction activities in a manner that does not disrupt either substation's functional, maintenance and/or construction operations.

Contractor shall submit a two-week look-ahead schedule for all construction activities that affect the operation of the facilities with City. The Contractor shall provide all labor, equipment, and materials required to maintain the permitted operation on a temporary basis whenever usual substation operational, maintenance and/or construction activities must be interrupted by work on this project. Any temporary operating arrangement shall comply with the Owner's permit requirements. Any violation of these requirements may result in fines or other costs to the City. The Contractor shall be responsible for any and all costs, including attorneys' fees, incurred as a result of any violation or threatened violation of permit requirements where the violation or threatened violation arises out of or in connection with Contractor's construction activities. This remedy is in addition to any other remedy existing under this contract.

Contractor is referred to paragraph 1.20 of this Section 01100 for information about actual damages.

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Contractor shall take a video and have a City representative present prior to any work beginning for record keeping purposes. Contractor is also required to utilize FR 2 clothing per requirements of the State of California as well as OSHA.

1.22 CONSTRUCTION SITE ACCESS

Contractor shall at all times limit access to the Site to necessary personnel only. All personnel associated with construction of the Project shall enter the site through Contractor's access gate, at the location indicated in the contract documents. Access for construction personnel shall be limited to 7:00 a.m. to 5:00 p.m. local time. All mail and deliveries (Federal Express, equipment, etc.) shall be sent to a separate address, specifically arranged by Contractor for the Project. Contractor is responsible for providing adequate signage to alert delivery persons to the new address.

1.23 SPECIFICATION DATA SHEETS AND SCHEDULES

Specifications may have data sheets and schedules as part of specific specification sections. Locations for data entries on the data sheets and schedules may be left blank intentionally. Each line where data may be entered on the data sheet has a selection box in the column "Chk". When the box for a line is checked and no data is entered in the respective line, this indicates that no data is required for that line of the data sheet.

Other standard codes which apply to the Work are designated in the Specifications.

1.24 SITE ADMINISTRATION

Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to City or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site (except City's employees) to observe the same regulations as Contractor requires of its employees.

PART 2 PRODUCTS

1. PRODUCTS ORDERED IN ADVANCE (N/A)

2. CITY-FURNISHED PRODUCTS

A. City's Responsibilities:

1. Arrange for and deliver City-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
2. Arrange and pay for delivery to site.
3. On delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.

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SUMMARY OF WORK

5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
1. Review City-reviewed Shop Drawings, Product Data, and Samples.
 2. Receive and unload products at site; inspect for completeness or damage jointly with City.
 3. Handle, store, install, and finish products.
 4. Repair or replace items damaged after receipt.
 5. Install into Project per Contract Documents.

PART 3 EXECUTION – NOT USED

END OF DOCUMENT

DOCUMENT 01200

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1. SUMMARY

This document describes requirements and procedures for determining amount of work done and for obtaining payment for work done.

2. REFERENCES

- A. California Public Contract Code
- B. Code of Civil Procedures
- C. Government Code

3. SCOPE OF WORK

Work under Contract Documents, or under any bid item, allowance or alternate, shall include all labor, materials, transport, handling, storage, supervision, administration and all other items necessary for the satisfactory completion of Work, whether or not expressly specified or shown.

4. DETERMINATION OF QUANTITIES

Quantity of work to be paid for under any item for which a unit price is fixed in Contract Documents shall be number, as determined by City, of units of work satisfactorily completed in accordance with Contract Documents or as directed by City. Unless otherwise provided, determination of number of units of work so completed will be based, so far as practicable, on actual measurements or count within prescribed or ordered limits, and no payment will be made for work done outside of limits. Measurements and computations will be made by methods, as City may consider appropriate, for class of work measured. Contractor shall immediately inform City of any disputes regarding quantity measurements and shall immediately supply City with any documentation supporting the disputed measurements.

5. SCOPE OF PAYMENT

- A. Except as otherwise expressly stipulated in Document 01100 Summary of Work, payment to Contractor at the unit price or other price fixed in the contract for performing Work required under any item, or (if the contract is on a lump sum price basis) at the lump sum price fixed in the contract for performing all work required under Contract Documents, and as either may be adjusted pursuant to any approved Change Order, or City directive to perform work on a time and material basis or unilateral change order basis, as required in Document 01250 shall be full compensation for completing, in accordance with Contract Documents, all work required under the item or under Contract Documents, and for all expense incurred

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by Contractor for any purpose in connection with the performance and completion of said work, including all incidental work necessary for completion of the Work.

- B. The Contract Sum, whether lump sum, unit price or otherwise, shall be deemed to include all costs necessary to complete required Work, shall also include any costs for loss or damage arising from nature of Work, or prosecution of the Work, or from action of elements. Unless Contract Documents expressly provide otherwise, the contract Sum shall be deemed to include:
1. Any and all costs arising from any unforeseen difficulties, which may be encountered during, and all risks of any description connected with, prosecution of Work, bid item or unit price item, respectively, until acceptance by City;
 2. All expenses incurred due to suspension, or discontinuance of Work, bid item or unit price item, respectively, as provided in Contract Documents;
 3. Escalation to allow for cost increases between time of Contract Award and completion of Work, bid item or unit price item, respectively.
- C. Whenever it is specified herein that Contractor is to do work or furnish materials of any class for which no price is fixed in Contract Documents, it shall be understood that Contractor is to do such work or furnish such materials without extra charge or allowance or direct payment of any sort, and that cost of doing work or furnishing materials is to be included in price bid, unless it is expressly specified herein, in particular cases, that work or material is to be paid for as extra work.
- D. For the materials and equipment referenced in Section 0110, as subject to payment prior to incorporation into the Work, where Contractor requests payment on the basis of such materials and equipment not incorporated in the Work, Contractor must satisfy the following conditions:
1. The materials and/or equipment shall be delivered and suitably stored at the site or at another local location agreed to in writing, for example, a mutually acceptable warehouse;
 2. Full title to the materials and/or equipment shall vest in City at the time of delivery to the site, warehouse or other storage location;
 3. Contractor shall obtain a negotiable warehouse receipt, endorsed over to City for materials and/or equipment stored in an off-site warehouse. No payment shall be made until such endorsed receipts are delivered to City;
 4. Stockpiled materials and/or equipment shall be available for City inspection, but City shall have no obligation to inspect them and its inspect or failure to inspect shall not relieve Contractor of any obligations under the Contract Documents. Materials and/or equipment shall be segregated and labeled or tagged to specifically identify these specific Contract Documents;
 5. After delivery of materials and/or equipment, if any inherent or acquired defects are discovered, defective materials and/or equipment shall be

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- removed and replaced with suitable materials and/or equipment at Contractor's expense;
6. At its expense, Contractor shall insure the materials and/or equipment against theft, fire, vandalism, and malicious mischief, as well as any other coverages required under the Contract Documents;
 7. Contractor's application for payment shall be accompanied by a bill of sale, invoice or other documentation warranting that City has received the materials and equipment free and clear of all liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect City's interest therein, all of which must be satisfactory to City. This documentation shall include, but not be limited to conditional releases of mechanics' liens and stop notices from all those providing materials and equipment as to which the application for payment relates as well as unconditional releases of the same from the same as to the previous application for payment for which they have not already been provided.
 8. Amounts previously paid for materials and equipment prior to incorporation into the Work shall be deducted from amounts otherwise due Contractor as they are incorporated.

6. BASIS OF PAYMENT

- A. Unit Pay Quantities: When estimated quantity for specific portions of Work is listed in Bid Form, quantity of work to be paid for shall be actual number of units satisfactorily completed in accordance with Contract Documents.
- B. Lump Sum: When estimated quantity for specific portion of Work is not indicated and unit is designated as Lump Sum, payment will be based on the approved schedule of values of the work under the lump sum, or in the event a schedule of values is not required, on the percentage of the lump sum scope satisfactorily completed. Once Contractor provides and the City accepts the cost loaded activities in the Initial Contract Schedule, payment will be based on the accepted lump sums of cost-loaded activities. See Specification Document 01320 regarding the preparation of the cost-loaded Initial Contract Schedule.
- C. Allowances: Allowance items will be paid for as provided in Document 01100 Summary of Work. Funds authorized for Allowance work will not be released for contract payments unless City has authorized Allowance work in writing.
- D. City does not expressly, or by implication, agree, warrant, or represent in any manner, that actual amount of Work will correspond with amount shown or estimated and reserves right to increase or decrease amount of any class of portion of Work, to leave out entire Bid item or items, or to add work not included in Bid, when in its judgment such change is in best interest of City. No change in Work shall be considered waiver of any other condition of Contract Documents. No claim shall be made for anticipated profit, for loss of profit, for damages, or for extra payment whatever, except as otherwise expressly provided for in Contract

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Documents, because of any differences between amount of work actually done and estimated amount as set forth herein, or for elimination of extra Bid Items.

7. PROGRESS PAYMENTS

- A. If requested by Contractor, progress payments will be made monthly, but not more often than monthly.
- B. Schedule of Values.
 - 1. Within ten (10) calendar days from issuance of Notice of Award and prior to the Contractor's application for the first progress payment, Contractor shall submit a detailed breakdown of its bid by scheduled Work items and or activities based on the approved cost loading of the Initial Contract Schedule, including coordination responsibilities and project record document responsibilities. Where more than one subcontractor comprises the work of a work item or activity, the Schedule of Values shall show a separate line item for each subcontractor. Contractor shall furnish such breakdown of the total Contract Sum by assigning dollar values (cost estimates) to each applicable Initial Contract Schedule network activity, which cumulative sum equals the total Contract Sum. The format and detail of the breakdown shall be as directed by City to facilitate and clarify future progress payments to Contractor for direct Work under Contract Documents. This breakdown shall be referred to as the Schedule of Values.
 - 2. Contractor's overhead, profit, insurance, cost of bonds and/or other financing, as well as "general conditions costs," (e.g., site cleanup and maintenance, temporary roads and access, off site access roads, monthly costs of temporary power and lighting, security and the like), shall be prorated through all activities so that the sum of all the Schedule of Values line items equal Contractor's total Contract Sum, less any allowances designated by City. Scheduling, record documents and quality assurance control shall be separate line items.
 - 3. City will review the breakdown in conjunction with the approved cost loading of the Initial Contract Schedule activities to ensure that the dollar amounts of this Schedule of Values are, in fact, fair market cost allocations for the Work items listed. Upon favorable review by City, City will accept this Schedule of Values for use. City shall be the sole judge of fair market cost allocations.
 - 4. Any attempt to increase the cost of early activities, (i.e., "front loading") will be rejected by City, resulting in a complete reallocation of monies until such "front loading" is corrected. Repeated attempts at "front loading" may result in suspension or termination of the Work or refusal to process progress payments, until such time as the Schedule of Values is acceptable to City.

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C. Payment Requests

1. On or before the 20th day of each month (but after receipt of City's approval of the updated Schedule as required by Document 01320 -- Progress Schedules and Reports, Contractor shall submit to City one original and one electronic copy of an Application for Payment for the cost of the Work put in place during the period from the 15th day of the previous month to the 15th day of the current month. Such Applications for payment shall be for the total value of activities completed or partially completed, including approved activity costs, based upon Schedule of Values prices (or Bid item prices if unit price) of all labor and materials incorporated in the Work up until midnight of the last day of that one month period, less the aggregate of previous payments. Accumulated retainage shall be shown as separate item in payment summary. Contractor shall submit in a form acceptable to City an itemized cost breakdown of Contractor's record of Cost of the Work together with supporting data and any certification required by City. If Contractor is late submitting its Application for Payment, that Application may be processed at any time during the succeeding one-month period, resulting in processing of Contractor's Application for Payment being delayed for more than a day for day basis.
2. Payment requests may include, but are not necessarily limited to the following:
 - a. Material, equipment and labor incorporated into the Work at the Site, less any previous payments for the same;
 - b. Up to seventy-five percent (75%) of the cost of major equipment identified in Paragraph 1.05.E above (if any), if purchased and delivered to the site or stored off site, as may be approved by City.
 - c. Up to fifty percent (50%) of the cost of materials identified in Paragraph 1.05.E above (if any), specifically fabricated for the Project that is not yet incorporated into the Work at the Site.
3. Contractor shall, at the time any payment request is submitted, certify in writing the accuracy of the payment request and that Contractor has fulfilled all scheduling requirements of Document 00700 – General Conditions and Document 01320 – Progress Schedules and Reports, including updates and revisions. A responsible officer of Contractor shall execute the certification.
4. No progress payment will be processed prior to City receiving all requested, acceptable schedule update information. Failure to submit a schedule update complying with Document 01320 justifies denying the entire Application for Payment.
5. Each Application for Payment shall list each Change Order and Construction Change Directive ("CCD") executed prior to date of submission, including the Change Order/CCD Number, and a description of the work activities, consistent with the descriptions of original work activities. Submit a monthly Change Order/CCD status log to City.
6. If City requires substantiating data, Contractor shall submit information requested by City, with cover letter identifying Project, payment request

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number and date, and detailed list of enclosures. Contractor shall submit one copy of substantiating data and cover letter for each copy Payment request submitted.

7. Monthly progress payments shall be made, based on total value of activities completed or partially completed, as determined by City with participation of Contractor, and based upon approved activity costs. Accumulated retainage will be shown as separate item in payment summary. If Contractor fails or refuses to participate in construction progress evaluation with City, Contractor shall not receive current payment until Contractor has participated fully in providing construction progress information and schedule update information for City.

D. Progress Payments

1. City will review Contractor's payment request following receipt. If adjustments need to be made to percent of completion of each activity, City will make appropriate notations and return to Contractor. Contractor will revise and resubmit. All parties will update percentage of completion values in the same manner, i.e., express value of an accumulated percentage of completion to date.
2. Each Application for Payment may be reviewed by City and/or inspectors to determine whether the Application for Payment is proper, and shall be rejected, revised, or approved by City pursuant to the Schedule of Values prepared in accordance with Section 1.05, paragraph 7 of this Document 01200.
3. If it is determined that the payment request is not a proper payment request suitable for payment, City shall return it to the Contractor as soon as practicable, but no later than seven (7) days after receipt, together with a document setting forth in writing the reasons why the payment request is not proper. If City determines that portions of the payment request are not proper or not due under the Contract Documents, then City may approve the other portions of the payment request, and in the case of disputed items or defective work not remedied, may withhold up to 150% of the disputed amount from the progress payment.
4. Pursuant to Public Contract Code Section 20104.50, if City fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted payment request from a contractor, City shall pay interest to the Contractor equivalent to the legal rates set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure. The thirty (30) day period shall be reduced by the number of days by which City exceeds the seven (7) day return requirement set forth herein.
5. As soon as practicable after approval of each Application for Payment for progress payments, City will pay Contractor in a manner provided by law, an amount equal to 95 percent of the amounts otherwise due as provided in the Contract Documents (City will retain the remaining 5 percent as retention), or in a lesser amount of so provided in the Contract Documents, provided that payments may at any time be withheld if, in the judgment of

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the City, Work is not proceeding in accordance with contract, or Contractor is not complying with requirements of Contract, or to comply with stop notices or to offset liquidated damages accruing or expected.

6. Before any progress payment or final payment is due or made, Contractor shall submit satisfactory evidence that Contractor is not delinquent in payments to employees, Subcontractors, suppliers, or creditors for labor and materials incorporated into Work. This specifically includes, without limitation, conditional lien release forms for the current progress payment and unconditional release forms for past progress payments. City also may elect in its sole discretion to pay progress payments by joint check to Contractor and each Subcontractor having an interest in that progress payment in such amount.
7. City reserves and shall have the right to withhold payment for any equipment and/or specifically fabricated materials that, in the sole judgment of City, is not adequately and properly protected against weather and/or damage, prior to or following incorporation into the Work.
8. Granting of progress payment or payments by City, or receipt thereof by Contractor, shall not be understood as constituting in any sense acceptance of Work or of any portion thereof, and shall in no way lessen liability of Contractor to replace unsatisfactory work or material through unsatisfactory character of work or material may have been apparent or detected at time payment was made.

When City shall charge sum of money against Contractor under any provision of Contract Documents, amount of charge shall be deducted and retained by City from amount of next succeeding progress payment or from any other moneys due or that may become due Contractor under Contract. If, on completion or termination of Contract, such moneys due Contractor are found insufficient to cover City's charges against it, City shall have the right to recover the balance from Contractor or Sureties.

The City will not reduce the 5% retention until the City issues the Certificate of Substantial Completion in accordance with Document 01770 – Project Closeout, Paragraph 1.03. The City reserves the right to maintain the 5% retention after the Certificate of Substantial Completion is issued if the Contractor is not complying with the requirements of the Contract, or to comply with stop notices or to offset liquidated damages accruing or expected.

8. SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION

In accordance with the provisions of Public Contract Code Section 22300, substitution of securities for any monies withheld under Contract Documents to insure performance is permitted under the following conditions:

- A. At request and expense of Contractor, securities listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and City which are equivalent to the amount

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withheld under retention provisions of Contract shall be deposited with Controller or with a state or federally chartered bank in California, as the escrow agent, who shall then pay such monies to Contractor. Upon satisfactory completion of Contract, securities shall be returned to Contractor.

- B. Alternatively, Contractor may request and City shall make payment of retentions earned directly to the escrow agent at the expense of Contractor. At the expense of Contractor, Contractor may direct the investment of the payments into securities and Contractor shall receive the interest earned on the investments upon the same terms provided for in this document for securities deposited by Contractor. Upon satisfactory completion of Contract Documents, Contractor shall receive from escrow agent all securities, interest, and payments received by the escrow agent from City, pursuant to the terms of this document. Contractor shall pay to each subcontractor, not later than twenty (20) days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure the performance of Contractor.
- C. Contractor shall be beneficial owner of securities substituted for monies withheld and shall receive any interest thereon.
- D. Contractor shall enter into escrow agreement with Controller according to Document 00680 – Escrow Agreement, as authorized under Public Contract Code Section 22300, specifying amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of Contract Documents.
- E. Public Contract Code Section 22300 is hereby incorporated in full by this reference.

9. FINAL PAYMENT

- A. As soon as practicable after all required Work is completed in accordance with Contract Documents, including Contractor maintenance after Final Acceptance, City will pay to Contractor, in manner provided by law, unpaid balance of contract price of Work, or whole contract price of Work if no progress payment has been made, determined in accordance with terms of Contract Documents, less sums as may be lawfully retained under any provisions of Contract Documents or by law.
- B. Prior progress payments shall be subject to correction in the final payment. City's determination of amount due as final payment shall be final and conclusive evidence of amount of work performed by Contractor under Contract Documents and shall be full measure of compensation to be received by Contractor.
- C. Contractor and each assignee under an assignment in effect at time of final payment shall execute and deliver at time of final payment and as a condition precedent to final payment, Document 00650 – Agreement and Release of any

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and All Claims, discharging City, its officers, agents, employees and consultants of an from liabilities, obligations, and claims arising under Contract Documents.

10. EFFECT OF PAYMENT

Payment will be made by City, based on City's and Engineer's observations at the site and the data comprising the application for payment. Payment will not be a representation that City and Engineer has:

- A. Made exhaustive or continuous on-site inspections to check the quality or quantity of Work;
- B. reviewed construction means, methods, techniques, sequences or procedures;
- C. reviewed copies of requisitions received from subcontractors and material suppliers and other data requested by City to substantiate Contractor's right to payment; or
- D. made examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

11. CONTINGENCY RESERVE

- A. City will authorize and direct Contractor regarding provisions in this paragraph.
- B. Contingency Reserve Amount: as listed in Document 00520 (Agreement)
- C. City shall determine, in its sole discretion, which, if any, costs it will authorize in writing to be paid from the Contingency Reserve. Generally, Contingency Reserve will be used only for City-initiated changes in scope of Work of Contract Documents.
- D. Cost shall be determined as for CCD work as provided in Document 01250 (Modification Procedures).
- E. Prior to final payment, an appropriate Change order will be issued to reflect actual amounts due Contractor on account of Work covered by this Contingency Reserve, and the Contract Sum will be correspondingly adjusted.

END OF DOCUMENT

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MEASUREMENT AND PAYMENT

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DOCUMENT 01250

MODIFICATION PROCEDURE

PART 1 GENERAL

1. SUMMARY

- A. This document describes general procedural requirements for alterations, modifications and extras.
- B. Related documents
 - 1. Document 01100: Summary of Work
 - 2. Document 01200: Measurement and Payment

2. GENERAL

- A. Any change in scope of work or deviation from Contract Documents, including without limitation extra work, or alterations or additions to or deductions from the original work, shall not invalidate the original Contract, and shall be performed under the terms of the Contract Documents.
- B. Only Contractor or City may initiate changes in scope of Work, or deviation from Contract Documents.
 - 1. Contractor may initiate changes by submitting Requests For Information (RFI)
 - a. RFI's shall be submitted to seek clarification of Contract Documents.
 - b. Notices of Concealed or Unknown Conditions shall be submitted in accordance with Document 00700, General Conditions.
 - c. Notices of Hazardous Waste Conditions shall be submitted in accordance with Document 00700, General Conditions.
- C. Contractor shall be responsible for its costs to implement and administer RFIs throughout the Contract duration. Regardless of the number of RFIs submitted, Contractor shall not be entitled to additional compensation. Contractor shall be responsible for both City and its Engineer's administrative costs for answering RFIs where the answer could reasonably be found by reviewing the Contract Documents, as determined by City; at City's discretion, such costs may be deducted from progress payments or final payment.
 - 1. City may initiate changes in the Work or Contract Times by issuing a Request for Proposal (RFP) or a Field Instruction (FI) to Contractor. Such RFPs or FIs will detail all proposed changes in the Work and request a quotation of changes in Contract Sum and Contract Times from Contractor.
 - 2. City may also by Field Instruction, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

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A Field Instruction shall be used in the absence of total agreement on the terms of a Change Order.

3. City may also, by Construction Change Directive (CCD), order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly. A CCD shall be used in the absence of total agreement on the terms of a Change Order and may, upon notice, consist of a Change Order executed by City only.

3. PROCEDURE

- A. Cost Proposal and Procedures: Whenever Contractor is required in this Document 01250 to prepare a Cost Proposal, and whenever Contractor is entitled to submit a Cost Proposal and elects to do so, Contractor shall prepare and submit to City for consideration a Cost Proposal using the form attached to this Document 01250. All Cost Proposals must contain a complete breakdown of costs of credits, deducts and extras; itemizing materials, labor, taxes, overhead and profit. All Subcontractor Work shall be so indicated. Individual entries on the Cost Proposal form shall be determined as provided in paragraphs 1.4 and 1.5 of this Document 01250. After receipt of a Cost Proposal with a detailed breakdown, City will act promptly thereon.
- B. If City accepts a Cost Proposal, City will prepare Change Order for City and Contractor signatures.
 1. If Cost Proposal is not acceptable to City because it does not agree with cost and/or time included in Cost Proposal, City will submit in a response what it believes to be a reasonable cost and/or adjustment, if any. Except as otherwise provided in this Document 01250, Contractor shall have seven Days in which to respond to City with a revised Cost Proposal.
 2. When necessity to proceed with a change does not allow the City sufficient time to conduct a proper check of a Cost Proposal (or revised Cost Proposal), City may order Contractor to proceed on basis to be determined at earliest practical date. In this event, value of change, with corresponding equitable adjustment to Contract, shall not be more than increase or less than decrease proposed
 3. Request for Information: Whenever Contractor requires information regarding the Project or Contract Documents, or receives a request for information from a Subcontractor, Contractor may prepare and deliver an RFI to City. Contractor shall use RFI format provided by City. Contractor must submit time critical RFIs at least 30 days before scheduled start date of the affected Work activity. Contractor shall reference each RFI to an activity of Progress Schedule and shall note time criticality of the RFI, indicating time within which a response is required. Contractor's failure to reference RFI to an activity on the Progress Schedule and note time criticality on the RFI shall constitute Contractor's waiver of any claim for

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time delay or interruption to the Work resulting from any delay in responding to the RFI.

4. City will respond within seven Days from receipt of RFI with a written response to Contractor. Contractor shall distribute response to all appropriate Subcontractors.
5. If Contractor is satisfied with the response and does not request change in Contract Sum or Contract Time, then the response shall be executed without a change.
6. If Contractor believes the response is incomplete, Contractor shall issue another RFI (with the same RFI number with the letter "A" indicating if it is a follow-up RFI) to City clarifying original RFI. Additionally, City may return RFI requesting additional information should original RFI be inadequate in describing condition.
7. If Contractor believes that the response results in change in Contract Sum or Contract Time, Contractor shall notify City in writing within seven Days after receiving the response. If City disagrees with Contractor, then Contractor may give notice of intent to submit a Claim as described in Article 12 of Document 00700 (General Conditions), and submit its Claim within 30 days. If City agrees with Contractor, then Contractor must submit a Cost Proposal within 21 Days of receiving the response to the RFI. Contractor's failure to deliver either the foregoing notice and Claim or Cost Proposal by the respective deadlines stated in the foregoing sentences shall result in waiver of the right to file a Cost Proposal or Claim.

C. Differing Site Conditions – Procedure

Contractor shall submit Requests for Information to resolve problems regarding differing site conditions encountered in the execution of the Work. Procedures in Paragraph 13.D of Document 00700 General Conditions shall be followed. If City determines that a change in Contract Sum or contract Times is justified, City shall issue a Field Instruction.

D. Hazardous Waste Conditions – Procedure

Contractor shall submit Requests for Information to resolve problems regarding hazardous materials encountered in the execution of the Work. Procedures in Paragraph 13.E of Document 00700 General Conditions shall be followed. If City determines that a change in Contract Sum or contract Times is justified, City shall issue a Field Instruction.

E. Supplemental Instruction – Procedure.

City may issue Supplemental Instructions to Contractor using the Field Instruction form. Contractor shall not proceed with Supplemental Instruction until one of the two following conditions has been met.

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MODIFICATION PROCEDURE

1. If Contractor is satisfied with Supplemental Instruction and does not request change in Contract Sum or Contract Times, then the Contractor shall initial the Field Instruction containing the Supplemental Instruction, and Contractor shall proceed with the work outlined in the Field Instruction without a Change Order.
2. If Contractor believes that Supplemental Instruction results in change in Contract Sum or Contract Times, Contractor shall submit a Cost Proposal to City, referencing the related Field Instruction Number. City may then deny request for change, cancel Supplemental Instruction, review the Cost Proposal following the procedures above, or issue a Change Order.

F. Construction Change Directives

1. If at any time City believes in good faith that a timely Change Order will not be agreed upon using the foregoing procedures, City may issue a CCD with its recommended cost and/or time adjustment. Upon receipt of CCD, Contractor shall promptly proceed with the change of Work involved and concurrently respond to City's CCD within 10 Days.
Contractor's response must be any one of following:
 - a. Return CCD signed, thereby accepting City's response, time and cost.
 - b. Submit a (revised if applicable) Cost Proposal with supporting documentation (if applicable, reference original Cost Proposal number followed by letter A, B, etc. for each revision), if City so requests.
 - c. Give notice of intent to submit a Claim as described in Article 12 of Document 00700 (General Conditions), and submit its Claim with 30 days.
2. If the CCD provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
 - a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation.
 - b. Unit prices stated in the Contract Documents or subsequently agreed upon.
 - c. Cost to be determined in a manner agreed.
3. CCD signed by Contractor indicates the agreement of Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
4. If Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by City on the basis of reasonable expenditures and savings of those performing the Work attributable to the change including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. If the parties still do not agree on the price for a CCD, Contractor may file a Claim per Article 12 of Document 00700 (General Conditions).

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Contractor shall keep and present, in such form as City may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this paragraph shall be limited to those provided in paragraph of this Document 01250.

5. Pending final determination of cost to City, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by Contractor to City for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by City. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

G. City Requested RFP – Procedure

1. City Requested RFP: Contractor shall furnish a Cost Proposal within 21 Business Days of City's RFP. Upon approval of RFP, City will issue a Change Order directing Contractor to proceed with extra Work. If the parties do not agree on the price for an RFP, City may either issue a CCD or decide the issue per Article 12 of Document 00700 (General Conditions). Contractor shall perform the changed Work notwithstanding any claims or disagreements of any nature.
2. Differing Site Conditions: Contractor shall submit Notices of Differing Site Conditions to resolve problems regarding differing underground Site conditions encountered in the execution of the Work pursuant to paragraph 13.4 of Document 00700 (General Conditions), which shall govern. If City determines that a change in Contract Sum or Contract Time is justified, City will issue RFP or CCD.
3. Hazardous Waste Conditions: Contractor shall submit Notices of Hazardous Waste Conditions to resolve problems regarding hazardous materials encountered in the execution of the Work pursuant to paragraph 13.5 of Document 00700 (General Conditions), which shall govern. If City determines that a change in Contract Sum or Contract Time is justified, City will issue RFP or CCD.

H. Field Instruction – Procedure

Unless otherwise direct, upon receipt of a Field Instruction, Contractor shall promptly proceed with the change in the work involved and advise City of Contractor's agreement or disagreement with the method, if any, provided in the Field Instruction for determining the proposed adjustment in the Contract Sum or Contract Time.

1. If the Field Instruction provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
 - a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation.

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MODIFICATION PROCEDURE

- b. Unit prices stated in the Contract Documents or subsequently agreed upon
 - c. On a not to exceed amount, which shall be expended based on time and material records of the work prepared and submitted each day by the Contractor to the City in conformance with the Force Account procedures outline in Paragraph 1.06 of this Specification 01250. These record sheets shall itemize all work performed on the Field Instruction work scope. All time and material records must be signed by the City's field representative indicating their agreement that the claimed work occurred. The signature of the City's field representative on the time and material record sheets does not constitute City agreement that the listed work is a contract change or that it is eligible for extra payment.
 - d. Cost to be determined in a manner agreed.
2. A Field Instruction signed by Contractor indicates the agreement of Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
 3. If Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by City on the basis of reasonable expenditures and savings of those performing the work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable allowance or overhead and profit. If the parties still do not agree on the price for a Field Instruction, Contractor may file a claim per Paragraph 12 of Document 00700 General Conditions. Contractor shall keep and present, in such form as City may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this paragraph shall be limited to those provided in paragraphs 1.04 and 1.05 below.
 4. Pending final determination of cost to City, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by Contractor to City for a deletion or change, which results in a net decrease in the Contract Sum, shall be actual net cost as confirmed by City. When both additions and credits covering related work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
 5. When both additions and credits are included in a Field Instruction, RFP or any request for additional compensation by Contractor, the Contractor's or Subcontractor's cost estimate shall first calculate the net add or deletion of the changed work before multiplying the quantity of work by the unit cost of the labor, material or equipment.

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I. All Changes

Documentation of Change in Contract Sum and Contract Time

1. Contractor shall maintain detailed records of work done on a time and material basis.
2. Contractor shall document each proposal for a change in cost or time with sufficient data to allow evaluation of the proposal.
3. Contractor shall, on request, provide additional data to support computations for:
 - a. Quantities of products, materials, labor and equipment.
 - b. Taxes, insurance and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time and new update of Baseline Schedule showing revision due, if any.
 - e. Credit for deletions from Contract, similarly documented.
4. Contractor shall support each claim for additional costs, and for work done on a cost and percentage basis, with additional information including:
 - a. Credit for deletions from Contract, similarly documented.
 - b. Origin and date of claim.
 - c. Dates and times work was performed and by whom.
 - d. Time records and wage rates paid.
 - e. Invoices and receipts for products, materials, equipment and subcontracts, similarly documented.

J. Correlation of Subcontractor Submittals

1. Contractor will revise Schedule of Values and Application for Payment forms to record each authorized Change Order or Field Instruction as a separate line item and adjust the Contract Sum as shown thereon prior to the next monthly pay period.
2. Contractor shall revise the Baseline Schedule updates prior to the next monthly pay period.
3. Contractor shall enter changes in Project Records and Documents prior to the next monthly pay period.

- K. For all responses for which the Contract Documents do not provide a specific time period, recipients shall respond within a reasonable time.

4. COST DETERMINATION

- A. Total cost of extra work or of work omitted shall be the sum of labor costs, material costs, equipment rental costs and specialist costs as defined herein plus overhead and profit as allowed herein. This limit applies in all cases of claims for extra work, whether calculating Cost Proposals, Change Orders or Field Instructions, or calculating claims of all types, and applies even in the event of fault, negligence, strict liability, or tort claims of all kinds, including strict liability or negligence. Contractor may recover no other costs arising out of or connected with the

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performance of extra work, of any nature. No special, incidental or consequential damages may be claimed or recovered against City, its representatives or agents, whether arising from breach of contract, negligence or strict liability, unless specifically authorized in the Contract Documents.

B. Overhead and Profit:

1. Overhead shall be as defined in Paragraph 1.08 of this Document 01250.
2. Overhead and profit on labor for extra work shall be 15 percent (15%).
3. Overhead and profit on materials for extra work shall be 15 percent (15%).
4. Overhead and profit on equipment rental for extra work shall be 10 percent (10%).
5. When extra a first tier subcontractor performs work, Contractor shall receive a 5 percent (5%) markup on subcontractors' total costs of extra work. First tier subcontractor's overhead and profit on its work shall not exceed 15 percent (15%).
6. When extra work is performed by a lower tier subcontractor, Contractor shall receive a maximum total markup of 5 percent (5%) and the first tier subcontractor shall receive a maximum total of five percent (5%) on the lower tier subcontractors' total costs of extra work, which shall not include overhead and profit that exceeds 15 percent (15%).
7. Notwithstanding the foregoing, in no case shall the total overhead, profit and markup on any extra work exceed twenty-five percent (25%) of the direct cost, notwithstanding the actual number of contract tiers.
8. On proposals covering both increases and decreases in Contract Sum, overhead, profit and commission shall be allowed on the net increase only as determined above. When the net difference is a deletion, no percentage for overhead profit and commission shall be allowed.
9. The markup shall include profit, small tools, cleanup, engineering, supervision, warranties, cost of preparing the cost proposal, jobsite overhead, and home office overhead. No markup will be allowed on taxes, insurance, and bonds.

C. Taxes, Bonds & Insurance:

1. City of Santa Clara and County of Santa Clara Sales Taxes should be included.
2. Federal and Excise Taxes shall not be included.
3. The Contractor's Bond and Insurance costs on first tier subcontractors shall be shown separately and applied to the work by first tier subcontractors and is not included in the 5% markup limitations, nor included in the 15% limitation for the Contractor. The Contractor must provide written support documentation to justify any bond and insurance costs, but these costs shall not exceed 1.75% for the Contractor. Bond and Insurance Costs for any tier subcontractor are included in the markup limitations for overhead and profit.

D. Owner Operated Equipment

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When owner-operated equipment is used to perform extra work, Contractor will be paid for equipment and operator as follows:

1. Payment for equipment will be made in accordance with Paragraph 1.05.C of this Document 01250.
2. Payment for cost of labor will be made at no more than rates of such labor established by collective bargaining agreements for type of worker and location of work, whether or not owner-operator is actually covered by such an agreement.

E. Accord and Satisfaction

Every Change Order and accepted CCD shall constitute a full accord and satisfaction, and release, of all Contractor (and if applicable, Subcontractor) claims for additional time, money or other relief arising from or relating to the subject matter of the change including, without limitation, impacts of all types, cumulative impacts, inefficiency, overtime, delay and any other type of claim. Contractor may elect to reserve its rights to disputed claims arising from or relating to the changed Work at the time it signs a Change Order or approves a CCD, but must do so expressly in a writing delivered concurrently with the executed Change Order or approved CCD, and must also submit a Claim for the reserved disputed items pursuant to Article 12 of Document 00700 no later than 30 days of Contractor's first written notice of its intent to reserve rights.

5. COST BREAKDOWN

- A. Labor - Contractor will be paid cost of labor for workers (including working forepersons when authorized by City) used in actual and direct performance of extra work. Labor rate, whether employer is Contractor, subcontractor or other forces, will be sum of following:
 1. Actual Base Wages - Actual base wages paid shall include any employer payments to or on behalf of workers for health and welfare, pension, vacation and similar purposes as depicted in the Union Wage Rate Recap (Base Wage) included in the Caltrans Labor Surcharge and Equipment Rental Rates, Current Construction Costs.
 2. Labor Surcharge - Payments imposed by local, county, state and federal laws and ordinances, and other payments made to, or on behalf of, workers, other than actual wages as defined in subparagraph 1 above, such as taxes and insurance. The Labor Surcharge is set forth in Caltrans Labor Surcharge and Equipment Rental Rates, which is in effect on date upon which extra work is accomplished, and is incorporated herein by reference as though fully set forth herein.
- B. Material - The City will only pay for materials furnished by Contractor and necessarily used in performance of extra work. Cost of such materials will be cost, including sales tax, to purchaser (Contractor, subcontractor or other forces) from supplier thereof, except as the following are applicable:

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1. If cash or trade discount by actual supplier is offered or available to purchaser, it shall be credited to City notwithstanding fact that such discount may not have been taken.
2. For materials salvaged upon completion of extra work, salvage value of materials shall be deducted from cost, less discounts, of materials.
3. If cost of a material is, in opinion of City, excessive, then cost of material shall be deemed to be lowest current wholesale price at which material is available in quantities concerned delivered to Site, less any discounts as provided in subparagraph 1 above.

C. Equipment Rental

For Contractor or subcontractor-owned equipment, payment will be made at rental rates listed for equipment in the most recent addition of Caltrans Labor Surcharge and Equipment Rental Rates, which is in effect on date upon which extra work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein. For rented equipment, payment will be made based on actual rental invoices. Equipment used on extra work shall be of proper size and type. If, however, equipment of unwarranted size or type and cost is used, cost of use of equipment shall be calculated at rental rate for equipment of proper size and type. Rental rates paid shall be deemed to cover cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Unless otherwise specified, manufacturer's ratings, and manufacturer-approved modifications, shall be used to classify equipment for determination of applicable rental rates. Individual pieces of equipment or tools not listed in said publication or having a replacement value of two hundred dollars (\$200) or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor as payment is included in payment for labor. Rental time will not be allowed while equipment is inoperative due to breakdowns.

1. For equipment on Site, rental time to be paid for equipment shall be time equipment is in operation on extra work being performed or on standby as approved by City. The following shall be used in computing rental time of equipment:
 - a. When hourly rates are listed, less than thirty (30) minutes of operation shall be considered to be one-half (1/2) hour of operation.
 - b. When daily rates are listed, less than four (4) hours of operation shall be considered to be one-half (1/2) day of operation.
2. For equipment that must be brought to Site to be used exclusively on extra work, cost of transporting equipment to Site and its return to its original location shall be determined as follows:
 - a. City will pay for costs of loading and unloading equipment.
 - b. Cost of transporting equipment in low bed trailers shall not exceed hourly rates charged by established haulers.

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- c. Cost of transporting equipment shall not exceed applicable minimum established rates of California Public Utilities Commission.
 - d. Payment for transporting and loading and unloading equipment as above provided will not be made if equipment is used on Work in any other way than upon extra work.
3. Rental period shall begin at time equipment is unloaded at Site of extra work and terminate at end of day on which City directs Contractor to discontinue use of equipment. Excluding Saturdays, Sundays, and legal holidays, unless equipment is used to perform extra work on such days, rental time to be paid per day shall be four (4) hours for zero (0) hours of operation, six (6) hours for four (4) hours of operation and eight (8) hours for eight (8) hours of operation, time being prorated between these parameters. Hours to be paid for equipment, which is operated less than eight (8) hours due to breakdowns, shall not exceed eight (8) less number of hours equipment is inoperative due to breakdowns.

D. Work Performed by Special Forces or Other Special Services

When City and Contractor, by agreement, determine that special service or item of extra work cannot be performed by forces of Contractor or those of any first tier or lower subcontractors, service or extra work item may be performed by specialist. Invoices for service or item of extra work on basis of current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with established practice of special service industry to provide complete itemization. In those instances wherein Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from Site, charges for that portion of extra work performed in such facility may, by agreement, be accepted as a specialist billing. City must be notified in advance of all off-site work. To specialist invoice price, less credit to City for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added 15 percent (15%) in lieu of overhead and profit provided in Paragraph 1.04.B of this Document 01250.

6. FORCE-ACCOUNT

- A. If it is impracticable because of nature of work, or for any other reason, to fix an increase or decrease in price definitely in advance, the Contractor may be directed to proceed at a not-to-exceed (NTE) maximum price which shall not under any circumstances be exceeded. Subject to such limitation, such extra work shall be paid for at actual necessary cost for Force-Account Work or at the negotiated cost, as determined by City. The cost for Force-Account Work shall be determined pursuant to paragraphs 1.04 and 1.05 of this Document 01250.
- B. Force-Account Work shall be used when it is not possible or practical to price out the changed work prior to the start of that work. In these cases, Force-Account

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Work will be utilized during the pricing and negotiation phase of the change. Once negotiations have been concluded and a bilateral agreement has been reached, the tracking of the work under Force-Account is no longer necessary. Force-Account Work shall also be used when negotiations between City and Contractor have broken apart and a bilateral agreement on the value of the changed work cannot be reached. City may approve other uses of Force-Account Work.

- C. Whenever any Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to City each day in writing in detail amount and cost of labor and material used, and any other expense incurred in Force-Account Work on preceding work day as required herein. No claim for compensation for Force-Account Work will be allowed unless report shall have been made.
- D. Whenever Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to City when seventy-five percent (75%) of the not-to-exceed amount has been expended.
- E. Force-Account Work shall be paid as extra work under this Document. Above described methods of determining payment for work and materials shall not apply to performance of work or furnishings of material, which, in judgment of City, may properly be classified under items for which prices are established in Contract Documents.

7. CITY FURNISHED MATERIALS

City reserves right to furnish materials, as it deems advisable, and Contractor shall have no claims for costs and overhead and profit on such materials.

8. OVERHEAD DEFINED

- A. The following constitutes charges that are deemed included in overhead for all contract modifications, including Force-Account Work, and work required by Field Instructions, whether incurred by Contractor, subcontractors, or suppliers:
 - 1. Drawings: field drawings, sketches, etc. including submissions of drawings
 - 2. Routine field inspection of work proposed
 - 3. General Superintendence
 - 4. General administration and preparation of cost proposals, schedule analysis, change orders and other supporting documentation as necessary
 - 5. Computer services
 - 6. Reproduction services
 - 7. Salaries of project engineer, superintendent, timekeeper, storekeeper and administrative assistants, secretaries
 - 8. Janitorial services

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9. Temporary on-site facilities
 - a. Offices
 - b. Telephones
 - c. Plumbing
 - d. Electrical: Power, lighting
 - e. Platforms
 - f. Fencing, etc.
 - g. Water
10. Home office expenses.
11. Subcontractor Insurance and Bond Premiums/Costs.
12. Procurement and use of vehicles and fuel used coincidentally in base bid work.
13. Surveying
14. Estimating
15. Protection of work
16. Handling and disposal fees
17. Small tools and equipment valued at less than \$200.
18. Consumables and attrition
19. Cartage and Vertical transportation (Elevators, Vertical Resource Lifts, etc.)
20. Trucking within 50 miles of the Project Site
21. Parking expenses of any field labor, foreman, office personnel and superintendents
22. Employee truck and gas expenses
23. Cleanup as a result of change order work
24. Final cleanup
25. Other incidental work

9. RECORDS AND CERTIFICATION

- A. Force-Account (cost reimbursement) charges shall be recorded daily upon Cost Breakdown for Contract Modification Form. Contractor or authorized representative shall complete and sign form. Contract Modification Form shall provide names and classifications of workers and hours worked by each, itemize materials used, and also list size type and identification number of equipment, and hours operated, and shall indicate work done by specialists.
- B. No payment for Force-Account Work shall be made until Contractor submits original invoices substantiating materials and specialists charges. No payment for Field Instruction Work shall be made until negotiations have been completed and the subsequent Change Order issued.
- C. City shall have the right to audit all records in possession of Contractor or first tier subcontractors or lower tier subcontractors relating to activities covered by Contractor's claims for modification of Contract, including Force-Account Work and Field Instruction Work, as set forth in Document 0700 General Conditions.

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- D. Further, City shall have right to audit, inspect, or copy all records maintained in connection with this Contract, including financial records, in possession of Contractor relating to any transaction or activity occurring or arising out of, or by virtue of, the Contract. If Contractor is a joint venture, right of City shall apply collaterally to same extent to records of joint venture sponsor, and of each individual joint venture member.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTIONS

Not used.

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MODIFICATION PROCEDURE

To: City of Santa Clara

This Cost Proposal is in response to the above referenced form

Brief description of change(s):

ITEM DESCRIPTION	TOTAL
Material	
Direct Labor Cost	
Equipment	
Other (Specify) Extended Overhead	
Total Cost	
Subcontractor's Overhead and Profit 15%	
Contractor's Overhead and Profit 15%	
O/P to Contractor For Subcontractor' work at 5%	
Bond and Insurance	
(% of total cost above not including any OIP)	
GRAND TOTAL	

By: _____
Contractor

Signature: _____ Date: _____

END OF DOCUMENT

DOCUMENT 01315

PROJECT MEETINGS

PART 1 GENERAL

1. SUMMARY

A. This document describes the required project meetings for this Work. These meetings include:

1. Preconstruction Conference.
2. Initial Contract Schedule Review Meeting.
3. Weekly Progress Meetings.
4. Progress Schedule and Billing Meetings.
5. Special Meetings.
6. Safety Meetings
7. Utility Coordination Meetings

B. Related Documents.

1. Document 01100: Summary of Work
2. Document 01200: Measurement and Payment
3. Document 01320: Progress Schedules and Reports
4. Document 01330: Submittals

2. PRECONSTRUCTION CONFERENCE

A. City will call for and administer Preconstruction Conference at time and place to be announced. Conference will occur as soon after award as can be reasonably scheduled.

B. Contractor, all subcontractors, and major suppliers shall attend Preconstruction Conference.

C. Agenda will include, but not be limited to, the following items.

1. Schedules
2. Personnel and vehicle permit procedures
3. Use of premises
4. Location of the Contractor's on-site facilities
5. Security
6. Housekeeping
7. Submittals and Requests for Information procedures
8. Inspection and testing procedures, on-site and off-site
9. Utility shutdown procedures
10. Control and reference point survey procedures
11. Injury and Illness Prevention Program
12. Contractor's Initial Contract Schedule
13. Contractor's Schedule of Values/Cost Loaded Schedule
14. Contractor's Schedule of Submittals
15. Turnover Procedures for Contract Items

DOCUMENT 01315

PROJECT MEETINGS

- D. City will distribute copies of minutes to attendees. Attendees shall have 7 days to submit comments or additions to minutes. Minutes will constitute final memorialization of results of conference.

3. INITIAL CONTRACT SCHEDULE REVIEW MEETINGS

- A. Contractor shall meet with the City after the Award of Contract and before the Notice to Proceed and review Contractor's draft Shop Drawing and Sample Submittal Schedule, draft Schedule of Values, and Draft Initial Contract Schedule.
- B. Authorized representative in Contractor's organization, designated in writing, that will be responsible for working and coordinating with City relative to preparation and maintenance of schedules shall attend initial review meeting.
- C. Contractor shall meet as required in Document 01320 to review the schedule requirements and provide schedules in compliance with Specification Document 01320.
 - 1. Contractor shall have its construction manager, general site superintendent, scheduler, and key subcontractor representatives, as required by City, in attendance. The meeting will take place over a continuous one-day period.
 - 2. City's review will be limited to submittal's conformance to Contract Documents requirements, including, but not limited to, coordination requirements. City's review may also include:
 - a. Clarifications of Contract Requirements.
 - b. Directions to include activities and information missing from submittal.
 - c. Requests to Contractor to clarify its schedule.
 - 3. After the Schedule Review Meeting, Contractor shall respond in writing in accordance with the requirements of Specification Document 01320 to all questions and comments expressed by City at the Meeting.
- D. City will administer scheduling meetings and shall distribute minutes of scheduling meetings to attendees by posting said meetings on the project website. Attendees shall have 7 calendar days to submit comments or additions to minutes. Minutes will constitute final memorialization of results of conference.

4. WEEKLY PROGRESS MEETINGS

- A. City will schedule and administer Weekly Progress Meetings throughout duration of Work. Progress meetings will be held weekly unless otherwise directed by City.
 - 1. Meetings shall be held at City Construction Manager's on-site office, unless otherwise directed by City.
 - 2. The meeting minutes will be the agenda for the subsequent progress meeting.
 - 3. A City representative will preside at meeting.

DOCUMENT 01315

PROJECT MEETINGS

4. The City will distribute minutes to Contractor by email . Minutes will constitute final memorialization of results of meeting.
- B. The Contractor's construction manager, general site superintendent, major subcontractors and suppliers, City, Engineer, and others as appropriate shall attend progress meetings to review and discuss agenda items.
- C. Agenda will contain the following items as appropriate:
 1. Review, revise and necessary, and approve previous meeting minutes
 2. Review of work progress since last meeting
 3. Status of Construction Work Schedule, delivery schedules, adjustments
 4. Submittal, RFI, Field Instructions and Change Order status
 5. Other items affecting progress of work
 6. Review of the Contractor's safety program activities and results, including report on all serious injury and/or damage accidents
5. **PROGRESS SCHEDULE AND BILLING MEETINGS**
 - A. A meeting will be held once each month in accordance to Specification Documents 01200 and 01320 to review the schedule update submittal and progress payment application. The Contractor shall provide the required schedules and progress payment information prior to the meeting in accordance Specification Document 01200 and 01320.
 1. At this meeting, at a minimum, the following items will be reviewed: Percent complete of each activity; time impact evaluations for change orders and time extension request; actual and anticipated activity sequence changes; actual and anticipated duration changes; and actual and anticipated contractor delays.
 2. These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate personnel attend. At a minimum, Contractor's Construction Manager, General Superintendent and Scheduler shall attend these meetings.
 3. Contractor shall plan on the meeting taking no less than four (4) hours.
6. **SPECIAL MEETINGS**
 - A. Special meetings may be called by any party by notifying all desired participants and City 5 days in advance, giving reason for meeting. Special meetings may be held without advance notice in emergency situations.
 - B. At any time during the progress of Work, City shall have authority to require the Contractor to attend meetings with any or all of the subcontractors engaged in Work or contractors in other work, and notice of such meetings shall be duly observed and complied with by Contractor.
 - C. Contractor shall schedule and conduct coordination meetings as necessary to discharge coordination responsibilities in Division 0 through 17 of the Contract

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PROJECT MEETINGS

Specifications. Contractor shall give City written notice of coordination meetings within 5 calendar days. Participation by representatives of the City is optional. Contractor shall maintain and distribute minutes of coordination meetings to all attendees and the City. Attendees shall have 7 days to submit comments or additions to minutes. Minutes will constitute final memorialization of results of coordination meetings.

- D. Contractor shall schedule pre-construction meetings before the Contractor or its subcontractors commence any type of new work in the field. The City shall be notified in writing 2 workdays in advance of all pre-construction meetings. At a minimum, the purpose of these meetings is to review plans, specifications and reviewed submittals before new work commences to facilitate the completion of work in accordance with the Contract Documents. The City's Construction Manager and the Engineer shall be invited to attend these meetings and the Contractor shall be responsible for presiding at these meeting, as well as preparing and distributing meeting minutes within 3 work days of each meeting.

7. SAFETY MEETINGS

- A. Contractor shall conduct monthly Contractor Safety Committee meetings.
- B. Contractor shall conduct weekly toolbox safety talks.

8. UTILITY COORDINATION MEETINGS

- A. Contractor shall plan, coordinate and schedule meetings with all utility companies and City forces installing utilities. The City's Construction Manager and the Engineer shall be invited to attend these meetings and the Contractor shall be responsible for presiding at these meeting, as well as preparing and distributing meeting minutes within 3 work days of each meeting. Additional requirements regarding the coordination and scheduling of utility work by others is included, but not limited to, Specification Document 01100, Summary of Work, the Contract General Conditions and the Contract Drawings.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTIONS

Not used.

END OF DOCUMENT

DOCUMENT 01320

PROGRESS SCHEDULES & REPORTS

PART 1 GENERAL

1. SUMMARY

- A. Perform scheduling of Work under this Contract in accordance with requirements of this Document 01320.
- B. Development of schedule, cost, and resource loading of the Progress Schedule, monthly payment requests, and project status reporting requirements of the Contract Documents shall employ scheduling as required in this Document 01320.
- C. The Schedule shall be cost-loaded based on Schedule of Values as approved by City.
- D. Submit schedules and reports as specified in 00700 (General Conditions).
- E. Upon Award of Contract, immediately commence development of Initial Schedule to ensure compliance with schedule submittal requirements.
- F. Contractor's obligations under this Document 01320 are hereby deemed material obligations justifying City's remedies for default if Contractor fails to perform. Nothing in this paragraph 1.1.C of this Document 01320 or the lack of an express statement that any other Contract Documents provision is or is not material shall be considered in determining whether any such other provision is material.
- G. Employ competent scheduling personnel or a schedule consultant with experience performing scheduling required herein on two prior, similar projects.

2. GENERAL

- A. Progress Schedule shall be based on and incorporate milestone and completion dates specified in Contract Documents.
- B. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times in Document 00520 (Agreement), unless an earlier (advanced) time of completion is requested by Contractor and agreed to by City. A Change Order shall formalize any such agreement.
- C. City is not required to accept an earlier (advanced) schedule, i.e., one that shows early completion date(s) for the Contract Time.
- D. Contractor is not entitled to extra compensation in event agreement is reached on an earlier (advanced) schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in earlier (advanced) schedule but within the Contract Time.
- E. A schedule showing the Work completed in less than the Contract Time, which has been accepted by City, shall be considered to have Project Float. The Project

DOCUMENT 01320

PROGRESS SCHEDULES & REPORTS

Float is the time between the scheduled completion of the Work and Contract Substantial Completion. Project Float is a resource available to both City and Contractor.

- F. Float Ownership: Neither City nor Contractor owns float. The Project owns the float. As such, liability for delay of any Substantial Completion or Final Completion date rests with the party whose actions, last in time, actually cause delay to a Substantial Completion or Final Completion date.
 - 1. For example, in the event of unexcused delay by Party A and Party B, and if Party A uses some, but not all of the float and Party B later uses remainder of the float as well as additional time beyond the float, Party B shall be liable for the time that represents a delay to the Substantial Completion date.
 - 2. Under this scenario, Party A would not be responsible for the time since it did not consume all of the float and additional float remained; therefore, the Substantial Completion Date was unaffected.
 - G. Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing Contract schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.
 - H. Failure of Progress Schedule to include any element of the Work or any inaccuracy in Progress Schedule will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. City's acceptance of Schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests, and shall not, in any manner, impose a duty of care upon City, or act to relieve Contractor of its responsibility for means and methods of construction.
 - I. Transmit each item under form approved by City or following Document 01330.
 - J. Identify Project with the City Contract number, and name of Contractor.
 - K. Provide space for Contractor's approval stamp and City's review stamps.
 - L. Submittals received from sources other than Contractor will be returned to Contractor without City's review.
3. INITIAL AND ORIGINAL PROGRESS SCHEDULE
- A. Initial Schedule submitted for review at the Pre-construction Conference shall serve as Contractor's schedule for up to 30 Days after the Notice to Proceed.
 - B. Initial Schedule must indicate detailed plan for the Work to be completed in first 30 Days of the Contract; details of planned mobilization of plant and equipment;

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sequence of early operations; and procurement of materials and equipment. Show Work beyond 30 Days in summary form.

- C. Contractor shall submit its Original Schedule for review no later than first progress payment. Original Schedule and all updates shall comply with all standards herein.
 - D. All Schedules shall be time-scaled.
 - E. All Schedules shall be cost- and resource-loaded. Accepted cost- and resource-loaded Schedule will be used as basis for monthly progress payments. Use of Initial Schedule for progress payments shall not exceed 30 Days.
 - F. Except as otherwise expressly provided in this Document 01320, meet with City to review and discuss the each Schedule (i.e., Initial, Original and monthly updates) within seven Days after each Schedule has been submitted to City.
 - G. City's review and comment on any Schedule shall be limited to Contract conformance (with sequencing, coordination, and milestone requirements).
 - H. Contractor shall make corrections to Schedule necessary to comply with Contract requirements and shall adjust Schedule to incorporate any missing information requested by City. Resubmit Initial Schedule if requested by City.
 - I. If Contractor is of the opinion that any of the Work included on its Schedule has been impacted, submit to City a written Time Impact Evaluation (TIE) in accordance with Document 01320. The TIE shall be based on the most current update of the Initial Schedule.
4. SCHEDULE FORMAT AND LEVEL OF DETAIL
- A. Each Schedule (Initial, Original and updates) shall indicate all separate fabrication, procurement and field construction activities required for completion of the Work, including but not limited to the following:
 - B. All Contractor, Subcontractor, and assigned Contractor work shall be shown in a logical work sequence that demonstrates a coordinated plan of work for all contractors. The intent is to provide a common basis of acceptance, understanding, and communication, as well as interface with other contractors.
 - C. Activities related to the delivery of Contractor and City-furnished equipment to be Contractor-installed per Contract shall be shown.
 - D. All activities shall be identified through codes or other identification to indicate the building (i.e. buildings, Site work) and Contractor/Subcontractor responsibility to which they pertain.

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- E. Break up the Work schedule into activities of durations of approximately 21 Days or less each, except for non-field construction activities or as otherwise deemed acceptable by City.
 - F. Show the critical path in red. For each activity, show early start, late start, early finish, late finish, durations measured in Days, float, resources, predecessor and successor activities, planned workday/week for the activity, man power loading, and scheduled/actual progress payments.
 - G. Seasonal weather conditions (which do not constitute a delay as defined herein) shall be considered in the planning and scheduling of all work influenced by high or low ambient temperatures or presence of high moisture for the completion of the Work within the allotted Contract Time.
 - H. Failure by Contractor to include any element of Work required for performance of the Work on the detailed construction schedule shall not excuse Contractor from completing all Work required within the Contract Time.
 - I. A two-week "look ahead," detailed daily bar chart schedule shall be updated and issued weekly.
 - J. Utilize computer-scheduling software, such as Microsoft Project software or approved equivalent, for all scheduling including schedule updates.
5. MONTHLY SCHEDULE UPDATE SUBMITTALS
- A. Following acceptance of Contractor's Initial Schedule, monitor progress of Work and adjust Schedule each month to reflect actual progress and any anticipated changes to planned activities.
 - B. Each Schedule update submitted shall be complete, including all information requested for the Initial Schedule and Original Schedule submittal.
 - C. Each update shall continue to show all Work activities including those already completed. These completed activities shall accurately reflect "as built" information by indicating when activities were actually started and completed, and Contractor warrants the accuracy of as-built information as shown.
 - D. At this meeting, at a minimum, the following items will be reviewed: Percent complete of each activity; TIEs for Change Orders and Time Extension Request; actual and anticipated activity sequence changes; actual and anticipated duration changes; and actual and anticipated Contractor delays.
 - E. These meetings are considered a critical component of overall monthly schedule update submittal; have appropriate personnel attend. At a minimum, Contractor's General Superintendent and Scheduler shall attend these meetings.
 - F. Plan on the meeting taking no less than four hours.

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- G. Within five Days after monthly Schedule update meeting, submit the updated Schedule.
- H. Within five Days of receipt of above-noted revised submittals, City will either accept or reject monthly schedule update submittal.
- I. If accepted, percent complete shown in monthly update will be basis for Application for Payment by Contractor. The schedule update shall be submitted as part of Contractor's Application for Payment.
- J. If rejected, update shall be corrected and resubmitted by Contractor before the Application for Payment is submitted.
- K. Updating, changing or revising of any report, curve, schedule or narrative submitted to City by Contractor under this Contract, nor City's review or acceptance of any such report, curve, schedule or narrative shall not have the effect of amending or modifying, in any way, the Contract Substantial Completion date or milestone dates or of modifying or limiting, in any way, Contractor's obligations under this Contract.

6. SCHEDULE REVISIONS

- A. Updating the Schedule (Initial and Original) to reflect actual progress shall not be considered revisions to the Schedule. Since scheduling is a dynamic process, however, revisions to activity durations and sequences are expected on a monthly basis.
- B. To reflect revisions to the Schedule, provide City with a written narrative with a full description and reasons for each Work activity revised. For revisions affecting the sequence of Work, provide a schedule diagram that compares the original sequence to the revised sequence of Work. Provide the written narrative and schedule diagram for revisions three Days in advance of the monthly schedule update meeting. Clearly show and discuss any changes in the critical path.
- C. Schedule revisions shall not be incorporated into any schedule update until City has reviewed the revisions. City may request further information and justification for schedule revisions and, within three Days, provide City with a complete written narrative response to City's request.
- D. If City does not accept Contractor's revision, and Contractor disagrees with City's position, Contractor has seven Days from receipt of City's letter rejecting the revision, to provide a written narrative providing full justification and explanation for the revision. Contractor's failure to respond in writing within seven Days of City's written rejection of a schedule revision shall be contractually interpreted as acceptance of City's position, and Contractor waives its rights to subsequently dispute or file a claim regarding City's position. If Contractor files a timely response as provided in this paragraph, and the parties are still unable to agree, Contractor's

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sole right shall be to file a claim as provided in Document 00700 (General Conditions), Article 12. At City's discretion, Contractor can be required to provide Subcontractor certifications of performance regarding proposed schedule revisions affecting said Subcontractors.

7. RECOVERY SCHEDULE

- A. If a Schedule update shows a substantial completion date 21 Days beyond any Contract Substantial Completion date, or individual Milestone completion dates, submit to City within seven Days the proposed revisions to recover the lost time. As part of this submittal, provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, provide a schedule diagram comparing the original sequence to the revised sequence of Work. If City requests, show the intended critical path; secure appropriate Subcontractor and supplier consent to the recovery Schedule; submit a narrative explaining trade flow and construction flow changes, duration changes, added/deleted activities, critical path changes and identify all near critical paths and man hour loading assumptions for major Subcontractors.
- B. The revisions shall not be incorporated into any Schedule update until City has reviewed the revisions.
- C. At City's discretion, Contractor can be required to provide Subcontractor certifications for revisions affecting said Subcontractors.

8. TIME IMPACT EVALUATION FOR CHANGE ORDERS AND OTHER DELAYS

- A. When Contractor is directed to proceed with changed work, prepare and submit, within 14 Days from the direction to proceed, a TIE that includes both a written narrative and a schedule diagram depicting how the changed work affects other schedule activities. The schedule diagram shall show how Contractor proposes to incorporate the changed work in the schedule, and how it impacts the current Schedule update critical path or otherwise. Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram shall be tied to the main sequence of scheduled activities to enable City to evaluate the impact of changed work to the scheduled critical path.
- B. Contractor is responsible for all costs associated with the preparation of TIEs, and the process of incorporating TIEs into the current schedule update. Provide City with four copies of each TIE.
- C. Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount City allows, and Contractor may submit a claim for

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additional time claimed by Contractor as provided in Document 00700 (General Conditions).

9. TIME EXTENSIONS

- A. Contractor is responsible for requesting time extensions for time impacts that, in the opinion of Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accordance with Document 00700 (General Conditions).
- B. Where an event for which City is responsible impacts the projected Substantial Completion date, provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. Also include a detailed cost breakdown of the labor, equipment, and material Contractor would expend to mitigate City-caused time impact. Submit mitigation plan to City within 14 Days from the date of discovery of said impact. Contractor is responsible for the cost to prepare the mitigation plan.
- C. Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.
- D. No time will be granted under the Contract Documents for cumulative effect of changes.
- E. City will not be obligated to consider any time extension request unless requirements of Contract Documents are complied with.
- F. Failure of Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests.
- G. Notwithstanding any other provision of this Document 01320, if Contractor does not submit a TIE within the required 14 Days for any issue, Contractor hereby agrees that Contractor does not require a time extension for that issue.

10. PROJECT STATUS REPORTING

- A. In addition to submittal requirements for scheduling identified in this Document 01320, provide a monthly project status report (i.e., written narrative report) to be submitted in conjunction with each Schedule as specified herein. Status reporting shall be in form specified below:
 - a. Prepare monthly written narrative reports of status of Project for submission to City. Written status reports shall include:
 - b. Status of major Project components (percent complete, amount of time ahead or behind schedule) and an explanation of how Project will be brought back on schedule if delays have occurred.

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- c. Progress made on critical activities indicated on each Schedule, including inspections.
- d. Explanations for any lack of work on critical path activities planned to be performed during last month.
- e. Explanations for any schedule changes, including changes to logic or to activity durations.
- f. List of critical activities scheduled to be performed during the next month.
- g. Status of major material and equipment procurement.
- h. Any delays encountered during reporting period.
- i. Provide printed report indicating actual versus planned resource (labor, materials and equipment) loading for each trade and each activity. This report shall be provided on weekly and monthly basis.
- j. Actual resource shall be accumulated in field by Contractor, and shall be as noted on Contractor's daily reports. These reports will be basis for information provided in monthly and weekly printed reports.
- k. Explain all variances and mitigation measures.
- l. Contractor may include any other information pertinent to status of Project. Include additional status information requested by City at no additional cost.
- m. Status reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.
- n. At the close of each workday provide City with report of Contractor and its Subcontractors' work activities for that day, including trades, equipment, work activities worked on, staff levels, and equipment deliveries.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

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SUBMITTAL PROCEDURES

PART 1 GENERAL

1. SUMMARY

A. This document describes general requirements for submittals for the Work:

1. Procedures
2. Schedule of Shop Drawing and Sample Submittals
3. Safety Plan
4. Progress Schedule
5. Product Data
6. Shop drawings
7. Samples
8. Coordination Drawings (Optional If Applicable)
9. Quality Control Submittals
 - a. Design Data
 - b. Test Reports
 - c. Certificates
 - d. Manufacturers' Instructions
 - e. Material Safety Data Sheets
10. Machine Inventory Sheets
11. Operations and Maintenance Manuals
12. Computer Programs
13. Project Record Documents

B. Related Documents

1. Document 01100: Summary of Work
2. Document 01200: Measurement and Payment
3. Document 01250: Modification Procedures
4. Document 01320: Progress Schedules and Reports
5. Document 01540: Site Security and Safety
6. Document 01770: Contract Closeout
7. Document 01780: Project Record Documents

2. PROCEDURES

A. Submit at Contractor's expense, PDF, Schedule of Shop Drawing and Sample Submittals, Safety Plans, Coordination Drawings, Traffic Plan, Contract Schedules, Product Data, Shop Drawings, Samples, Storm Water Pollution Prevention Plan, Quality Control Data, Machine Inventory Sheets, Operations and Maintenance Manuals, Computer Programs, and Project Record Documents Seismic Submittal Review Forms, where specified in Division 2 through 16. Forms are attached at the end of this Document 01330, required by the Contract Documents. Submit these submittals simultaneously to City at the Site and to the Engineer at their office for review in accordance with accepted schedule of Shop Drawings and Samples submittals.

B. Transmit each PDF with a submittal cover and a single transmittal form provided by

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City. Identify Project; Contractor, subcontractor, major supplier, pertinent drawing sheet and detail number, and specification document number as appropriate. Where manufacturer's standard drawings or data sheets are used, they shall be marked clearly to show those portions of the data that are applicable to this project. Submittals shall be submitted based on each technical specification document. Submittals containing information about more than one specification document will be returned for resubmittal. Submittals shall include all information requested by each specification document. (No partial submittals.) Incomplete submittals will be returned without review. Provide a log number and reference to Specifications Document and/or Plan sheets and details, for each submittal for ease of identification of submittal, in the format required by the City provided submittal transmittal form. If the Contractor fails to provide the required information the submittal will be returned as incomplete without review. The Contractor shall include in its Initial Contract Schedule and subsequent Baseline Schedule updates at least twenty-one (21) calendar days for the review of shop drawings. The City reserves the right to increase the review period for selected shop drawings and other submittals, which will be communicated at the time of the City's review of the Contractor's Initial Contract Schedule. Submittals which require finishes or colors to be selected by the Engineer will be held and reviewed together after all related materials have been submitted.

- C. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show the materials and equipment Contractor proposes to provide and to enable City review of the information for the limited purposes specified below. Samples shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which it is intended and otherwise as may be required to enable to review of the submittal. The number of each Sample to be submitted shall be three unless otherwise specified in the Specifications.
- D. At the time of each submission, Contractor shall give City specific written notice of all variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, and the reasons therefore. This written notice shall be in a written communication attached to the submittal transmittal form, and the information shall also be noted on the submittal cover sheet. In addition, Contractor shall cause a specific notation to be made on each Shop Drawing and Sample submitted for review of each such variation. If City accepts deviation, City shall note its acceptance on the returned submittal transmittal form and, if necessary, issue appropriate Contract Modification.
- E. Submittal coordination and verification is responsibility of Contractor; this responsibility shall not be delegated in whole or in part to subcontractors or suppliers. Before submitting each Shop Drawing or Sample, Contractor shall have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents, and shall have determined and verified:
 - 1. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar

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- information with respect thereto.
2. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work; and
 3. All information relative to Contractor's sole responsibilities and of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.
- F. Contractor's submission to City of a Shop Drawing or Sample submittal will constitute Contractor's representation that it has satisfied its obligations under the Contract Documents, and as set forth immediately above, with respect to Contractor's review and approval of that submittal.
- G. Designation of work "by others", if shown in submittals, shall mean that work will be responsibility of Contractor rather than subcontractor or supplier who has prepared submittals.
- H. After review by City or Engineer of each of Contractor's submittals, one set of submittals will be returned to Contractor with actions defined as follows:
1. REVIEWED- Reviewed subject to contract requirements and its compatibility with future submittals for portions of the work not covered in this submittal. Does not constitute approval of deletion of specified or required items unless specifically noted in Submittal.
 2. REVIEWED AS NOTED (NO RESUBMISSIONS REQUIRED) -."Reviewed subject to making corrections noted and to contract requirements..." Reviewed subject to contract requirements and its compatibility with future submittals for portions of the work not covered in this submittal. Does not constitute approval of deletion of specified or required items unless specifically noted in Submittal.
 3. REVISE AND RESUBMIT – Significant comments or complexity that must be resolved by Contractor, and resubmitted for subsequent review by City, before work can proceed. .
 4. REJECTED - RESUBMIT - Submitted material does not conform to Plans and Specifications in major respect. Resubmit in conformance with Contract Documents.
- I. Contractor shall make a complete and acceptable submittal (i.e. a submittal receiving a reviewed or reviewed as noted status) at least by second submission. City reserves the right to deduct monies from payments due Contractor to cover additional costs of review beyond the second submission. Illegible submittals will be rejected and returned to Contractor for resubmission. Contractor shall be in breach of the Contract if following the second submittal, which City determines falls within categories 3 or 4 above, the Contractor does not provide a subsequent re-submittal that obtains a category 1 or 2 review by the City or Engineer.
- J. Favorable review will not constitute acceptance by City of any responsibility for the accuracy, dimensions, or coordination and completeness of the submittals. Accuracy, dimensions, coordination, and completeness of Submittals shall be sole

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responsibility of Contractor, including responsibility to backcheck comments, corrections, and modifications from City's review before fabrication. Contractor, subcontractors, or suppliers may prepare submittals, but Contractor shall ascertain that submittals meet requirements of Contract Documents, while conforming to structural space and access conditions at point of installation. City's review will be only to determine if the items covered by the submittals conform to the information given in the Contract Documents and if they are compatible with the design concept of the completed Project as indicated by the Contract Documents. Favorable review of submittal, method of work, or information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of responsibility for errors therein and shall not be regarded as assumption of risks or liability by City, or any officer or employee thereof, and Contractor shall have no claim under Contract on account of failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so reviewed. Favorable review shall be considered to mean merely that City has no objection to Contractor using, upon his own full responsibility, the plan or method of work proposed, or materials and equipment proposed.

- K. City's review does not extend to the means, methods, techniques, sequences or procedures of construction or to safety precautions or programs incident thereto. The review of separate item's does not indicate review of the assembly in which the item functions.
- L. Submit complete initial submittal for those items where required by individual specification Documents. Complete submittal shall contain sufficient data to demonstrate that items comply with Specifications, shall meet minimum requirements for submissions cited in technical specifications, include motor data and seismic anchorage certifications, where required, and include necessary revisions required for equipment other than that used for the basis of the design. If Contractor submits incomplete initial submittal, submittal may be returned to Contractor without review.
- M. It shall be Contractor's responsibility to copy, conform and distribute reviewed submittals in sufficient numbers for Contractor's files, subcontractors and vendors.
- N. After City's review of submittal, revise as noted and resubmit if required. Identify changes made since previous submittal.
 - 1. Fabrication or work that requires a resubmittal is not allowed until the resubmittal is received as approved by the Contractor. Contractor proceeds at his risks for work and materials which have not been accepted as meeting contract documents.
- O. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.
- P. All shop drawings and submittals shall be number identified by Contractor, prior to submission to City, in accordance with the following:
 - 1. Contractor shall number each submittal according to the specification

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document and sequentially within the specification document as the basis for number identification of all shop drawings and submittals.

2. Include the submittal number under which each submittal is made on a submittal cover sheet, the form for which will be provided by City, attached to: every copy of each shop drawing, product data, sample, certification, O & M manual, etc.
3. If the submittal is a resubmittal (including without limitation after an initial submittal is rejected, returned not reviewed or marked revise as noted and resubmit), add the suffix designation "-R1" Subsequent re-submittals must be identified by the submittal number followed by "-R" and a sequential number (i.e.: "-R1", "-R2", "-R3", etc.).
4. All submittals shall include all information requested by each specification document. No partial submittals will be accepted unless previously authorized by the City. In the event a partial submittal is authorized, each partial submittal (as opposed to resubmittal) shall be given a suffix letter (i.e. 14240A, 14240B, etc.).
5. Number Installation, Operation, and Maintenance Manuals with original root number of the approved Submittal for the item.

Q. Submission Requirements

1. Schedule submissions to provide for at least two complete review cycles before dates so as to cause no delay and to allow adequate time for review, re-submittal and re-review, taking into account complexity of each submittal and inter-relatedness with other submittals reviewed submittals will be needed, to avoid impact to the project schedule.
2. Shop Drawings: The Contractor shall submit a PDF of shop drawings to the City's Field Office at the Site and to the Engineer's office in Santa Clara. The City will return a PDF of the reviewed copy to the Contractor.
3. Submittals: The Contractor shall a PDF of each submittal to the City's Field Office at the Site and a PDF to the Engineer's office in Santa Clara. The City will return a PDF of the reviewed copy to the Contractor.
4. Samples: The Contractor shall submit two (2) samples of each product or finish to the City's Field Office at the Site and three (3) samples to the Engineer's office in Santa Clara. The City will return two samples to the Contractor.
5. If Contractor desires more copies of reviewed submittals, then Contractor shall either submit additional copies or make copies from the returned submittals. Submittals requiring resubmission will require the same quantity and distribution as an initial submittal.
6. Accompany submittals with submittal cover form attached to each copy of each submittal.
7. Initial Submittal of Installation, Operation, and Maintenance Manuals shall be 45 Days after the date Submittals that pertain to the applicable portion of the Installation, Operation, and Maintenance Manual is satisfactorily reviewed.
8. The following table lists the number of initial Submittals required from Contractor for each type of submission, to whom Contractor shall distribute the information, and City's distribution of reviewed submissions. If

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Contractor needs more copies of reviewed Submittals returned to it, then either submit additional copies or make copies from the returned transparency Submittal. Submittals requiring resubmission will require the same quantity and distribution as an initial Submittal.

- a. Accompany Submittals with Submittal transmittal form, in duplicate, containing:
 - i. Date, revision date, and Submittal log number.
 - ii. Project name and City's Contract number.
 - iii. Contractor's name, address, and job number.
 - iv. Specification Document number clearly identified.
 - v. The quantity of Shop Drawings, Product Data, or Samples submitted.
 - vi. Notification of deviations from Contract Documents.
 - vii. Materials Safety Data Sheet (MSDS) for each item complying with OSHA's Hazard Communication Standard 29 CFR 1910.1200.
 - viii. Other pertinent data.
- b. Submittal shall include:
 - i. Date and revision dates.
 - ii. Revisions, if any, identified.
 - iii. Project Name and Contract number.
 - iv. The names of:
 1. Contractor, Subcontractor, Supplier, Manufacturer, and separate detailer, when pertinent.
 - v. Identification of product material by location within the Project.
 - vi. Relation to adjacent structure or materials.
 - vii. Field dimensions, clearly identified as such.
 - viii. Specification Document number and applicable detail reference number on the Drawings.
 - ix. Applicable reference standards, such as ASTM, ANSI, FS, NEMA, SMACNA or ACI.
 - x. A blank space, on each Drawing or data sheet, 5" x 4" for the City's stamp.
 - xi. Identification of deviations from Contract Documents.
 - xii. Contractor's stamp, initialed or signed, with language certifying the review of Submittals, verification of field measurements, construction criteria and technical standards in compliance with Contract Documents.

R. Resubmission requirements:

1. Shop Drawings:
 - a. Revise initial Shop Drawings or package as required and re-submit.
 - b. Indicate on Shop Drawings any changes, which have been made other than those, requested by Engineer.
2. Product Data and Samples: Submit new Data and Samples as required for initial submittals.

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3. Installation, Operation, and Maintenance Manuals:
 - a. Revise initial Installation, Operation, and Maintenance Manual(s) as required and resubmit as specified for initial Submittals.
4. Number of resubmissions:
 - a. One reexamination of Contractor's Submittals that have been returned for correction or replacement will be included in City's budget. Any additional reexamination of Contractor's Submittals will be considered additional scope services to be paid by Contractor through City. Contractor shall pay City (or City may deduct from any progress or final payment), for engineering personnel, on an hourly basis at 2.5 times direct payroll expenses, and for consultant personnel time at 1.25 times the amount billed City.

3. SCHEDULE OF SHOP DRAWING AND SAMPLE SUBMITTALS

- A. Submit preliminary Schedule of Shop Drawing and Sample Submittals as required by Document 00700 General Conditions. Submit a PDF of final and accepted schedule of submittals of shop drawings and samples as required by Document 00700 General Conditions, and in no event later than ten (10) calendar days following Notice of Proceed.
- B. Schedule of Shop Drawing and Sample Submittals will be used by City to schedule their activities relating to review of submittals. Schedule of submittals shall support the approved Initial Contract Schedule logic and indicate a spreading out of submittals and early submittals of long lead-time items and of items that require extensive review.
- C. Schedule of Shop Drawing and Sample Submittals shall be reviewed by City and shall be revised and resubmitted until accepted by City.
- D. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received. Identify on the submittal which submittals should be reviewed together. The City may delay return of interrelated submittals when review is dependent on other submittals not yet received. The review period of such groups shall begin with the date of submission of the last member of the group and run for 21 calendar days.

4. SAFETY PROGRAM

- A. Submit two (2) copies of Safety Program specific to these Contract Documents to City within the time set forth in Specification 1540, Paragraph 1.05.

5. PROGRESS SCHEDULE

- A. Progress Schedule

1. See Document 01320 (Progress Schedules and Reports) for schedule and

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- report requirements. Document 01320 shall control in any conflict with Document 01330.
2. Submit one reproducible and three print copies of schedule at each of the following times:
 - a. Initial Progress Schedule at the Preconstruction Conference.
 - b. Original Schedule within 20 Days of the Notice to Proceed date.
 - c. Adjustments to the Schedule as required.
 - d. Schedule updates monthly, seven Days prior to monthly progress meeting.
 3. Submit four copies of the reports listed in Document 01320 (Progress Schedules and Reports) with:
 - a. Initial Schedule
 - b. Original Schedule
 - c. Each monthly Schedule update
 4. Progress Schedules and Reports shall be submitted on CD-ROM, using software described in paragraph 1.4E of Document 01320, in addition to hard copies specified in this paragraph 0. Electronic files shall be complete copies, including all programs and electronic coding
6. **PRODUCT DATA**
- A. Within twenty-one (21) calendar days after Start Date of the Contract Times submit two (2) copies of complete list of major products proposed for use, with name of manufacturer, telephone number, trade name, and model number of each product. Tabulate product data by specification document number.
 - B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.
 - C. **Product or Catalog Data:**
 1. Manufacturers standard drawings shall be modified to delete non-applicable data or include applicable data.
 2. Manufacturers catalog sheets, brochures, diagrams, schedules, charts, illustrations and other standard descriptive data shall be:
 - a. Mark each copy to identify pertinent materials, products, or models.
 - b. Show dimensions and clearances required; performance characteristics and capacities, wiring diagrams and controls. Include applicable MSDS
 - D. **Supplemental Data:**
 1. Submit number of copies that Contractor requires, plus two copies that will be retained by City.
 2. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data, to provide information unique to Project.
 3. Provide copies for Project Record Documents described in Document 01770 (Contract Closeout).

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7. SHOP DRAWINGS

- A. Minimum Sheet Size: 8-1/2 inches by 11 inches. All others: Multiples of 8-1/2 inches by 11 inches, 34 inches by 44 inches maximum.
- B. For 8-1/2 inch by 11 inch and 11 inch by 17-inch sheets, see Paragraph 1.02Q in this Document for number of required copies.
- C. For 17 inch by 22 inch through 34 inch by 44-inch sheets, see Paragraph 1.02Q in this Document for number of required copies.
- D. Original sheet or reproducible transparency will be marked with City's review comments and returned to Contractor. See Paragraph 1.02Q in this Document for the number of copies returned to Contractor.
- E. Mark each copy to identify applicable Products, models, options, and other data; supplement manufacturers' standard data to provide information unique to Work.
- F. Include manufacturers' installation instructions when required by specification document.
- G. Contractor shall not submit shop drawings for items that shop drawings are not specified.
- H. Contractor shall be responsible for procuring copies of shop drawing for its own use as he may require for the progress of the work.
- I. Shop drawings shall be drawn to scale and completely dimensioned, giving plan together with such documents as are necessary to clearly show construction detail and methods.
- J. Shop drawings shall have Submittal cover attached to the front of each set.

8. SAMPLES

- A. Submit full range of manufacturers' standard colors, textures, and patterns for City and/or Engineer's selection.
- B. Submit samples to illustrate functional and aesthetic characteristics of Product, with integral parts and attachment devices. Coordinate submittal of different Categories for interfacing work.
- C. Include identification on each sample, giving full information.
- D. Where no color is indicated in the drawings or specifications the Contractor shall submit manufacturer's standard physical color samples. Except for painted finishes, manufacturers color samples must be actual material samples. No printed or photographic color reproductions will be accepted.

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SUBMITTAL PROCEDURES

- E. The City Construction Manager may select up to 3 colors from specified sample ranges. The Contractor will then be required to submit larger scale samples to the City Construction Manager and install the submitted colors into the on-site Mock-Ups. For all interior finishes supply a minimum of 5 samples, one to be retained by the City on site and 4 to be sent to the City Construction Manager. Samples shall be as follows:
1. Paint – 8" x 10" samples painted on Masonite in specified paint type and finish (with suitable prime coats installed).
 2. Flat or sheet products: minimum of 12" x 12" square, maximum 24" x 24" square – unless larger area is required to show full pattern.
 3. Linear products 12" minimum
 4. Bulk products: Minimum 1 pint, maximum 1 gallon.
- F. Full size samples may be used in Work upon approval, unless otherwise noted.
- G. Field Samples and Mock-ups (as applicable):
1. Erect field samples and mock-ups at Project site in accordance with requirements of Specification Documents.
 2. Modify or make additional field samples and mock-ups as required to provide appearance and finishes approved by Engineer and/or City.
 3. Approved field samples and mock-ups may be used in Work upon approval, unless otherwise noted.
 4. Construct or prepare as many additional Samples as may be required, as directed by the City Construction Manager, until desired textures, finishes, and/or colors are obtained.
 5. Accepted Samples and mock-up shall serve as the standard of quality for the various units of work.
- H. No review of a Sample shall be taken in itself to change or modify the requirements in the Contract Documents.
- I. Finishes, materials, and workmanship in the completed building shall match accepted Samples.
9. QUALITY CONTROL SUBMITTALS
- A. Design Data: N/A
- B. Test Reports: Provide three (3) paper copies and one (1) PDF copy to the City for their records.
1. Indicate that material or product conforms to or exceeds specified requirements.
 2. Reports may be from recent or previous tests on material or product, but must be acceptable to City. Comply with requirements of each individual Specification Document.

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SUBMITTAL PROCEDURES

- C. Certificates: Submit three (3) copies of certificates for the City's records.
1. Indicate that material or product conforms to or exceeds specified requirements.
 2. Submit supporting reference data, affidavits, and certifications as appropriate.
 3. Certificates may be recent or from previous test results on material or product, but must be acceptable to City.
- D. Manufacturers' Instructions: Submit three (3) paper copies and one (1) PDF copy for the City's records.
1. Include manufacturer's printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.
 2. Identify conflicts between manufacturer's instructions and Contract Documents.
- E. Material Safety Data Sheets: Contractor shall provide City with three (3) copies of Material Safety Data Sheets (MSDS) for any paints, solvents, thinners, varnish, lacquer, glues and adhesives, mastics, or other materials needed for the Project as required by the individual documents of this Specification or as otherwise specified in the Contract Documents.

MSDS required for a submittal must be submitted with product date in order for the submittal to be reviewed

F. **OPERATIONS AND MAINTENANCE MANUALS**

1. Installation, Operations, and Maintenance Manuals
2. Sheet Size: 8½ x 11 inch
3. Submit two (2) paper copies and one (1) PDF copy.
4. Drawing Size: Reduce drawings or diagrams to an 8½ x 11 inch or 11 x 17 inch size. However, where reduction is not practical to ensure readability, fold larger drawings separately and place in vinyl envelopes bound into the binder. Identify vinyl envelopes with drawing numbers.
5. Binding: Bind in stiff, metal-hinged, three-ring binder(s) with standard three-hole punching.
6. Multiple Items: Multiple items may be combined into one binder; tab each document with plastic-coated dividers.
7. Page Protectors: Provide plastic sheet lifters prior to first page and following last page.
8. Binder title: Include the following title on front and spine of binder:

**FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN
PROJECT INSTALLATION, OPERATION, AND MAINTENANCE
MANUAL CONTRACT #2403B**

DOCUMENT 01330

SUBMITTAL PROCEDURES

9. Contents:
 - a. Introductory Information:
 - i. Title page providing the same information as paragraph 0 above
 - ii. Contractor's name, address, and telephone number
 - iii. Table of Contents
 - b. Include, at a minimum, the following detailed information for each item as applicable and as required by individual Specification Documents:
 - i. Equipment function, normal operating characteristics, limiting operations.
 - ii. Assembly, disassembly, installation, alignment, adjustment, and checking instructions.
 - iii. Operating instructions for startup, routine and normal operation, regulation and control, shutdown, and emergency conditions.
 - iv. Lubrication and maintenance instructions including specific type and amount of lubricant and recommended lubrication interval.
 - v. Guide to "troubleshooting."
 - vi. Parts list and predicted life of parts subject to wear.
 - vii. Outline, cross-section, and assembly drawings; engineering data; and electrical diagrams, including elementary diagrams, labeled wiring diagrams, connection diagrams, word description of wiring diagrams and interconnection diagrams.
 - viii. Test data and performance curves.
 - ix. A list of recommended spare parts with a price list and a list of spare parts provided under this Contract.
 - x. Copies of parts lists or other documents packed with equipment when delivered.
 - xi. Instrumentation or tag numbers relating the equipment back to the Contract Documents.
 - xii. Preventive maintenance instructions
 - xiii. Cleaning instructions
 - xiv. Safety precautions
 - xv. Trouble shooting procedures
 - xvi. Theory of operation to discrete component level
 - xvii. Schematic diagrams, flow diagrams, wiring diagrams, logic diagrams, etc., to discrete component level
 - xviii. Parts lists showing all discrete components with part number, current prices and availability
 - xix. List of replaceable supplies; paper, ink, ribbon, etc., with part numbers, current prices and availability
 - xx. Recommended levels of spare parts and supplies to keep on hand

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SUBMITTAL PROCEDURES

- xxi. Manufacturers' service and maintenance technical manuals
- xxii. Names, addresses and telephone numbers of service and repair firms for the equipment

c. Index

- H. Final Submittal: Upon favorable review of Installation, Operation, and Maintenance Manual(s) by City, deliver nine additional hard copies and one electronic media format copy of the final approved Installation, Operation, and Maintenance Manual(s). Electronic media format copy shall include all tables, charts, drawings, codes and all other matters reflected in hard copies. The City utilizes a PDF format for records-keeping and facilitating maintenance functions. The PDF file must be searchable and indexed.
- I. Electronic Media Format: Compatible with Microsoft® Word 2000 for Windows, AutoCAD 2005 for Windows in drawing format (.DWG), or Adobe (.PDF) unless directed otherwise by City. All files shall be delivered on a unique CD-ROM.
- J. Draft Submittal: The Draft Submittal of Installation, Operation, and Maintenance Manuals shall be submitted to City prior to equipment startup.
- K. Operations and maintenance manuals shall include the following as appropriate.
- L. Manuals shall be the same as are used by manufacturers' authorized technicians to completely service and repair the equipment.

10. COMPUTER PROGRAMS

When any equipment requires operation by computer programs, submit copy of program on appropriate diskette, plus a hard copy and an electronic copy (Adobe .PDF format) of all user manuals and guides for operating the programs and making changes in the programs for upgrading and expanding the databases. Program shall be Windows 2000 compatible. Provide required licenses to City at no additional cost.

11. PROJECT RECORD DOCUMENTS

Submit one copy of each of the Project Record Documents listed in Document 01770 Contract Closeout.

12. DELAY OF SUBMITTALS

Delay of submittals by Contractor is considered avoidable delay. Liquidated damages incurred because of late submittals will be assessed to Contractor.

13. OPTIONAL REVIEW MEETING

- A. At the Contractor's request, in order to facilitate the timeliness of the review process, the City may schedule a meeting to review the materials submitted. If this option is exercised, the following requirements apply.

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SUBMITTAL PROCEDURES

- B. Request a meeting date with the City at least 10 Business Days in advance.
- C. Provide the complete package of Submittal information at least 5 Business Days in advance of the meeting.
- D. The meeting shall take place at City's office. City will provide the authorized staff to review and respond on the Submittal information during the meeting.
- E. Make available for this meeting the job superintendent and/or foreman, Contractor's safety officer, and someone knowledgeable of all the items submitted and authorized to make substitutions or changes

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

TRANSMITTAL SHEETS FOLLOW THIS PAGE

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SUBMITTAL PROCEDURES

EXHIBIT A

SUBMITTAL TRANSMITTAL NO. _____

Project Name: FAIRVIEW SUBSTATION 60 kV TRANSMISSION LINE LOOP-IN PROJECT			Date Received:	
City of Santa Clara, a chartered Municipal Corporation of the State of California 1500 Warburton Avenue Santa Clara, CA 95050			Checked By:	
Contractor:		Log Page:		
Address:		Address:		
Attention:		Specification Document Number:		
		1 st Submittal <input type="checkbox"/>		Resubmittal <input type="checkbox"/>
Date Transmitted:		Previous Transmittal Date:		
No. Copies	Description	Manufacturer	Dwg. or Data No.	Action Taken*

Remarks

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SUBMITTAL PROCEDURES

* The action designated above is in accordance with the following legend:

A – No Exceptions Taken

D – City's review not required

B – Make Corrections Noted (No Resubmission Required)

1. Submittal not required

C.– Make Corrections Noted and Resubmit

2. Supplemental information. Submittal retained for informational purposed only

D – Not Approved

3. Information reviewed and approved on prior Submittal

1. Not enough information for review

4. See comments

2. No reproducibles submitted

3. Copies illegible

4. Not enough copies submitted

5. Wrong sequence number

6. Wrong resubmittal number

7. Wrong Specification Document number

8. Wrong form used

9. See comments

Comment

Distribution: Contractor File Field City Other

By _____ Date _____

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SUBMITTAL PROCEDURES

EXHIBIT B

INSTALLATION, OPERATION, AND MAINTENANCE MANUAL TRANSMITTAL NO. _____

Project Name: FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT			Date Received:	
City of Santa Clara, a chartered Municipal Corporation of the State of California 1500 Warburton Avenue Santa Clara, CA 95050			Checked By:	
Contractor:		Log Page:		
Address:		Address:		
Attention:		Specification Document Number:		
		1 st Submittal <input type="checkbox"/>	Resubmittal <input type="checkbox"/>	
Date Transmitted:		Previous Transmittal Date:		
No. Copies	Description	Manufacturer	Dwg. or Data No.	Action Taken*

Remarks

* The action designated above is in accordance with the following legend:

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SUBMITTAL PROCEDURES

A – No exceptions taken

B – Make Corrections Noted (No Resubmission Required)

C. – Make Corrections Noted and Resubmit

D – Not Approved– this manual Submittal is deficient in the following area:

1. Equipment record sheets
2. Functional description
3. Assembly, disassembly, installation, alignment, adjustment, and checkout instructions
4. Operating instructions

C – (continued)

5. Lubrication and maintenance instructions
6. Troubleshooting guide
7. Parts list and ordering instructions
8. Organization (indexing and tabbing)
9. Wiring diagrams and schematics specific to installation
10. Outline, cross section, and assembly diagrams
11. Test data and performance curves
12. Tag or equipment identification numbers
13. See comments

Comments:

Distribution: Contractor File Field City Other

By _____ Date _____

END OF DOCUMENT

DOCUMENT 01350

SPECIAL PROCEDURES

PART 1 GENERAL

1. SUMMARY

A. Document Includes:

1. Cultural resources.
2. Hazardous materials/waste.
3. Tree protection.

2. DEFINITIONS (N/A)

3. SUBMITTALS

- A. See Document 01330 (Submittal Procedures).
- B. Name and address of the selected treatment, recycling, or disposal facilities for contaminated soil disposal.
- C. Non-hazardous waste manifests.
- D. Facility weight tickets.

4. CULTURAL RESOURCES

- A. If cultural resources are encountered during construction of the Project, Contractor shall avoid any further disturbance of the materials and immediately discontinue earthwork within 100 feet of the find. Contractor shall notify City immediately upon encountering cultural resources. Contractor shall be prepared to move on to another location or phase of work, allowing sufficient time for City to evaluate the nature and significance of the find, and implement appropriate management procedures.
- B. In the event that prehistoric human remains are encountered, ground-disturbing activities at that location shall cease immediately. Contractor shall notify City immediately upon encountering human remains. Contractor shall be prepared to move on to another location or phase of Work to allow the City to notify the proper authorities and assess management of the situation.
- C. Contractor shall not be entitled to any increase in Contract Sum due to conditions described in this paragraph 1.4 of this Document 01350. City may, if it believes appropriate in its sole discretion, grant an extension of Contract Time.

DOCUMENT 01350

SPECIAL PROCEDURES

5. HAZARDOUS MATERIALS/WASTE

- A. Comply with Sections 5163 through 5167 of the *General Industry Safety Orders (California Code of Regulations, Title 8)* to protect the Site from being contaminated by the accidental release of any hazardous materials and/or waste.
- B. If Contractor encounters subsurface contamination, the following provisions and precautionary measures shall be implemented during construction:
 - 1. Contractor's personnel shall be alert for and immediately report to City any detectable chemical odors, unusual debris, or discolored soil.
 - 2. Should the discovery of contaminants cause delay to Contractor's operations, extension of Contract Time will be granted by City in accordance with Document 00700 (General Conditions). Contractor will not be entitled to damages or additional payment due to such delay.
 - 3. If hazardous materials are encountered, they shall be handled in accordance with applicable local, state, and federal regulations which may include: (1) CCR Title 8, Division 4, Chapter 4, Section 5192 (Hazardous Waste Operations and Emergency Response); (2) CCR, Title 22, Division 4.5, Chapters 10 through 13 and 18 (Environmental Health Standards for Management of Hazardous Waste); and (3) CCR Title 23, Division 3, Chapter 15 (Discharges of Waste to Land).
- C. Disposal requirements: Soils containing hazardous materials shall be disposed by Contractor at permitted treatment, recycling, or disposal facilities in accordance with CCR Title 23, Division 3, Chapter 15 (Discharges of Waste to Land). Determine to which permitted treatment, recycling, or disposal facilities the soil will be delivered.
- D. Fees: Pay for any fees associated with the treatment, recycling, or disposal of these soils. Any additional soil sampling and chemical analyses required for acceptance of the soil at facilities other than those described above shall be the responsibility of Contractor.
- E. Transport: Transport the soils to the selected facilities under approved manifests and submit copies of these manifests and the facility weight tickets to City.
- F. Dewatering: Construct, operate and maintain as required to complete the Work all necessary cofferdams, channels, pipes, flumes, drains, sumps, well points and protective works; and furnish, install, operate and maintain all necessary pumping and other equipment for dewatering the areas of Work suspected of containing hazardous materials; and control all surface flow and groundwater as may be encountered while performing the Work. Remove all water that may accumulate in the excavation while the Work progresses so that all Work can be performed in dry conditions. All contaminated water shall be removed from the excavation before it is backfilled. The excavation shall be kept free from water until backfilling has progressed to a height above the water source.

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SPECIAL PROCEDURES

- G. Storage tank: Provide a minimum 2,500-gallon double-walled water storage tank on Site for the duration of the Work. If more storage capacity is needed, provide additional storage tanks on Site.
- H. Water sampling and chemical analysis: Water samples shall be collected from the holding tanks and submitted to a State-Certified chemical analysis laboratory. Chemical analyses required for the samples shall at a minimum include: TPHg following EPA Test Methods 5030/8015 (modified); benzene, toluene, ethylbenzene, and total xylenes (BTEX) following EPA Test Method 8020; and chlorinated solvents following EPA Test Method 8010. Perform additional chemical analyses that may be required for disposal or recycling of the water. Laboratory chemical analysis reports associated with the water samples shall be provided to City.

Removal of dewatering equipment: After having served their purpose, all protective works, including the temporary water storage tank(s) and dewatering pumps, shall be decontaminated and removed from the Site. Contractor is responsible for permanent disposal of all equipment that cannot be decontaminated or recycled in accordance with all applicable laws and regulations.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01350
SPECIAL PROCEDURES

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DOCUMENT 01410

REGULATORY REQUIREMENTS

PART 1 GENERAL

1. SUMMARY

This document includes regulatory requirements applicable to Contract Documents.

Specific reference in the specifications to codes and regulations or requirements of regulatory agencies shall mean the latest printed edition of each adopted by the regulatory agency at the date of submission of bids unless the document referenced is shown dated.

Should any conditions develop not covered by the Contract Documents wherein the finished work will not comply with current codes, a change order detailing and specifying the required work shall be submitted to and approved by the Engineer before proceeding with the Work.

2. REFERENCES TO REGULATORY REQUIREMENTS

A. Codes, laws, ordinances, rules and regulations referred to shall have full force and effect as though printed in full in these specifications. Code, laws, ordinances, rules and regulations are not furnished to Contractor, because Contractor is assumed to be familiar with their requirements. The listing of applicable codes, laws and regulations for hazardous waste abatement work in this Document 01410 is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these specifications, the most stringent requirements shall be used.

B. Conform to referenced codes, laws, ordinances, rules and regulations.

C. Precedence:

1. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
2. Where Plans or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, Plans and Specifications shall take precedence so long as such increase is legal.
3. Where no requirements are identified on Plans or in Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

3. CODES

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REGULATORY REQUIREMENTS

Codes that apply to Contract Documents include, but are not limited to, the following:

- A. Cal. Building Code (Part 2, Title 24, C.C.R., including, without means of limitation, sections 16A, 102A.23, 308, 420A, 504-506, 904.2.6, 1019 and 1604)
- B. Cal. Electrical Code (Part 3, Title 24, C.C.R.)
- C. Cal. Mechanical Code (Part 4, Title 24, C.C.R.)
- D. Cal. Plumbing Code (Part 5, Title 24, C.C.R.),
- E. State Elevator Safety Regulations (Part 7, Title 24, C.C.R.)
- F. UBC
- G. UPC
- H. UMC
- I. NEC

4. LAWS, ORDINANCES, RULES AND REGULATIONS

- A. During prosecution of Work to be done under Contract Documents, comply with applicable laws, ordinances, rules and regulations, including, but not limited to, the following:
 - B. Federal
 - 1. Americans With Disabilities Act of 1990 ADAI
 - 2. 29 CFR, Section 1910.1001, Asbestos
 - 3. 40 CFR, Subpart M, National Emission Standards for Asbestos
 - 4. Executive Order 11246
 - 5. Federal Endangered Species Act
 - 6. Clean Water Act
 - C. State of California
 - 1. California Code of Regulations, Titles 5, 8, 19, 21, 22, 24 and 25
 - 2. California Public Contract Code
 - 3. California Health and Safety Code
 - 4. California Government Code
 - 5. California Labor Code
 - 6. California Civil Code
 - 7. California Code of Civil Procedure
 - 8. CPUC General Order 95, Rules for Overhead Electric Line Construction
 - 9. CPUC General Order 128, Rules for Construction of Underground Electric Supply and Communications Systems

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REGULATORY REQUIREMENTS

10. California Occupational Safety and Health Administration (Cal OSHA)
 11. Occupational Safety and Health Administration (OSHA): Hazard Communications Standards.
 12. California Endangered Species Act
 13. Water Code
 14. Fish and Game Code
- D. State of California Agencies
1. State and Consumer Services Agency
 2. Office of the State Fire Marshall
 3. Office of Statewide Health Planning and Development
 4. California Regional Quality Control Board, San Francisco Bay Region.
 - a) Contractor shall oversee site compliance with the Storm Water Pollution Prevention Plan attached to the end of this Document.
 5. San Francisco Bay Regional Water Quality Control Board
- E. Local Agencies:
1. Bay Area Air Quality Management District
 2. City of Santa Clara
 3. County of Santa Clara
 4. Santa Clara County Water District
 5. Peninsula Corridor Joint Powers Board/CalTrain/Amtrack
- F. Other Requirements:
1. National Fire Protection Association (NFPA): Pamphlet 101, Life Safety.
 2. References on Plans or in Specifications to "code" or "building code" not otherwise identified shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction.
- G. Maintain a copy of each of the above documents in Contractor's field office. The City's Construction Management staff shall have access to these documents for their reference.
- H. Other Applicable Laws, Ordinances and Regulations:
1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions having authority over the Project.
 2. Work shall be accomplished in conformance with all rules and regulations of public utilities and utility districts.
 3. Where such laws, ordinances rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur

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REGULATORY REQUIREMENTS

subsequent to the execution date of the Agreement.

- I. Under California Government Code Section 930.2 et. seq. and Public Contract Code Section 7105(d)(2), neither the Contract Claims Procedure (Document 00700, Article 12) nor the Change Order Procedure (Document 01250) may be modified, waived, or otherwise not complied with, absent a written change order that explicitly and expressly makes such modifications.

5. CONFLICTS

- A. Between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.
- B. Between referenced regulatory requirements and Contract Documents: Comply with the one establishing the more stringent requirement.

6. REQUIRED PROVISIONS ON CONTRACT CLAIM RESOLUTION

- A. The California Public Contracts Code specifies required provisions on resolving contract claims less than \$375,000, which are set forth below, and constitute a part of this Contract.

For the purposes of this document, "CLAIM" means a separate demand by Contractor of \$375,000 or less for (1) a time extension, (2) payment or money or damages arising from work done by or on behalf of Contractor arising under the Contract Documents and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (c) an amount the payment of which is disputed by City. In order to qualify as a CLAIM, the written demand must state that it is a claim submitted under Paragraph 12 of Document 00700 General Conditions and be submitted in compliance with all requirements of Paragraph 12 of Document 00700 General Conditions. Separate claims which total more than \$375,000 do not qualify as a "separate demand of \$375,000 or less", as referenced above, and are not subject to this document.

A voucher, invoice, payment application, or other routine or authorized form of request for payment is not a claim under the Contract. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a claim under the Contract by submitting a separate claim in compliance with Contract Documents claim submission requirements.

CAUTION: This document does not apply to tort claims and nothing in this document is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 and Chapter 2 of Part 3 of Division 3.6 of Title 1 of the California Government Code.

- B. **PROCEDURE**

- 1. The CLAIM must be in writing, submitted in compliance with all requirements of Paragraph 12 of Document 00700 General Conditions,

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REGULATORY REQUIREMENTS

including, but not limited to, the time prescribed by and including the documents necessary to substantiate the CLAIM, pursuant to Paragraph 12.C of Document 00700 General Conditions. CLAIMS must be filed on or before the day of final payment. Nothing in this document is intended to extend the time limit or supersede notice requirements for the filing of claims as set forth in Paragraph 12 of Document 00700 General Conditions or elsewhere in the Contract Documents.

2. For CLAIMS of fifty thousand dollars (\$50,000) or less
 - a. City shall respond in writing within 45 days of receipt of the CLAIM, or
 - b. City may request in writing within 30 days of receipt of the CLAIM, any additional documentation supporting the CLAIM or relating to any defenses or claims City may have against Claimant.
 - i. If additional information is thereafter required, it shall be requested and provided in accordance with this document, upon mutual agreement of City and Claimant.
 - ii. City's written response to the CLAIM, as further documented, shall be submitted to Claimant within 15 days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
 - iii. For CLAIMS over Fifty Thousand Dollars (\$50,000) and less than or equal to \$375,000:
 - 1) City shall respond in writing within 60 days of receipt of the CLAIM, or
 - 2). City may request in writing within 30 days of receipt of the CLAIM, any additional documentation supporting the CLAIM or relating to any defenses or claims City may have against Claimant.
 - a) If additional information is thereafter required, it shall be requested and provided in accordance with this document, upon mutual agreement of County and Claimant;
 - b) City written response to the CLAIM, as further documented, shall be submitted to Claimant within 30 days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
 - vi. Meet and Confer
 - 1) If Claimant disputes City written response, or City fails to respond within the time prescribed above, Claimant shall notify City, in writing, either 15 days of receipt of City response or within 15 days of City failure to timely respond, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon demand City will schedule a meet and confer conference within 30 days for

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REGULATORY REQUIREMENTS

- settlement of the dispute.
- 2) Following the meet and confer conference, if the CLAIM or any portion remains in dispute, Claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the California Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time Claimant submits his or her written claim as set forth at Paragraph 12.B.2 of Document 00700 General Conditions, until the time that CLAIM is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

7. COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT

Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Contractor shall provide the services specified in this Agreement in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents or assigns shall constitute a material breach of this Agreement.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01411

REGULATORY REQUIREMENTS FOR HAZARDOUS MATERIALS

PART 1 GENERAL

1. SUMMARY

- A. This document includes regulatory requirements applicable to Work in connection with hazardous waste abatement and disposal, including, but not limited to, asbestos and asbestos containing materials, lead based paint, polychlorinated biphenyls, petroleum contaminated soils and materials, construction and demolition debris and any other hazardous substance or hazardous waste.
- B. This document supplements Document 01410 Regulatory Requirements and the work specific listings of applicable regulatory requirements elsewhere in the specifications.
- C. Related Documents.
 - 1. Document 01410: Regulatory Requirements.

2. REFERENCES TO REGULATORY REQUIREMENTS

- A. Codes, laws, ordinances, rules and regulations applicable to the Work shall have full force and effect as though printed in full in Contract Documents. Codes, laws, ordinances, rules and regulations are not furnished to Contractor because Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws and regulations for hazardous waste abatement work is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these specifications exists, the most stringent requirements shall be used.
- B. Contractor's work shall conform to all applicable codes, laws, ordinances, rules and regulations that are in effect on date of contracting.

3. LAWS, ORDINANCES, RULES AND REGULATIONS

- A. During prosecution of Work under Contract Documents, Contractor shall comply with applicable laws, ordinances, rules and regulations, including, but not limited to, those listed below.
- B. Federal:
 - 1. Statutory Requirements:
 - a. Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 *et seq.*
 - b. Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601 *et seq.*
 - c. Toxic Substances Control Act of 1976, 15 U.S.C. §§ 2601 *et seq.*

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REGULATORY REQUIREMENTS FOR HAZARDOUS MATERIALS

- d. Hazardous Materials Transportation Act of 1975, 49 U.S.C. §§ 1801 *et seq.*
 - e. Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*
 - f. Safe Drinking Water Act, 42 U.S.C. §§3001 *et seq.*
 - g. Clean Air Act, section 112, 42 U.S.C. §7412
 - h. Occupational Safety and Health Act of 1970, 29 U.S.C. §§ 651 *et seq.*
 - i. Underground Storage Tank Law, 42 U.S.C. §§6991 *et seq.*
 - j. The Emergency Planning and Community Right to Know Act of 1986, 42 U.S.C. §§ 11001 *et seq.*
- 2. Environmental Protection Agency (EPA):
 - a. 40 C.F.R. Parts 260, 264, 265, 268, 270
 - b. 40 C.F.R. Parts 258 *et seq.*
 - c. 40 C.F.R. Part 761
 - d. 40 C.F.R. Parts 122-124
 - 3. Occupational Safety and Health Administration (OSHA):
 - a. OSHA Worker Protection Standards, Title 29 CFR Part 1926.58, Construction Standards and 29 CFR 1910.1001 General Industry Standard
 - b. OSHA, 29 C.F.R. Part 1926.1101, Construction Standards for Asbestos
 - c. OSHA, Lead Exposure in Construction: Interim Final Rule, 29 C.F.R. 1926.62
 - d. National Emission Standard for Hazardous Air Pollutants, Title 40 CFR Part 61
 - e. Asbestos Hazardous Emergency Response Act, Title 40 C.F.R. 763
 - 4. Department of Transportation:
 - a. Title 49 C.F.R. 173.1090
 - b. Title 49 C.F.R. 172
 - c. Title 49 C.F.R. 173
 - d. DOT, HM 181 and MH126f
- C. State of California Requirements:
- 1. Statutory Law:
 - a. The Carpenter-Presley-Tanner Hazardous Substance Account Act, Health & Safety Code §§25300 *et seq.*
 - b. Health and Safety Code § 25359.4
 - c. Hazardous Waste Control Law, Health & Safety Code §§25100 *et seq.*
 - d. Porter Cologne Water Quality Control Act, Water Code §§13000 *et seq.*
 - e. Health and Safety Code §§25915-25924
 - f. Cal. Labor Code Chapter 6, including, without limitation, §§ 6382, 6501.5-6501.9, 6503.5, 9021.5, 9080
 - g. Business and Professions Code, including without limitation, §§7058.5, 7065.01, 7118.5.

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REGULATORY REQUIREMENTS FOR HAZARDOUS MATERIALS

- h. Underground Storage of Hazardous Substance Act, Health & Safety Code §§25280 *et seq.*
 - i. Petroleum Underground Storage Tank Cleanup, Health and Safety Code §§25299.10 *et seq.*
 - j. Safe Drinking Water and Toxic Enforcement Act of 1986, Health & Safety Code §§25249.5 *et seq.* (Proposition 65)
 - k. Above Ground Petroleum Storage Act, Health and Safety Code §§ 25270 *et seq.*
 - l. Hazardous Materials Release Response Plans and Inventory, Health and Safety Code Chapter 6.95.
 - 2. Administrative Code and Regulations:
 - a. Title 22 C.C.R. Division 4.5, Environmental Health Standards for the Management of Hazardous Waste § 6600 *et seq.*
 - b. Cal OSHA Worker Protection Standards, Title 8 C.C.R. §§1529, 5208
 - 3. Other Agency Requirements:
 - a. Bay Area Air Quality Management District, Fugitive Dust Rules
- D. Local Agency Requirements:
- 1. City of Santa Clara Fire Department
 - 2. City of Santa Clara Ordinances
 - 3. County of Santa Clara Ordinances
- E. See document 00700
4. PERMITS
- A. Contractor shall comply with, implement and acknowledge effectiveness of all the permits applicable to Work, and initiate and cooperate in securing all required notifications or approvals therefore, including but not limited to permits affecting environmental work.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

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REGULATORY REQUIREMENTS FOR HAZARDOUS MATERIALS

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REFERENCES AND DEFINITIONS

PART 1 GENERAL

1. SUMMARY

- A. This document includes reference standards, abbreviations, symbols and definitions used in Contract Documents.
- B. Full titles and edition dates are given in this document for standards cited in other documents of Specifications.
- C. Material and workmanship specified by reference to number, symbol, or title of specific standard such as state standard, commercial standard, federal specifications, technical society, or trade association standard, or other similar standard shall comply with requirements of standards except when more rigid requirements are specified or required by applicable codes.
- D. Standards referred to, except as modified herein, shall have full force and effect as though printed in the Contract Documents. Standards are not furnished to Contractor, because manufacturers and trades involved are assumed to be familiar with their requirements.

2. REFERENCE TO STANDARDS AND SPECIFICATIONS OF TECHNICAL SOCIETIES; REPORTING AND RESOLVING DISCREPANCIES:

- A. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated in the Contract Documents.
- B. If during the performance of the Work, Contractor discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such law or regulation applicable to the performance of the Work or of any such standard, specification, manual or code or of any instruction of any supplier, Contractor shall report it in writing at once by submitting a Request for Information to City, with a copy to Engineer, and Contractor shall not proceed with the Work affected thereby until consent to do so is given by City.
- C. Except as otherwise specifically stated in the Contract Documents or as may be provided by Change Order, Construction Change Directive, Field Instruction or supplemental instruction, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the provisions of the Contract Documents and:
 - 1. The provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the

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- Contract Documents); or
2. The provisions of any such laws or regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such law or regulation).

No provision of any such standard, specification, manual, code or instruction shall be effective to change the duties and responsibilities of City, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to City, Engineer, or any of their consultants, agents or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

- D. Contractor shall comply with the applicable portions of standards and specifications published by the technical societies, institutions, associates and governmental agencies referred to in Specifications.

1. Comply with referenced standards and specifications; latest revision in effect at the time the Agreement is executed, unless otherwise identified by date.
 - a. Exception: Comply with issues in effect as listed in governing legal requirements.

- E. Referenced Grades Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified in Plans or in Specifications, provide the highest, best and greatest of the alternatives or options for the intended use and prevailing conditions.

- F. Jobsite Copies:

1. Contractor shall obtain and maintain at the Site copies of reference standards identified on Plans and in Specifications in order to properly execute the Work. The City's Construction Management staff shall have access to these reference standards for their use at the Site.
2. At a minimum, the following shall be readily available at the site:
 - a. Model Codes: Uniform Building Code (UBC), Uniform Fire Code (UFC), Uniform Mechanical Code (UMC), Uniform Plumbing Code (UPC), NFPA 70-National Electric Code (NEC) and NFPA 101-Life Safety Code, including applicable amendments for jurisdiction in which Project is located.
 - b. State Codes: California Code of Regulations, Division of Industrial Safety regulations.
 - c. Safety Codes: State of California, Division of Industrial Safety regulations.
 - d. General Standards: UBC Standards, other model code standards, UL Building Products Listing, FM Approval Guide and ASTM Standards in Building Codes.
 - e. Fire and Life Safety Standards: All referenced standards pertaining to fire rated construction and exiting.
 - f. Common Materials Standards: American Concrete Institute (ACI),

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American Institute of Steel Construction (AISC), American Welding Society (AWS), Gypsum Association (GA), National Fire Protection Association (NFPA), Tile Council of America (TCA) and Woodwork Institute of California (WIC) standards to the extent referenced within the Specifications.

- g. Research Reports: ICBO Research Reports and CABO National Evaluation Service Reports (NER) for all products used.

G. Edition Date of References:

1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of the Agreement.
2. All amendments, changes, errata and supplements as of the effective date shall be included.

H. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is presumed that Contractor is familiar with and has access to these nationally-and industry-recognized specifications and standards.

3. STANDARDS

- A. ACI (American Concrete Institute)
Standard 318, Building Code Requirements for Reinforced Concrete
- B. AISC (American Institute of Steel Construction)
Specifications and Code of Standard Practice for Steel Buildings and Bridges
- C. ANSI (American National Standards Institute, formerly American Standards Association)

Standard C2, NESC (National Electrical Safety Code)
- D. ASTM (American Society for Testing and Materials)
 1. C31, Making and Curing Concrete Test Specimens in the Field
 2. C42, Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
 3. C143, Test Method for Slump of Portland Cement Concrete
- E. IAPMO (International Association of Plumbing and Mechanical Officials)
 1. UMC (Uniform Mechanical Code)
 2. UPC (Uniform Plumbing Code)The minimum building standards applicable to public schools are set forth in Parts 4 (California Mechanical Code) and 5 (California Plumbing Code)

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- F. ICBO (International Conference of Building Officials)
1. UBC (Uniform Building Code)
The minimum building standards applicable to public schools are set forth in Parts 2 (California Building Code), 3 (California Electrical Code), 4 (California Mechanical Code), 5 (California Plumbing Code) and 7 (State Elevator Safety Regulations)
 2. UBC Standard 26-8, Welding Reinforcing Steel, Sheet Metal inserts and Connections in Reinforced Concrete Construction
 3. UBC Standard 26-10, Concrete Tests
 4. UFC (Uniform Fire Code)
- G. NEMA (National Electric Manufacturer's Association)
1. WC 26/EEMAC 201 Binational Wire and Cable Packaging
 2. WC 53/ICEA T-27-581 (2000) Standard Test Methods for Extruded Dielectric Power, Control, Instrumentation and Portable Cables for Test
- H. NFPA (National Fire Protection Association)
1. Pamphlet 1, Fire Prevention Code
 2. Pamphlet 13, Sprinkler Systems, Installation
 3. Pamphlet 24, Private Fire Service Mains
 4. Pamphlet 70, NEC (National Electric Code)
 5. Pamphlet 71, Signaling Systems, Central Station
 6. Pamphlet 80, Fire Doors and Windows
 7. Pamphlet 101, Life Safety Code
- I. UL (Underwriters' Laboratories, Inc.)

4. ABBREVIATIONS

- A. Listed hereinafter are the various organizations or references which may appear in the Contract Documents, along with their respective acronyms and/or abbreviations:

- | | | |
|-----|--------|--|
| 1. | AA | Aluminum Association |
| 2. | AABC | Associated Air Balance Council |
| 3. | AAMA | Architectural Aluminum Manufacturers Association |
| 4. | AAP | Affirmative Action Program |
| 5. | AASHTO | American Association of State Highway and Transportation Officials |
| 6. | ABMA | American Boiler Manufacturers Association |
| 7. | ABPA | American Board Products Association |
| 8. | ACI | American Concrete Institute |
| 9. | AED | Association of Equipment Distributors |
| 10. | AGA | American Gas Association |
| 11. | AISC | American Institute of Steel Construction |
| 12. | AISI | American Iron and Steel Institute |

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13.	AITC	American Institute of Timber Construction
14.	ANSI	American National Standards Institute (formerly American Standards Association)
15.	AMCA	Air Moving and Conditioning Association, Inc.
16.	ANSI	American National Standards Institute
17.	APA	American Plywood Association
18.	ARI	Air Conditioning and Refrigeration Institute
19.	ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
20.	ASI	Architect's Supplemental Instructions
21.	ASME	American Society of Mechanical Engineers
22.	ASTM	American Society for Testing and Materials
23.	AWCI	Association of the Wall and Ceiling Industries
24.	AWPA	American Wood Preserves Association
25.	AWPB	American Wood Preservers Bureau
26.	AWS	American Welding Society
27.	AWWA	American Water Works Association
28.	BIL	Basic Insulation Level
29.	Cal/OSHA	California Occupational Safety and Health Administration
30.	CalTrans	State of California, Department of Transportation
31.	CBC	California Building Code
32.	CCD	Construction Change Directive
33.	CCR	California Code of Regulations
34.	CEC	California Electric Code
35.	CFR	Code of Federal Regulations
36.	CISPI	Cast Iron Soil Pipe Institute
37.	CLMFI	Chain Link Manufacturers Institute
38.	CMC	California Mechanical Code
39.	CO	Change Order
40.	CPC	California Plumbing Code
41.	CPM	Critical Path Method
42.	CPUC	California Public Utilities Commission
43.	CRA	California Redwood Association
44.	CRSI	Concrete Reinforcing Steel Institute
45.	CS	Commercial Standards, U.S. Department of Commerce
46.	CSA	Canadian Standards Association
47.	CTI	Ceramic Tile Institute
48.	DSA	Division of State Architect (formerly known as the Office of the State Architect)
49.	DHI	Door and Hardware Institute
50.	EPA	Environmental Protection Agency
51.	FGMA	Flat Glass Marketing Association
52.	FM	Factory Mutual
53.	FS	Federal Specifications
54.	GA	Gypsum Association
55.	HPMA	Hardwood Plywood Manufacturers Association
56.	HVAC	Heating, Ventilating and Air Conditioning
57.	IACS	International Annealed Copper Standards
58.	IAPMO	International Association of Plumbing and Mechanical

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		Officials
59.	ICBO	International Conference of Building Officials
60.	ICEA	Insulated Cable Engineers Association
61.	I.D.	Identification
62.	IEEE	Institute of Electrical and Electronic Engineers, Inc.
63.	IES	Illuminating Engineering Society
64.	ISA	Instrumentation Society of America
65.	JATC	Joint Apprenticeship Training Committee
66.	JV	Joint Venture
67.	kW	Kilowatt
68.	LBE	Local Business Enterprise
69.	MBE	Minority Business Enterprise
70.	M.I.	Middle Initial
71.	MIA	Masonry Institute of America
72.	MIA	Marble Institute of America
73.	ml	milliliter
74.	MLSFA	Metal Lath/Steel Framing Association
75.	mm	millimeter
76.	MS	Military Specifications
77.	MDS	Material Safety Data Sheet
78.	MSS	Manufacturers Standardization Society of the Valve & Fitting Industry
79.	M/WBE	Minority and Woman-Owned Business Enterprise
80.	NAAMM	National Association of Architectural Manufacturers
81.	NACE	National Association of Corrosion Engineers
82.	NBS	National Bureau of Standards
83.	NEC	National Electric Code
84.	NEMA	National Electric Manufacturer's Association
85.	NESC	National Electrical Safety Code
86.	NFPA	National Fire Protection Association
87.	NFPA	National Forest Products Association
88.	NIOSH	National Institute for Occupational Safety and Health
89.	NIST	National Institute of Science and Technology (formerly the National Bureau of Standards)
90.	NOFMA	National Oak Flooring Manufacturers Association
91.	NSF	National Sanitation Foundation
92.	NTMA	National Terrazzo & Mosaic Association
93.	NWWDA	National Wood Windows and Doors Association
94.	OSA	Division of State Architect (formerly known as the Office of the State Architect)
95.	OSHA	Occupational Safety and Health Administration
96.	OSHPD	Office of Statewide Health Planning and Department
97.	PCA	Portland Cement Association
98.	PCI	Pre-stressed Concrete Institute
99.	PDI	Plumbing and Drainage Institute
100.	PG&E	Pacific Gas and Electric Company
101.	PM	Preventive Maintenance
102.	PR	Proposal Request
103.	PS	Product Standard, U. S. Department of Commerce

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104.	RFI	Request for Information
105.	RFS	Request for Substitution
106.	RIS	Redwood Inspection Service
107.	SDI	Steel Deck Institute
108.	SFM	State of California, Office of State Fire Marshal
109.	SIGMA	Sealed Insulating Glass Manufacturers Association
110.	SJI	Steel Joint Institute
111.	SMACNA	Sheet Metal and Air Conditioning Contractors National Association
112.	SPIB	Southern Pine Inspection Bureau
113.	SSPC	Steel Structures Painting Council
114.	SVP	Silicon Valley Power
115.	SWI	Steel Window Institute
116.	TCA	Tile Council of America
117.	TIE	Time Impact Evaluation
118.	UBC	Uniform Building Code
119.	UFC	Uniform Fire Code
120.	UL	Underwriters' Laboratories, Inc.
121.	UMC	Uniform Mechanical Code
122.	UPC	Uniform Plumbing Code
123.	USA	Underground Service Alert
124.	USC	United States Code
125.	WCLIB	West Coast Lumber Inspection Bureau
126.	WIC	Woodwork Institute of California
127.	WHI	Warnock Hersey International
128.	WWPA	Western Wood Products Association

B. ABBREVIATIONS IN SPECIFICATIONS

1.	accord	accordance
2.	AWG	American Wire Gauge
3.	cm.	centimeter (centimeters)
4.	Co.	Company
5.	Corp.	Corporation
6.	cu.	cubic
7.	Div.	Division
8.	dia.	diameter
9.	ft.	foot (feet)
10.	g./gr.	gram (grams)
11.	gal.	gallon (gallons)
12.	gpd	gallons per day
13.	gpm	gallons per minute
14.	hr.	hour
15.	in.	inch (inches)
16.	Inc.	Incorporated
17.	kg.	kilogram (kilograms)
18.	km.	kilometer (kilometers)
19.	kW	Kilowatt
20.	l.	liter (liters)

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21.	lbs.	pounds
22.	m	meter (meters)
23.	Mfg.	Manufacturing
24.	mg.	milligram (milligrams)
25.	ml./mls.	milliliter (milliliters)
26.	mm.	millimeter (millimeters)
27.	No.	number
28.	o.c.	on centers
29.	O.D.	outside diameter
30.	psi	pounds per square inch
31.	psf	pounds per square foot
32.	sq.	square
33.	T & G	tongue and groove
34.	U.S.	United States
35.	yd.	yard (yards)

C. ABBREVIATIONS IN DRAWINGS

Additional abbreviations, used only on drawings, are listed thereon.

5. SYMBOLS

A. SYMBOLS IN SPECIFICATIONS

1.	:	"shall be" or "shall" - where used within sentences or paragraphs
2.	#1	number
3.	1#	pound
4.	&	and
5.	%	percent
6.	C	Centigrade
7.	F	Fahrenheit
8.	'	Minute
9.	/	per, except where used to combine words; example: power/fuel.
10.	"	inch (inches)
11.	'	foot (feet)
12.	@	at
13.	°	Degree

B. SYMBOLS IN DRAWINGS

Symbols, used only on Drawings, are shown thereon.

6. DEFINITIONS

- A. Wherever any of the words or phrases defined below, or a pronoun used in place thereof, is used in any part of the Contract Documents, it shall have the meaning here set forth. In the Contract Documents, the neuter gender includes the feminine

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and masculine, and the singular number includes the plural. While City has made an effort to identify all defined terms with initial caps, the following definitions shall apply regardless of case unless the context otherwise requires:

1. **ADDENDA:** Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding requirements or the Contract Documents. Addenda shall not include the minutes of the Pre-bid Conference and Site Visit.
2. **AGREEMENT (Document 00520):** Agreement is the basic contract document that binds the parties to construction Work. Agreement defines relationships and obligations between City and Contractor and by reference incorporates Conditions of Contract, Plans, Specifications and contains Addenda and all Modifications subsequent to execution of Contract.
3. **ALTERNATE:** Work added to or deducted from the Base Bid, if accepted by City.
4. **APPROVED EQUAL:** Approved in writing by City as being of equivalent quality, utility and appearance.
5. **ARCHITECT:** The person holding a valid California State Architect's license, whose firm has been designated within the Contract Documents as Architect to provide architectural services on the Project, and whom may have engaged engineering subconsultants to provide services on Project. When Architect is referred to within the Contract Documents and no Architect has in fact been designated, then the matter shall be referred to City. The term Architect shall be construed to include all his or her consultants retained for the Project, as well as Architect's employees. When the designated Architect is an employee of City, Architect's authorized representatives on the Project will be included under the term Architect.
6. **APPLICATION FOR PAYMENT:** Written application for monthly or periodic progress or final payment made by Contractor complying with the Contract Documents.
7. **ASBESTOS:** Any material that contains more than one percent asbestosis and is friable or is releasing asbestos fibers into the air above current action levels established by OSHA or Cal/OSHA.
ASSIGNED CONTRACT: THE FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT.
8. **ASSIGNED CONTRACTOR:** The contractor performing The FAIRVIEW SUBSTATION 60 KV TRANSMISSION LINE LOOP-IN PROJECT, Contract 2403B, which is assigned to the Contractor. The Assigned Contractor is a subcontractor to the Contractor.
9. **BID:** The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
10. **BIDDER:** One who submits a Bid.
11. **BIDDING DOCUMENTS:** All documents comprising the Project Manual (including all documents and specification documents listed on Document 00010 Table of Contents), including documents supplied for bidding purposes only and Contract Documents.
12. **BOARD:** The Board of Supervisors of the City.
13. **BUSINESS DAY:** Any Day other than Saturday, Sunday, and the following days that have been designated as holidays by City. If a holiday falls on a

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Saturday, the preceding Friday will be the holiday. If a holiday falls on a Sunday, the following Monday will be the holiday.

- a. New Year's Day, January 1;
 - b. Martin Luther King Jr.'s Birthday, third Monday in January;
 - c. Lincoln's Birthday, February 12;
 - d. Presidents' Day, third Monday in February;
 - e. Spring Holiday, March 21
 - f. Memorial Day, last Monday in May;
 - g. Independence Day, July 4;
 - h. Labor Day, first Monday in September;
 - i. Admission Day, September 9
 - j. Columbus Day, October 13
 - k. Veterans' Day, November 11;
 - l. Thanksgiving Day, The 4th Thursday in November
 - m. The Day following Thanksgiving Day;
 - n. Christmas Day, December 25; and
14. BY CITY: Work that will be performed by City or its agents at the City's expense.
 15. BY OTHERS: Work that is outside scope of Work to be performed by Contractor under this Contract, which will be performed by City, other contractors, or other means.
 16. CHANGE ORDER: A written instrument prepared by City and signed by City and Contractor, stating their agreement upon all of the following:
 - a. a change in the Work,
 - b. the amount of the adjustment in the Contract Sum, if any, and
 - c. the amount of the adjustment in the Contract Time, if any.
 17. CITY: The City of Santa Clara, a municipal corporation of the State of California.
 18. CITY-FURNISHED, CONTRACTOR-INSTALLED: Items furnished by City at its cost for installation by Contractor at its cost under this Contract.
 19. CITY REPRESENTATIVE(S): The person or persons assigned by City to be City's agent(s) at the Site.
 20. CODE INSPECTOR: A local or state agency responsible for the enforcement of applicable codes and regulations. This includes, without limitation: City Building Division of Permits and Resources Management Department; City Public Works Department; City of Santa Clara Fire Department; and City of Santa Clara Utilities Department.
 21. CONCEALED: Work not exposed to view in the finished Work, including within or behind various construction elements.
 22. CONSTRUCTION CHANGE DIRECTIVE: A written order prepared by City with assistance from Engineer and signed by City, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. On this Project, a Field Instruction serves the same function as a Construction Change Directive.
 23. CITY CONSTRUCTION MANAGER: The person or persons assigned by City to be the City's agent(s) at the Site.
 24. CONSULTANT: See Document 00805 (Supplemental General Conditions – Hazardous Materials) (if included).
 25. CONSULTING ENGINEER: See Document 00520 (Agreement) (if this

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- term is used).
27. CONSTRUCTION MANAGER: See Document 00520 (Agreement) (if this term is used).
28. CONTRACT CONDITIONS: Consists of two parts: General Conditions and Supplementary Conditions.
- a. General Conditions are general clauses that are common to the City Contracts.
 - b. Supplementary conditions modify or supplement General Conditions to meet specific requirements for this Contract.
29. CONTRACT DOCUMENTS: Contract Documents shall consist of the documents identified as the Contract Documents in Document 00520 Agreement, plus all changes, addenda and modifications thereto.
30. CONTRACT MODIFICATION: Either:
- a. a written amendment to Contract signed by Contractor and City; or
 - b. a Change order; or
 - c. a Construction Change Directive; or
 - d. a written directive for a minor change in the Work issued by City.
31. CONTRACT SUM: The sum stated in the Agreement and, including authorized adjustments, the total amount payable by City to Contractor for performance of the Work and the Contract Documents. The Contract Sum is also referred to as the Contract Price or the Contract Amount.
32. CONTRACT TIMES: The number or numbers of days or the dates stated in the Agreement (i) to achieve Substantial Completion of the Work or designated milestones and/or (ii) to complete the Work so that it is ready for final payment and is accepted.
33. CONTRACTOR: The person or entity identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number and neuter in gender. The term "Contractor" means the Contractor or its authorized representative.
34. CONTRACTOR'S EMPLOYEES: Persons engaged in execution of Work under Contract as direct employees of Contractor, as subcontractors, or as employees of subcontractors.
35. DAY: One calendar day, unless the word "day" is specifically modified to the contrary.
36. DEFECTIVE: An adjective which, when modifying the word "Work", refers to Work that is unsatisfactory or unsuited for the use intended, faulty, or deficient, that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents (including but not limited to approval of samples and "or equal" items), or has been damaged prior to final payment (unless responsibility for the protection thereof has been assumed by City). City is the judge of whether Work is defective.
37. DRAWINGS: The graphic and pictorial portions of Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, documents, details, schedules and diagrams.
38. ENGINEER: The person holding a valid California State Engineer's license, whose firm has been designated within the Contract Documents as Engineer

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to provide engineering services on the Project, and whom may have engaged engineering subconsultants to provide services on Project. When Engineer is referred to within the Contract Documents and no Engineer has in fact been designated, then the matter shall be referred to City. The term Engineer shall be construed to include all his or her consultants retained for the Project, as well as Engineer's employees. When the designated Engineer is an employee of City, Engineer's authorized representatives on the Project will be included under the term Engineer.

39. EQUAL: Equal in opinion of City. Burden of proof of equality is responsibility of Contractor.
40. EXPOSED: Work exposed to view in the finished Work, including behind louvers, grilles, registers and various other construction elements.
41. FIELD INSTRUCTION: A written order prepared by City with assistance from Engineer and signed by City, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both.
42. FINAL ACCEPTANCE or FINAL COMPLETION: City's acceptance of the Work as satisfactorily completed in accordance with Contract Documents. Requirements for Final Acceptance/Final Completion include, but are not limited to:
 - a. All Systems having been tested and accepted as having met requirements of Contract Documents.
 - b. All required instructions and training sessions having been given by Contractor.
 - c. All as-built drawings and operations and maintenance manuals and Machine Inventory Sheets having been submitted by Contractor, reviewed by City and Engineer and accepted by City.
 - d. All punch list work, as directed by City, having been completed by Contractor.
 - e. Generally all Work, except Contractor maintenance after Final Acceptance, having been completed to satisfaction of City.
43. FORCE-ACCOUNT: Work directed to be performed without prior agreement as to lump sum or unit price cost thereof, and which is to be billed at cost for labor, materials, equipment, taxes, and other costs, plus a specified percentage for overhead and profit.
44. FURNISH: Supply only, do not install.
45. INDICATED: Shown or noted on the Drawings.
46. TESTING AND SPECIAL INSPECTION AGENCY: An independent entity engaged by City to inspect and/or test the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes.
47. INSTALL: Install or apply only, do not furnish.
48. LATENT: Not apparent by reasonable inspection, including but not limited to, the inspections and research required as a condition to bidding under the General Conditions.
49. LAW: Unless otherwise limited, all applicable laws including without limitation all federal, state, and local laws, statutes, standards, rules, regulations, ordinances, and judicial and administrative decisions

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REFERENCES AND DEFINITIONS

50. MATERIAL OR MATERIALS: These words shall be construed to embrace machinery, manufactured articles, materials of construction (fabricated or otherwise), and any other classes of material to be furnished in connection with Contract, except where a more limited meaning is indicated by context.
51. MILESTONE: A principal event specified in Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all Work.
52. MODIFICATION: Same as Contract Modification.
53. NOT IN CONTRACT: Work that is outside the scope of work to be performed by Contractor under this Contract.
54. NOTICE OF COMPLETION: Shall have the meaning provided in California Civil Code Section 3093, and any successor statute.
55. OFF SITE: Outside geographical location of the Project.
56. OWNER: The City.
57. PARTIAL UTILIZATION: Use by City of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all of the Work.
58. PCB: Polychlorinated byphenyl.
59. PHASE: A specified portion of the Work (if any) specifically identified as a Phase in Document 00520 (Agreement) or Document 01100 (Summary).
60. PRODUCT DATA: That information (including brochures, catalogue cuts, MSDS, etc.) supplied by the vendor describing the technical and commercial characteristics of the supplier equipment or materials, and accompanying commercial terms such as warranties, instructions and manuals.
61. PROGRESS REPORT: A periodic report submitted by Contractor to City with progress payment invoices accompanying actual work accomplished to the Progress Schedule. See Document 01320, Progress Schedules and Reports and Document 00700, General Conditions.
62. PROJECT: Total construction of which Work performed under this Contract may be whole or part.
63. PROJECT FLOAT: As defined in Document 01320, paragraph 1.2.E.
64. PROJECT INSPECTOR: A person engaged by City to provide general observation of the Work, scheduling requested inspections by Contractor and reporting to City.
65. PROJECT MANAGER: The person or persons assigned by City to be the City's agent(s) at the Site.
66. PROJECT MANUAL: Project Manual consists of Bidding Requirements, Agreement, Bonds, Certificates, Contract Conditions, and Specifications.
67. PROJECT RECORD DRAWINGS: All Project deliverables required under Documents 01780 et seq., including without limitation, as-built drawings, operations and maintenance manuals Installation, Operation, and Maintenance Manuals, and Machine Inventory Sheets.
68. PROVIDE: Furnish and install.
69. REQUEST FOR INFORMATION ("RFI"): A document prepared by Contractor requesting information regarding the Project or Contract Documents. The RFI system is also a means for City and Engineer to submit Contract Document clarifications or supplements to Contractor.
70. REQUEST FOR PROPOSALS ("RFP"): A document issued by City to

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REFERENCES AND DEFINITIONS

- Contractor whereby City may initiate changes in the Work or Contract Time as provided in Contract Documents. See Document 01250 (Modification Procedures).
71. REQUEST FOR SUBSTITUTION ("RFS"): A document prepared by Contractor requesting substitution of materials as and to the extent permitted in Contract Documents.
72. RFI-REPLY: A document consisting of supplementary details, instructions or information issued by City or Engineer, which clarifies or supplements Contract Documents, and with which Contractor shall comply. RFI-Replies do not constitute changes in Contract Sum or Contract Times except as otherwise agreed in writing by City. RFI-Replies will be issued through the RFI administrative system.
73. SAMPLES: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
74. SHOP DRAWINGS: All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the work.
75. SHOWN: As indicated on Drawings.
76. SITE: The particular geographical location of Work performed pursuant to Contract within the City of Santa Clara.
77. SPECIFICATIONS: The written portion of the Contract Documents consisting of requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services; and are contained in Divisions 1 through 16. (If a Division 17 is used, then it is considered as part of the Specifications.)
78. SPECIFIED: As written in Specifications.
79. STANDARD DETAILS: Shall mean the City of Santa Clara Standard Details.
80. STANDARD SPECIFICATIONS: Shall mean the latest revision of the CalTrans specifications.
81. SUBCONTRACTOR: A person or entity who has a direct contract with Contractor to perform a portion of the Work at the site. The term "subcontractor" is referred to throughout the Contract Documents as if singular in number and neuter in gender and means a subcontractor or an authorized representative of the subcontractor. The term "subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
82. SUBSTANTIAL COMPLETION: The Work (or a specified part thereof) has progressed to the point where, in the opinion of City as evidenced by a Certificate of Substantial Completion, the Work is sufficiently complete, in accordance with Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work is complete and ready for final payment as evidenced by written recommendation of City for final payment. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

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REFERENCES AND DEFINITIONS

83. SUPPLEMENTAL INSTRUCTION: A written work change directive to Contractor from Engineer, approved by City, ordering alterations or modifications which do not result in change in Contract Sum or Contract Times, and do not substantially change Drawings or Specifications.
84. TECHNICAL SPECIFICATIONS: Specification Divisions 2 through 16 of the Contract Documents.
85. TESTING AND SPECIAL INSPECTION AGENCY : An independent entity engaged by City to inspect and/or test the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes.
86. UNDERGROUND FACILITIES: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: Electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and sewage drainage removal, traffic or other control systems or domestic water or fire water.
87. UNIT PRICE WORK: Shall be the portions of the Work for which a unit price is provided in Document 00520 (Agreement) or Document 01100 (Summary).
88. WORK: The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents within the Contract Time. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents including everything shown in the Plans and set forth in the Specifications. Wherever the word "work" is used, rather than the word "Work", it shall be understood to have its ordinary and customary meaning.
- B. Wherever words "as directed", "as required", "as permitted", or words of like effect are used, it shall be understood that direction, requirements, or permission of City is intended. Words "sufficient", "necessary", "proper", and the like shall mean sufficient, necessary or proper in judgment of City. Words "approved", "acceptable", "satisfactory", "favorably reviewed" or words of like import, shall mean approved by, or acceptable to, or satisfactory to, or favorably reviewed by City.
- C. Wherever the word "may" is used, the action to which it refers is discretionary. Wherever the word "shall" is used, the action to which it refers is mandatory.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01450

TESTING AND INSPECTION

PART 1 GENERAL

1. Document includes

- A. Regulatory requirements for testing and inspection.
- B. Contractor's quality control.
- C. Quality of the Work.
- D. Inspections and tests by governing authorities.
- E. Inspections and tests by serving utilities.
- F. Inspections and tests by manufacturer's representatives.
- G. Inspections by Independent Testing and Inspection Agency.

2. RELATED DOCUMENTS

Document 01410 - Regulatory Requirements: Compliance with applicable codes, ordinances and standards.

3. CONTRACTOR'S QUALITY CONTROL

- A. Contractor's Quality Control: Contractor shall ensure that products, services, workmanship and site conditions comply with requirements of Contract Documents by coordinating, supervising, testing and inspecting the work and by utilizing only suitably qualified personnel.
- B. Quality Requirements: Work shall be accomplished in accordance with quality requirements of Plans and Specifications, including, by reference, all codes, laws, rules, regulations and standards. When no quality basis is prescribed, the quality shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type.
- C. Quality Control Personnel: Contractor shall employ and assign knowledgeable and skilled personnel as necessary to perform quality control functions to ensure that the Work is provided as required.

4. QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.

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TESTING AND INSPECTION

- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling and staining, until Acceptance by the City.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating erecting, installing, applying, connecting and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by City or Engineer in accordance with provisions of the Contract Documents.
 - 1. Contractor shall cooperate by making Work available for inspection by City, Engineer or their designated representatives.
 - 2. Such verification may include mill, plant, shop, or field inspection as required.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by City or Engineer.
 - 5. Applicable provisions of the Contract Documents shall govern Contract modifications, if any, resulting from such verification activities.
- G. Observations by City's Representative's, Engineer's Consultants: Periodic and occasional observations of Work in progress will be made by City Representative's, Engineer and Engineer's consultants as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspection, Test and Observation: Neither employment of independent testing and inspection agency nor observations by Engineer and Engineer's consultants shall in any manner relieve Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.
- I. City's Acceptance and Rejection of Work: City reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications.

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TESTING AND INSPECTION

- J. Correction of Non-Conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by the Contractor at no change in Contract Sum or Contract Time.
- K. Acceptance of Non-Conforming Work: Acceptance of nonconforming Work, without specific written acknowledgement and approval of the City, shall not relieve the Contractor of the obligation to correct such Work.
- L. Contract Adjustment for Non-Conforming Work: Should Engineer or City determine that it is not feasible or in City's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between City and Contractor. If equitable amount cannot be agreed upon, a Construction Change Order or Field Directive will be issued and the amount in dispute resolved in accordance with applicable provisions of the General Conditions.
- M. Non-Responsibility for Non-Conforming Work: Engineer and Engineer's consultants disclaim any and all responsibility for Work produced not in conformance with the Drawings and Specifications.
- N. Responsibility for Defective Work: Contractor shall have full responsibility for all consequences resulting from defective work, including without limitation all delays, disruptions, extra inspection and correction costs by Contractor and City and re-Work, and extra time and costs of all types. Contractor waives excuses for defective work relating to City's prior review of Submittals and/or prior failure to notice defective work in place on inspection.

5. INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for testing and Inspection: Comply with California Building Code (UBC) requirements and all other requirements of governing authorities having jurisdiction.
- B. Inspections and Tests by Governing Authorities: Contractor shall cause all tests and inspections required by governing authorities having jurisdiction to be made for Work under this Contract.
 - 1. Such authorities include City of Santa Clara Public Works Department, SVP, Building Department, Fire Department, and City retained Inspection, and Testing Organizations or similar agencies.
 - 2. Except as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.
 - 3. Notify City in writing during normal business hours, Monday through Friday, at least 24 hours before the required inspection date.

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TESTING AND INSPECTION

6. INSPECTIONS AND TESTS BY SERVING UTILITIES

- A. Inspections and Tests by Serving Utilities: Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling conducting and paying for such inspections shall be solely the Contractor's responsibility.

7. INSPECTIONS AND TESTS BY MANUFACTURER'S REPRESENTATIVES

- A. Inspections and Tests by Manufacturer's Representatives: Contractor shall cause all tests and inspections specified to be conducted by materials or systems manufacturers to be made. Additionally, all tests and inspections required by materials or systems manufacturers as conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum.

8. INSPECTIONS BY INDEPENDENT TESTING AND INSPECTION AGENCY

- A. City will select an independent testing and inspection agency or agencies to conduct tests and inspections as indicated on Plans, in Specifications and as required by governing authorities having jurisdiction.
- B. Responsibility for payment for tests and inspections shall be as indicated in schedule below. All time and costs for Contractor's service related to such tests and inspections shall be included in Contract Time and Contract Sum.
- C. Contractor shall notify City on inspection request form provided by City and, if directed by City, testing and inspection agency, when Work is ready for specified tests and inspections. This written notification should be delivered during normal business hours, Monday through Friday, at least 48 hours before the requested inspection date and time.
- D. Contractor shall in addition to the requirements of the Contract comply with all permit and code related requirements.
- E. Contractor shall pay for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following:
 - 1. Contractor's failure to properly schedule or notify testing and inspection agency or authorities having jurisdiction.
 - 2. Changes in sources, lots or suppliers of products after original tests or inspections.
 - 3. Changes in means methods, techniques, sequences and procedures of construction that necessitate additional testing, inspection and related services.
 - 4. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design.
 - 5. Contractor submitted requests to change materials or products, which are accepted, but require testing and/or re-inspection beyond original design.

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TESTING AND INSPECTION

6. Costs of travel, and per diem to perform factory testing on-sites over 50 miles from the jobsite.
 7. Cost of re-testing work due to failure of the original test.
- F. Tests and special inspections to be paid by the City shall include the following:
- i. Subgrade compaction
 - ii. Base rock compaction
 - iii. Rebar
 - iv. Concrete placement
 - v. CMU block strength, shrinkage and moisture content
 - vi. CMU wall rebar
 - vii. CMU wall mortar
 - viii. CMU wall grout
 - ix. Structural steel bolting and welding
 - x. Pile concrete and reinforcing
 - xi. Building pad sub-grade and imported fill
 - xii. Load test pile dowels
 - xiii. Trench back fill
 - xiv. Asphalt concrete placement
 - xv. Asphalt sampling
- G. Test and Inspection Reports: After each inspection and test, one copy of report shall be promptly submitted to City, who will distribute copies to Engineer, Contractor and any agency having jurisdiction (if required by Code).
1. Reports shall clearly identify the following:
 - a. Date issued.
 - b. Project name and number.
 - c. Identification of product and Specifications Document in which Work is specified.
 - d. Name of inspector.
 - e. Date and time of sampling or inspection.
 - f. Location in Project where sampling or inspection was conducted.
 - g. Type of inspection or test.
 - h. Date of test.
 - i. Results of tests.
 - j. Comments concerning conformance with Contract Documents and other requirements.
 2. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
 3. Samples taken but not tested shall be reported.
 4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
 5. When requested, testing and inspection agency shall provide interpretations of test results.

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TESTING AND INSPECTION

H. Contractor Responsibilities in Inspections and Tests:

1. Notify City during normal business hours, Monday through Friday, 48 hours in advance of expected time of each test and inspection to be conducted on the project site, for off-site testing within 50 miles of jobsite, 72 hours' notice, and beyond 50 miles 5 working days' notice is required, and for all other operations requiring inspection and testing services, by submitting Contractor's inspection request form provided by City.
 - a. When tests or inspections cannot be performed after such notice, reimburse City for Testing Laboratory personnel and travel expenses incurred due to Contractor's negligence.
2. Deliver to laboratory or designated location, adequate samples of materials proposed to be used that require advance testing, together with proposed mix designs.
3. Cooperate with testing and inspection agency personnel, City's field representative, Engineer and Engineer's consultants. Provide access to Work areas and off-site fabrication and assembly locations, including during weekends and after normal work hours.
4. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Project site or at source of products to be tested, and to store and cure test samples.
5. Provide, at least 15 days in advance of first test or inspection of each type, a schedule of tests or inspections indicating types of tests or inspections and their scheduled dates.

9. **ADDITIONAL TESTING AND INSPECTION**

- A. If initial tests or inspections made by the Testing Laboratory reveal that materials do not comply with Contract Documents, or if City has reasonable doubt that materials do not comply with Contract Documents, additional tests and inspections shall be made as directed.
1. If additional tests and inspections establish that materials comply with Contract Documents, City shall pay all costs for such tests and inspections.
 2. If additional tests and inspections establish that materials do not comply with Contract Documents, all costs of such tests and inspections shall be deducted from Contract Sum. I
 3. If Work requiring inspection is covered by follow-on work before it is inspected, Contractor shall uncover work so proper inspections can be performed. All costs of such tests and inspections shall be deducted from Contract Sum.

SECTION	MATERIAL TESTS
4200	Masonry block strength, shrinkage and moisture content.
4200	Masonry grout strength
5120	High strength grout strength
4200	Masonry mortar strength
5120	Structural steel bolting and welding

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TESTING AND INSPECTION

2300	Pile concrete and reinforcing
2200	Trench backfill
2200	Building pad sub-grade and imported fill
2300	Load test pile dowels
SECTION	SPECIAL INSPECTION
3200	Placement of reinforcing steel for concrete and concrete masonry
3300	Placement of cast-in-place concrete
4200	Placement of concrete block and grout
5120	Structural steel fabrication, erection, bolting and welding
7511	Installation of roof membrane
05500, 04200, 05120	Installation of anchor bolts, dowels embedded in concrete and masonry
TBD	Installation of adhesive (epoxy) connections
2300	Placement of pile concrete and reinforcement
2300	Pile driving
2200	Site grading, road and parking phase
2200	Trench backfill
SECTION	ENVIRONMENTAL TESTS
TBD	Construction noise monitoring. Storm water runoff sampling
02200, 02222	Compaction
3300	Concrete sump and strength. Weight of lightweight concrete. Water content for controlled mixes. Temperature during hot or cold weather.
3370	Shotcrete soundness and strength
4220	Block strength and moisture content. Grout strength
5100	Steel welding and bolting
5300	Shear connector stud
TBD	Expansion and epoxy anchors.
SECTION	SPECIAL INSPECTION
2200	Subgrade beneath mat
02200, 02222	Filling
3200	Placement of reinforcing for concrete and shotcrete, Installation of mechanical couplers and end anchors, Welding of reinforcing bars (not anticipated)
3300	Concrete placement, Grout placement for steel base plates
3370	Preconstruction test panels. Shotcrete placement.

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TESTING AND INSPECTION

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END OF DOCUMENT

DOCUMENT 01500

TEMPORARY CONSTRUCTION

PART 1 GENERAL

1. DOCUMENT OVERVIEW

A. PART 1 DOCUMENT INCLUDES:

1. TEMPORARY FACILITIES
2. USE OF CITY FACILITY AND EQUIPMENT
3. TEMPORARY ELECTRICITY
4. TEMPORARY LIGHTING
5. PROTECTION OF PUBLIC AND PRIVATE PROPERTY
6. TEMPORARY SANITARY FACILITIES
7. CONSTRUCTION AIDS
8. TEMPORARY HEAT
9. TEMPORARY VENTILATION
10. TEMPORARY TELEPHONE SERVICE
11. TEMPORARY WATER SERVICE
12. SPECIAL EQUIPMENT & CONTROLS
13. WATER CONTROL
14. SCAFFOLDING
15. TEMPORARY ENCLOSURES
16. BARRIERS
17. SITE PROTECTION
18. TREE AND PLANT PROTECTION
19. ACCESS REQUESTS
20. NOISE CONTROL
21. DUST CONTROL
22. TRAFFIC CONTROL
23. DEBRIS CONTROL
24. POLLUTION CONTROL
25. EROSION CONTROL
26. FIRE PROTECTION SYSTEMS
27. SECURITY
28. PROJECT SIGNS
29. FIELD OFFICE TRAILERS AND SHEDS CONSTRUCTION MANAGER'S FIELD OFFICE/FURNISHINGS
30. REMOVAL OF TEMPORARY FACILITIES
31. FORMS

2. TEMPORARY UTILITIES

- A. Temporary Connections: The Contractor shall provide all necessary temporary electricity, power, water, sewer, gas, data and other utilities needed for the Work through Final Completion.
- B. Contractor shall apply for, coordinate, schedule, and obtain all necessary permits for the Work, including payment of any permit fees charged by entities other than the City of Santa Clara. Only permit fees charged by the City of Santa Clara, which includes Silicon Valley Power, will be waived.

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TEMPORARY CONSTRUCTION

- C. Maintain strict supervision of the use of temporary construction facilities. Enforce compliance with applicable standards. Prevent abuses of services.
 - D. Comply with all code and City requirements for use of temporary facilities and utilities.
3. USE OF CITY FACILITY AND EQUIPMENT
- A. Contractor will not be allowed to use any facility or equipment, which belongs to the City. Contractor shall provide its own facilities and equipment at its own expense.
 - B. City Facilities and Sanitary/Nuisance Regulations:
 - 1. The Contractor shall provide adequate sanitary facilities for the use of those employed to perform Work at the Site. Such facilities shall be made available when the first employees arrive on Site, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.
 - 2. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. Contractor shall rigorously prohibit the committing of nuisances to the sanitary facilities and shall immediately repair or correct any nuisance (graffiti, vandalism, etc.) or any inappropriate or unsafe sanitary condition. Any time the sanitary facilities are deemed to be a nuisance or health hazard, the City will issue a notice to repair. If not cleaned within 4 hours, the City will resolve the issue by whatever means is deemed appropriate by the City and the City shall back-bill the Contractor for payment of invoices for this service.
 - 3. The Contractor shall rigorously prohibit the committing of nuisances on Site, on the lands of the City, or on adjacent property. Contractor shall immediately repair or correct any nuisance (graffiti, vandalism, etc.) or any inappropriate or unsafe sanitary condition adjacent to or associated with any area of Work activity.
4. TEMPORARY ELECTRICITY/POWER
- A. The Contractor will provide all temporary electricity/power on Site necessary to complete the Work, including all temporary electricity. The Contractor shall contact Silicon Valley Power to confirm the availability of the electrical source. If not currently available, the Contractor shall pay all costs to install and provide the electrical source needed to perform the Work.
 - B. Contractor shall exercise measures to conserve energy at all times.
 - C. All electrical work to be in compliance with all reference codes.

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TEMPORARY CONSTRUCTION

- D. The Contractor shall pay all electricity costs for temporary lighting currently in use on site, and for the temporary access roadway lighting throughout the duration of the Project.

5. TEMPORARY LIGHTING

- A. The Contractor will provide and pay for all temporary lighting in accordance with codes and regulations for all Work performed at the Site.
- B. The Contractor shall maintain all temporary lighting in current service to light the temporary access roadway/pedestrian walk and other temporary lighting on Site.

6. PROTECTION OF PUBLIC AND PRIVATE PROPERTY

- A. Contractor shall protect, shore, brace, support, and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by its construction operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, and other surface structures affected by construction operations, together with all sod and shrubs in yards, parkways, and medians, shall be restored to their original condition, whether within or outside the easement. All replacements shall be made with new materials.
- B. Contractor shall be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, and other public or private property, regardless of location or character, which may be caused by transporting equipment, materials, or workers to or from the Work, Site or any part thereof, whether by Contractor or Subcontractors. Contractor shall make satisfactory and acceptable arrangements with the City, or the agency or authority having jurisdiction over the damaged property, concerning its repair or replacement or payment of costs incurred in connection with the damage.
- C. All fire hydrants and water control valves shall be kept free from obstruction and available for use at all times.

7. TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required temporary buildings with sanitary toilets for use of all workers. At a minimum, sanitary facilities shall be located at trailer site, staging area, and adjacent to work area.
- B. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 persons. Contractor shall enforce the use of such sanitary facilities by all personnel at the Site.

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TEMPORARY CONSTRUCTION

Comply with all minimum requirements of the Health Department or other public agency having jurisdiction; maintain in a sanitary condition at all times.

8. CONSTRUCTION AIDS

Contractor shall furnish, install, maintain, and operate all construction aids required by it and its Subcontractors in the performance of the Work, except as otherwise provided herein. Such construction aids shall include elevators and hoists, cranes, temporary enclosures, swing staging, scaffolding and temporary stairs. Construction aids shall be furnished without charge to the Subcontractors, and all necessary erection, maintenance, and operating personnel shall be included. In the event of conflict, the contractor furnishing the equipment shall determine priorities in the best interest of the Project.

9. TEMPORARY HEAT

- A. Provide and pay for heat devices and heat as required to perform the Work.
- B. Maintain minimum ambient temperature as necessary for specific work activities in areas where construction is in progress, unless otherwise indicated in the specifications.

10. TEMPORARY VENTILATION

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases. Identify potential problems associated with dust, fumes, vapors or gases as required in these specifications. Implement procedures, which will mitigate problems appropriately and within the limits imposed by the Contract Documents.

11. TEMPORARY TELEPHONE SERVICE

- A. Provide, maintain and pay for telephone service to Contractor's field office (and to all required cellular phones) throughout the duration of the Contract.

12. TEMPORARY WATER SERVICE

- A. The Contractor will provide all temporary water necessary for the Work.
- B. Where connected to City or Santa Clara Water Department water distribution system, exercise measures to conserve water.

13. SPECIAL EQUIPMENT AND CONTROLS

- A. Equipment Provided by the Contractor: The Contractor shall provide all necessary equipment, such as, but not limited to tower cranes, truck cranes, and welding machines to install the structural steel. The Contractor shall provide and pay for

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TEMPORARY CONSTRUCTION

any temporary modifications to the work to accommodate the use of its equipment at the Site (e.g., structural design and support for tower crane).

- B. Welding Protection Provided by the Contractor: The Assigned Contractor shall provide for and maintain all forms of protection necessary to prevent damage resulting from welding structural steel, including, but not limited to previously installed material, equipment, and stored material. Provide all portable welding exhaust systems with HEPA 4 systems.

14. WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment. Contractor shall have two (2) trailer mounted portable pumps on site at all times that excavation is occurring or that heading(s) are open.
- B. Protect site from puddling or running water. If, by any action by Contractor, water is allowed to issue forth or flow from any source in an unchecked manner (e.g. from a ruptured irrigation pipe, broken water line, etc.) or to pool for longer than 1 hour, City shall have the option to repair the rupture at City discretion and to back-charge Contractor for repair work.
- C. Provide water barriers as required to protect the Site from soil erosion.
- D. Provide methods to control surface water to prevent damage to the Site, or adjoining properties. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas to direct drainage to proper runoff.
- E. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.
- F. Legally dispose of drainage or ground water. Disposal shall be in a manner, which will prevent flooding, erosions, or other damage to any portion of the Site or to adjoining areas and in accordance with all permit requirements.

15. SCAFFOLDING

Furnish, erect and maintain all required scaffolding to perform the Work. Scaffolding and accessories shall conform to all regulations governing such equipment. Maintain scaffolding in conformance with all applicable safety requirements. Upon completion of use, remove all scaffolding and accessories from the Site. At the Contractor's option, Contractor may have individual subcontractors provide scaffolding for their work; however, all scaffolding remains the responsibility of the Contractor.

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16. TEMPORARY ENCLOSURES

- A. Provide temporary weather-tight enclosure of exterior walls for successive areas of building as work progresses, as necessary, to provide acceptable working conditions for Contractor and to provide weather protection for materials. Said enclosures shall provide for effective temporary heating, and shall prevent entry of unauthorized persons.
 - 1. Provide temporary exterior doors with self-closing hardware and padlocks.
 - 2. Enclosures shall be removable as necessary for work and for handling of materials as well as for emergency access or egress.
- B. Provide temporary shoring as required by these Contract Documents. Obtain approval of City for any temporary structural supports.
- C. Provide temporary lighting as required to conform to safety standards.
- D. Completely remove temporary materials, equipment, and services
 - 1. At completion of work, or as directed by City.
- E. Clean and repair damage caused by installation or by use of temporary facilities in accordance with the specifications.
- F. Restore existing areas and/or facilities used for temporary purposes to specified or to original condition (whichever is more restrictive). In the event that Contractor fails to restore areas and/or facilities as required, the City may restore or replace them and deduct the expense or the replacement from any amounts due or to become due to the Contractor.

17. BARRIERS

- A. Provide all barriers necessary or required by codes and regulations to perform the Work.
- B. Shield all welding operations from public view with solid barrier.
- C. Contractor shall provide warning signs, barricades, and flag persons as necessary and required by public agencies having jurisdiction for traffic control and to protect public safety where work is performed in City roadways and public rights-of-way or when City roadways and public rights-of-way are temporarily used for deliveries (e.g., concrete pours, major material deliveries, etc.).
- D. Where walks, pathways or access ways are closed by the Work, an ADA compliant, alternate walkway shall be provided, preferably within the immediate location of the pathway or access to be closed. Where it is necessary to divert pedestrians into a major detour and/or into a parking lane or traffic area, at no time

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shall pedestrians be diverted into a portion of a street used for vehicular traffic. Any deviation from the above must have prior approval of the City.

- E. At locations where adjacent alternate walkways cannot be provided (i.e. where no pathway or access is available within the immediate location of the interruption) ADA compliant detours shall be clearly planned, marked and constructed. Appropriate signs and barricades must be installed at the limits of construction and in advance of the closure (or detour) in order to divert pedestrians to the appropriate walkway or detour.
- F. Wherever it is necessary that trenches and excavation be bridged, bridges shall be constructed in an ADA compliant manner. These bridges shall permit unobstructed flow of traffic or pedestrians and shall meet the following criteria:
 - 1. Bridging shall be secured against displacement by using adjustable cleats, angles, bolts or other devices.
 - 2. Bridging shall be installed to operate with minimum noise.
 - 3. The trench shall be adequately shored, to support the bridging and traffic.
 - 4. Only steel plates shall be used for bridging. Steel plates used for bridging shall extend one foot (minimum) beyond the edges of the trench. The steel plates shall be beveled in order to provide smooth and uninterrupted wheelchair and other access. Temporary paving materials may be used in conjunction with the beveled steel plates.
- G. Remove barriers and enclosures only after acceptance of that portion of the Work area.

18. SITE PROTECTION

Construction limits are shown on the Contract Drawings. All construction activity including material storage, project office(s), equipment parking or other uses shall be confined within those areas, which have been approved in advance by the City. In no case shall the surrounding area outside the construction limits be disturbed unless otherwise noted in the Contract Documents. In the event that it is disturbed, the Contractor shall restore that area, at its cost, as directed by, and to the satisfaction of the City.

19. TREE AND PLANT PROTECTION

- A. Do not park vehicles or store equipment within the drip line of any trees on Site. The trees are protected by temporary fencing, which has been provided by others. The Contractor is encouraged to visit the Site prior to bid to determine the extent of the protection that could limit the Contractors flexibility to access the Site and temporarily store materials. The Contractor is required to remove all temporary fencing around the Site and the temporary tree protection fencing prior to Final Completion in accordance with other documents of these Specifications.

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20. ACCESS REQUESTS

- A. The Contractor is required to coordinate access to all work, which also requires coordination with the City and its Construction Manager in order to maintain control and coordination of the work at the Site.
- B. The Contractor shall provide convenient and safe access to all Work during construction. Such access shall include, but is not limited to, providing ladders, lifts or scaffolding to allow safe and convenient access by such City representatives as City Inspectors, Engineer, Special Inspectors, the Fire Department, and Building Department.

21. NOISE CONTROL

- A. Conform to OSHA and City of Santa Clara noise ordinance requirements unless a more stringent requirement is otherwise specified in the Contract Documents.
- B. City has limited hours of certain types of construction operations. Coordinate work with City's Construction Manager.
- C. See Contract Specification Document 01590 for additional requirements and limitation regarding noise generated by the Contractor.

22. DUST CONTROL

- A. Provide positive methods and apply dust control material to minimize raising dust from the construction operations and construction vehicles and provide positive means to prevent airborne dust from dispersing into the atmosphere.
- B. See Contract Specification Documents 01100 and 01590 for additional requirements for controlling dust at and around the Site.

23. TRAFFIC REGULATIONS, TRAFFIC PLAN, SITE PARKING AND RESTRICTIONS

- A. The City has restricted routing of construction traffic and construction vehicle and equipment parking. Parking of construction vehicles will only be in designated nearby areas on City property.
 - 1. Employee parking shall be arranged by the Contractor.
- B. Street Lane and Side Walk Closures:
 - 1. Street Closures: Contractor must obtain all necessary permits and comply with all City regulations before closing any streets.
 - 2. Sidewalk Closures: Contractor must obtain all necessary permits and comply with all City regulations before closing sidewalks.
 - 3. The Contractor shall pay for all street and sidewalk closures, including but not limited to, the appropriate street closure and temporary directional

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TEMPORARY CONSTRUCTION

signage, crosswalks, flag persons as required to control construction traffic. The City has waived fees for street closures or diversions, but the Contractor must plan, schedule, apply for, coordinate and implement all necessary street closures or diversions. Contractor shall take all necessary precautions to protect the public from construction activities. Minimum requirements for the directional signage and related signage must comply with City traffic regulations. Contact Dave Pitton, Traffic Engineer, at 408-615-3021 for more information regarding traffic regulations and requirements.

24. DEBRIS CONTROL

- A. Maintain all areas under the Contractor's control, free of extraneous debris.
- B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking areas, or along access roads and haul routes.
 - 1. Provide containers for deposit of debris.
 - 2. Prohibit overloading of trucks to prevent spillages on access and haul routes.
 - 3. Provide periodic inspection of traffic areas to enforce requirements.
- C. Schedule periodic collection and disposal of debris.
 - 1. Provide additional collections and disposal of debris whenever the periodic schedule is inadequate to prevent accumulation or as requested by the City.

25. POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- B. Provide systems for control of atmospheric pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of pollutants into the atmosphere.
 - 3. Direct pollutants such as diesel exhaust away from building air intakes.

26. EROSION CONTROL

- A. The Contractor will be responsible for providing additional erosion control as necessary and is also responsible for removing existing and any added erosion control when it is no longer needed at the Site.

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27. FIRE PROTECTION SYSTEMS

- A. Provide temporary fire protection as required by codes and regulations for Work.
- B. Maintain approved fire extinguishers at all work areas and maintain fire department vehicle access as required by the Fire Department. The Contractor is responsible to contact the City Fire Department to insure compliance with all vehicle access by the fire Department.

28. SECURITY

Provide adequate security for equipment and construction materials for the Work that are either erected or stored at the Site.

- A. Contractor is responsible for the security and protection of the Contractor's work area.
- B. If the Contractor requires a sign in procedure, it must be coordinated with the City to avoid confusion.
- C. Coordinate with local law enforcement and cooperate at all times with them.
- D. If the Contractor fails to adequately secure the Site in the opinion of the City, qualified forces will be employed and costs for the service charged to the Contractor.
- E. Maintain fencing at all times.
- F. Review and comply with all local ordinances related to emergency response requirements.
- G. Develop, submit, update and maintain an emergency response program for this project specific to the needs of the project.
- H. Provide list of emergency contact numbers for the Project, including all personnel work and home phone numbers. The Contractor must provide a twenty-four hour contact phone number for Contractor personnel.
- I. Provide and post local map with area hospitals and emergency room locations and phone numbers and update this map on a monthly basis.

29. PROJECT SIGNS

- A. General: Others will provide and design of the project signs. The Contractor shall modify the sign to update it with information regarding the Contractor. Contractor shall pay all cost to include the Contractor's name on Project Sign.
- B. Warning Signs on Enclosure Barriers and Construction Gates: Provide as necessary to comply with codes and local laws and regulations.

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- D.. Interior Signs: Provide temporary interior signs as necessary to comply with codes and local laws and regulations.
- E.. Additional Signs: Contractor shall provide and install any additional temporary signage as may be necessary to provide safe, reliable, accurate way-finding and construction area marking in accordance with all codes and local laws and regulations.

30. FIELD OFFICE TRAILERS AND SHEDS

A. CONTRACTOR'S FIELD OFFICE:

Furnish and install field office trailer(s), on Site, adequate in size and accommodation for Contractor's offices, superintendent's office, supply and tool room and subcontractors. Location of Contractor's field office trailer must be in the designated staging area as approved by the City. Make the field office available to the City throughout the entire construction period. Field office(s) shall be for safekeeping of plans, specifications and records, and shall contain reference board, table or desk, and chairs. Field offices shall be installed and operated at Contractors expense as a part of the base bid.

31. REMOVAL OF TEMPORARY FACILITIES

Maintain all temporary facilities, staging area and controls as long as needed for the safe and proper completion of the Work; and remove all such temporary facilities. Promptly clean and repair damage caused by installation or use of temporary facilities. Restore site including staging area(s) to condition equal to or better than the condition prior to the installation of the temporary facility(s). If the Contractor fails or refused to repair the damage promptly, the City may have the necessary work performed and charge the cost to the Contractor or deduct the expense from any amounts due or to become due to the Contractor.

32. FORMS

The Contractor is required to use the City's standard project forms during construction. A project manual will be provided to the Contractor outlining the specific use for each form at the pre-construction conference. Electronic versions of the forms in Microsoft Word will be provided to the Contractor for their use during the Project.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01500
TEMPORARY CONSTRUCTION

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DOCUMENT 01540

SITE SECURITY

PART 1 GENERAL

1. DESCRIPTION

This document describes the requirements for providing Site security and safety.

2. SUBMITTALS

- A. See Document 01330 (Submittal Procedures).
- B. Site Security
- C. Safety Program
- D. Fire Protection Plan

3. WORK SPECIFIED ELSEWHERE

- A. Continuously maintain protection as necessary to protect the Work as a whole and in part, and adjacent property and improvements, injuries or damage.
- B. Properly protect the Work:
 - 1. With lights, guard rails, temporary covers and barricades.
 - 2. Enclose excavations with proper barricades.
 - 3. Brace and secure all parts of the Work against storm and accident.
 - 4. Provide such additional forms of protection, which may be necessary under existing circumstances.
- C. Provide and maintain in good condition all protective measures required to adequately protect the public from hazards resulting from the Work and to exclude unauthorized persons from the Work. When regulated by Building Code, Cal OSHA, or other authority, such legal requirements for protection shall be considered as minimum requirements. Be responsible for the protection in excess of such minimum requirements as required.

4. CONTROL OF SITE

Contractor shall ensure that no alcohol, firearms, weapons, or controlled substance enters or is used at the Site. Contractor shall immediately remove from the Site and terminate the employment of any employees found in violation of this provision.

5. SITE SECURITY

- A. As part of the Work included within the Contract Price, Contractor shall take and be fully responsible for all reasonably required measures to protect and maintain the security of persons, existing facilities and property at the Site, including without

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SITE SECURITY

limitation preventing theft, loss, vandalism and improper concealment of personal property of the City and all persons lawfully present on the Site, and including times where workers are not present on the Site. Contractor's measures shall include, at a minimum, maintaining a log of all persons entering and leaving the Site and who they represent, what they are delivering and to whom.

- B. No claim shall be made against City by reason of any act of an employee or trespasser, and Contractor shall repair all damage to City's property resulting from Contractor's failure to provide adequate security measures.
- C. Contractor shall maintain a lock on the Construction access gate at all times. Contractor shall appoint one person to let people through the gate and maintain the sign-in/out list, with person's name, company, reason for entering, what they are delivering, time and date. Alternatively, Contractor shall provide a full-time guard at the gate at all times to control access and maintain the sign-in/out list. The sign in/out list shall be available to City at any time upon request. If City determines that the gate has been left unlocked, Contractor shall if requested by City provide a full time guard at no additional expense to the City.
- D. Contractor shall supply additional security fencing, barricades, lighting, and other security measures as required to protect and control the Site.

6. SAFETY PROGRAM

- A. Within 15 calendar days after Notice to Proceed, Contractor shall submit a Safety Program to City for information purposes. Contractor shall be required to comply with the Safety Program and all applicable Federal, State and regulation codes, rules, law and ordinances.
- B. Review of the Safety Program shall not relieve Contractor of any responsibility for complying with all applicable safety regulations.
- C. It is essential that Contractor and each subcontractor implement an effective and vigorous Safety and Health Program to cover its portion of the Work. Subject to Contractor's overall responsibility for Project safety, it shall be understood that the full responsibility for providing a safe place to work with respect to its portion of the Work rests with each individual Contractor and subcontractor.
- D. Safety Program components:
 - 1. Injury and Illness Prevention Program (IIPP): Conforming to the General Industrial Safety Orders (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 3203), and the California Labor Code (Section 6401.7).
 - 2. Site-Specific Safety and Health Plan (SSHP): Describing health and safety procedures that shall be implemented during the Work in order to ensure safety of the public and those performing the Work. Follow the guidelines

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SITE SECURITY

- for a SSHP listed in CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5192, Item (b)(4) f.
3. Confined Space Program: The Site contains permit- and non-permit-confined spaces. City will provide Contractor with any available information regarding permit space hazards, entry operations, and safety information relating to work in the permit spaces as set forth in the General Industrial Safety Orders (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5157). Permit space entry is allowed only through compliance with a permit space program meeting the requirements of Section 5157 of the General Industrial Safety Orders. During entry operations, or at the conclusion of entry operations, verbally notify Engineer of the permit space program followed and of any hazards confronted or created in permit spaces during entry operations.
 4. The wearing of hard hats will be mandatory at all times for personnel on Site. Contractor shall supply sufficient hard hats to equip properly all employees and visitors.
- E. Whenever an exposure exists, appropriate personal protective equipment (PPE) will be used by all affected personnel. Contractor shall supply PPE to all personnel under its direction.

7. SAFETY REQUIREMENTS

- A. Standards: Maintain the Site in accordance with State and local safety and insurance standards.
- B. Hazards Control:
 1. Store volatile wastes in covered metal containers and remove from premises daily.
 2. Prevent accumulation of wastes, which create hazardous conditions.
 3. Provide adequate ventilation during use of volatile or noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 1. Do not burn or bury rubbish and waste material at the Site.
 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 3. Do not dispose of wastes into streams or waterways.
- D. Provide accident information on the forms provided by Contractor. This information will be provided on the same day as the occurrence of said accident.

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SITE SECURITY

8. SITE SAFETY OFFICER

- A. Contractor shall designate one of its staff as "Site Safety Officer" whose duties will include responsibility for enforcing the environmental protection provisions of these Specifications including safety and health, the requirements of the Occupational Safety Health Act, and other applicable Federal, State and local standards. Contractor shall submit for review by City its intended traffic flow plan, security plan, program for temporary structures, housecleaning plan, safety and health plan. After review by City, the implementation and changes in the programs shall be requested by Contractor through the Site Safety Officer for written concurrence by City.
- B. Representative(s) of City Risk Management will be allowed access to accident/injury and illness reports, inspection reports, scheduling and construction meetings, and safety meetings.

9. FIRE PROTECTION PLAN

- A. Within 15 days after Notice to Proceed submit one copy of a fire protection plan that has been reviewed and approved by the Santa Clara County Fire Department. It is recommended that the plan include, but not be limited to, a discussion of the following items:
 - 1. Equipment spark arresters
 - 2. Fire-extinguishing equipment on hand
 - 3. Method of operation in case of fire
 - 4. Notification to authorities of any fire
 - 5. Access available during performance of Work
 - 6. Educating workers of fire protection plan
 - 7. Storage protection for flammable materials
 - 8. Ventilation and illumination equipment

10. EMERGENCY WATER SUPPLY SHUT-OFF PLAN

11. EMERGENCY SEWER BY-PASS PLAN

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01590

CITY MITIGATION MEASURES

PART 1 GENERAL

1. SUMMARY

A. Document includes:

1. Cultural Resources & Human Remains Requirements
2. Air Quality Measures
3. Noise Reduction Measures
4. Other City Requirements

2. RELATED DOCUMENTS

- A. Document 01100-Summary of Work
- B. Document 01500-Temporary Construction

3. GENERAL

In January 2001, the City Council approved the mitigation measures included in the Draft and Final Environmental Impact Reports prepared by Environmental Science Associates, dated October 27, 2000 and November 30, 2000, respectively. These reports are available for review at the City's office (1500 Warburton Ave, Santa Clara). The Contractor shall comply with and implement the Environmental Impact Report mitigation measures, which are listed in Paragraph 1.04 and Paragraph 1.05 of this Document of the Contract Specifications, as well as other City mitigation measures listed in this Document and the Contract Specifications:

4. MITIGATION MEASURES B.3a & B.3b, CULTURAL RESOURCES & HUMAN REMAINS

- A. The City and the Planning Division shall be notified at least 48 hours (i.e., 2 business work days) prior to any grading or other subsurface work on the site. In the event that cultural resources are encountered, all work within the proximity of the find shall temporarily halt so that the archaeologist can examine the find and document its provenience and nature (through drawings, photographs, written description, etc. as necessary).
- B. If human remains are encountered during project construction, the Contractor shall notify the Santa Clara County Coroner's Office immediately. The coroner will determine if the remains are those of a Native American, and if they are, will notify the Native American Heritage Commission.
- C. The Contractor shall anticipate zero (0) workdays of delays and impacts as a result of any discovery of cultural resources or human remains and include these delay and impact costs in its bid. The Contractor shall receive a non-compensable time extension for delays resulting from the discovery of cultural resources or human

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CITY MITIGATION MEASURES

remains beyond the Contractor's control as defined in Paragraph 15.B of Document 00700, General Conditions.

D. ARCHAEOLOGICAL AND PALEONTOLOGICAL RIGHTS

The Contractor shall notify the City at least five (5) full working days in advance of performing any earth-moving activities to enable the City to provide archaeological monitoring of the work.

Monitoring shall consist of coordinating subsurface work to allow for the careful examination of vertical and horizontal soil relationships for the purpose of defining positive archaeological finds (prehistoric and/or historic). In the event that cultural resources are encountered, all work within the proximity of the find shall temporarily halt so that the archaeologist can examine the find and document its provenience and nature (through drawings, photographs, written description, etc., as necessary). The monitor will then direct the work to either proceed if the find is deemed to be insignificant or is adequately documented and resolved, or continue elsewhere, as appropriate, until adequate mitigation measures are adopted or the matter is otherwise resolved to the satisfaction of the City.

The Contractor shall notify the City a minimum of two (2) full working days in advance of canceling scheduled subsurface construction work including grading or similar work to provide the City with sufficient notice to cancel archaeological monitoring services.

The City may suffer damages in the event that the Contractor failed to comply with the required notification. The parties hereto agree that it is and will be extremely difficult to determine the actual damage that the City will sustain in the event that the City does not receive the required notification; and it is therefore agreed that the Contractor will pay to the City the sum of \$1,000 for each occurrence of the Contractor's failure to provide the required notification. The Contractor agrees to pay said liquidated damages herein provided for, and further agrees that the City may deduct the amount thereof from any monies due or that may become due to the Contractor under the Contract. In addition, in the event that the Contractor fails to comply with the required notification, the Contractor shall cease all construction operations, including non- surface constructions, until the required notification is provided in accordance with the Provisions of this Document.

5. MITIGATION MEASURE D.1, AIR QUALITY

- A. Water all active construction areas at least twice daily or as needed to prevent dust.
- B. Cover all trucks hauling soil, sand, and other loose materials, or all trucks shall maintain at least 2 feet of freeboard.
- C. Pave, or apply water three times daily, or apply nontoxic soil stabilizers on all unpaved roads, parking areas, and construction staging areas.

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CITY MITIGATION MEASURES

- D. Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites as needed to prevent dust.
 - E. Sweep streets daily with water sweepers, if visible soil material is carried onto adjacent public streets.
 - F. Hydroseed or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
 - G. Enclose, cover, water twice daily, or apply nontoxic soil binders to exposed stockpiles (dirt, sand, etc.).
 - H. Traffic speeds on unpaved roads shall be limited to 15 miles per hour.
 - I. Install sandbags or other erosion-control measures to prevent silt runoff to public roadways during rainy season construction (November through April).
 - J. Other related requirements by the City:
 - 1. Dust-proof chutes shall be used for loading construction debris onto trucks. Alternative means of loading construction debris may be permitted if approved by the City.
 - 2. Contractor shall suspend dust-producing activities during periods of high winds when dust control measures are unable to avoid visible dust plumes.
 - 3. During the dry season (May-October) provide equipment and staffing for watering of all exposed or disturbed soil surfaces at least twice daily.
 - 4. Any fine materials transported by truck will be covered or wetted down to control dust.
6. NOISE REDUCTION MEASURES
- A. Contractor shall comply with the City of Santa Clara Noise Ordinance. The following construction activities shall be prohibited:
 - 1. "Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 PM and 7 AM, or 8 PM and 9 AM on weekends or holidays such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City.
 - 2. "Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels at affected properties will not exceed those listed in the following schedule: Maximum sound levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment shall be 80 dB daily (7 AM to 7 PM) and 65 dB weekends (8 AM to 8 PM): Maximum sound levels for repetitively scheduled

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CITY MITIGATION MEASURES

and relatively long-term operation (periods of 10 days or more) of stationary equipment shall be 65 dB daily (from 7 AM to & 7 PM and 55 dB weekends (from 8 AM to 8 PM).

In addition, the use of impulse tools (e.g., hoe-ram, jackhammers, etc.) shall be limited to the hours of 7:00 AM to 5:00 PM.

- B. Plywood Barrier & Impulse Tool Shields
 - 1. Impulse tools shall be temporarily shielded when in use (by interposing another truck, a temporary plywood barrier, noise control blankets, or gypsum board, as appropriate).
- C. All construction equipment shall be muffled and properly maintained. "Quiet package" equipment (e.g., compressors and generators in separate compartments or otherwise muffled) shall be used on the Site.
- D. The City will respond to any complaints regarding construction noise and for coordinating with adjacent land uses. The City shall determine the cause of any complaints and coordinate with the Contractor. The Contractor shall implement effective measures (considered technically and economically feasible by the City) warranted to correct the problem.

END OF DOCUMENT

DOCUMENT 01600

PRODUCT REQUIREMENTS

PART 1 GENERAL

1. DOCUMENT INCLUDES

- A. Products
- B. Product Options and Substitutions
- C. Product Delivery Requirements
- D. Shipping Requirements
- E. Product Storage and Handling Requirements

2. PRODUCTS

- A. Products: New material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. For similar components, provide interchangeable components of the same manufacturer.

3. PRODUCT OPTIONS AND SUBSTITUTIONS

- A. Summary: This paragraph describes procedures for selecting products and requesting substitutions of unlisted materials in lieu of materials named in the Specifications or approved for use in Addenda that were not already the subject of a Document 00660 (Substitution Request Form) submittal as provided in Document 00200 (Instructions to Bidders).
- B. Contractor's Options:
 - 1. For products specified only by reference standard: Select any product meeting that standard.
 - 2. For products specified by naming one or more products or manufacturers:
 - a. Select products of any named manufacturer meeting specifications.
 - b. If product becomes unavailable due to no fault of Contractor, submit Request for Substitution (RFS), including all information contained in this Document 01600 and a fully executed Document 00660 (Request for Substitution), but using the term "Contractor" each place the term "Bidder" appears in that form.

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PRODUCT REQUIREMENTS

C. Substitutions:

1. Except as provided in Document 00200 (Instructions to Bidders) with respect to "or equal" items, City will consider Contractor's substitution requests only when product becomes unavailable due to no fault of Contractor. Requests for review of proposed substitute items will not be accepted from anyone other than Contractor. The RFS shall state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of Substantial Completion on time, and whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with City for work on the Project).
2. Submit separate RFS (and four copies) for each product and support each request with:
 - a. Product identification.
 - b. Manufacturer's literature.
 - c. Samples, as applicable.
 - d. Name and address of similar projects on which product has been used, and dates of installation.
 - e. Name, address, and telephone number of manufacturer's representative or sales engineer.
 - f. For construction methods: Detailed description of proposed method; drawings illustrating methods.
3. Where required, itemize a comparison of the proposed substitution with product specified and list significant variations including, but not limited to dimensions, weights, service requirements, and functional differences. If variation from product specified is not pointed out in submittal, variation will be rejected even though submittal was favorably reviewed. Identify all variations of the proposed substitute from that specified in the RFS and indicate available maintenance, repair, and replacement service.
4. State whether the substitute will require a change in any of the Contract Documents (or provisions of any other direct contract with City for work on the Project) to adapt the design of the proposed substitute, and whether or not incorporation or use of the substitute in connection with Work is subject to payment of any license fee or royalty. Submit data relating to changes in construction schedule.
5. Include accurate cost data comparing proposed substitution with product and amount of net change in Contract Sum including, but not limited to, an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by City in evaluating the proposed substitute. City may require Contractor to furnish additional data about the proposed substitute.
6. City will not consider substitutions for acceptance (or, in City's sole discretion, City may make Contractor solely responsible for all resulting costs, expenses and other consequences) when a substitution:

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PRODUCT REQUIREMENTS

- a. Results in delay meeting construction Milestones or completion dates.
 - b. Is indicated or implied on submittals without formal request from Contractor.
 - c. Is requested directly by Subcontractor or supplier.
 - d. Acceptance will require substantial revision of Contract Documents.
 - e. Disrupts Contractor's job rhythm or ability to perform efficiently.
7. Substitute products shall not be ordered without written acceptance of City.
 8. City will determine acceptability of proposed substitutions and reserve right to reject proposals due to insufficient information.
 9. Accepted substitutions will be evidenced by a Change Order. All Contract Documents requirements apply to Work involving substitutions.
- D. Contractor's Representation and Warranty:
1. Contractor's RFS constitute a representation and warranty that Contractor:
 - a. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - b. Will provide the same warranty for substitution as for specified product.
 - c. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
 - d. Waives claims for additional costs which may subsequently become apparent.
 - e. Will compensate City for additional redesign costs associated with substitution.
 - f. Will be responsible for Construction Schedule slippage due to substitution.
 - g. Will be responsible for Construction Schedule delay due to late ordering of available specified products caused by requests for substitution that are subsequently rejected by City.
 - h. Will compensate City for all costs; including extra costs of performing Work under Contract Documents, extra cost to other contractors, and any claims brought against City, caused by late requests for substitutions or late ordering of products.
- E. City's Duties:
1. Review Contractor's RFS with reasonable promptness.
 2. Notify Contractor in writing of decision to accept or reject requested substitution.
- F. Administrative Requirements:
1. Specified products, materials, or systems for Project may include engineering or on-file standards required by the regulatory agency. Contractor's substitution of products, materials or systems may require

DOCUMENT 01600

PRODUCT REQUIREMENTS

additional engineering, testing, reviews, approvals, assurances, or other information for compliance with regulatory agency requirements or both. Provide all agency approvals or other additional information required and pay additional costs for required City services made necessary by the substitution at no increase in Contract Sum or Contract Time, and as a part of substitution proposal.

4. PRODUCT DELIVERY REQUIREMENTS

- A. Deliver products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

5. SHIPPING REQUIREMENTS

- A. Preparation for Shipment. All equipment shall be suitably packaged to facilitate handling and to protect against damage during transit and storage. All equipment shall be boxed, crated, or otherwise completely enclosed and protected during shipment, handling, and storage. All equipment shall be protected from exposure to the elements and shall be kept dry at all times.
 - 1. Painted and coated surfaces shall be protected against impact, abrasion, discoloration, and other damage. Painted and coated surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of City.
 - 2. Grease and lubricating oil shall be applied to all bearings and similar items.
- B. Shipping. Before shipping each item of equipment shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

6. PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store products only in staging area per provisions of Document 01100 (Summary).
- B. Handle, store, and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate-controlled enclosures.
- C. For exterior storage of fabricated products, place on appropriate supports, above ground.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area.

DOCUMENT 01600

PRODUCT REQUIREMENTS

- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.
- H. Without limiting the foregoing:
 - 1. Contractor shall bear the responsibility for delivery of equipment, spare parts, special tools, and materials to the Site and shall comply with the requirements specified herein and provide required information concerning the shipment and delivery of the materials specified in Contract Documents. These requirements also apply to any subsuppliers making direct shipments to the Site. Acceptance of the equipment shall be made only after it is installed, tested, placed in operation and found to comply with all the specified requirements.
 - 2. All items shall be checked against packing lists immediately on delivery to the Site for damage and for shortages. Damage and shortages shall be remedied with the minimum of delay.
 - 3. No metalwork (miscellaneous steel shapes and reinforcing steel) shall be stored directly on the ground. Masonry products shall be handled and stored in a manner to hold breakage, chipping, cracking, and spalling to a minimum. Cement, lime, and similar products shall be stored off the ground on pallets and shall be covered and kept completely dry at all times. Pipe fittings and valves may be stored out of doors, but must be placed on wooden blocking. PVC pipe, geo-membranes, plastic liner, and other plastic materials shall be stored off the ground on pallets and protected from direct sunlight.
 - 4. Pumps, motors, electrical equipment, and all equipment with anti-friction or sleeve bearings shall be stored in weather-tight structures maintained at a temperature above 60°F. Electrical equipment, controls, and insulation shall be protected against moisture and water damage. All space heaters furnished in equipment shall be connected and operated continuously.
 - 5. Equipment having moving parts such as gears, bearings, and seals, shall be stored fully lubricated with oil, grease, etc., unless otherwise instructed by the manufacturer. Contractor shall carefully follow manufacturer's storage instructions.
 - 6. When required by the equipment manufacturer, moving parts shall be rotated a minimum of twice a month to ensure proper lubrication and to avoid metal to metal "welding". Upon installation of the equipment, Contractor shall, at the discretion of City, start the equipment at one-half load for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
 - 7. When required by the equipment manufacturer, lubricant shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. Contractor shall put new lubricants into the equipment at the time of acceptance.

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PRODUCT REQUIREMENTS

8. Equipment and materials shall not show any pitting, rust, decay, or other deleterious effects of storage when installed in the Work.
9. In addition to the protection specified for prolonged storage, the packaging of spare units and spare parts shall be for export packing and shall be suitable for long-term storage in a damp location. Each spare item shall be packed separately and shall be completely identified on the outside of the container.
10. Handling. Stored items shall be laid out to facilitate their retrieval for use in the Work. Care shall be taken when removing the equipment for use to ensure the precise piece of equipment is removed and that it is handled in a manner that does not damage the equipment.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01620

PRODUCT OPTIONS

PART 1 GENERAL

1. SUMMARY

A. Procedures are described for selecting products and requesting substitutions of unlisted materials in lieu of materials named in the specifications or approved for use in Addenda, which were not already the subject of a Document 00660 Substitution Request Form.

B. Related Documents

1. Document 01250: Modification Procedures
2. Document 01330: Submittals

2. CONTRACTOR'S OPTIONS

A. For products specified only by reference standard: Select any product meeting that standard.

B. For products specified by naming one or more products or manufacturers:

1. Select products of any named manufacturer meeting specifications.
2. If product becomes unavailable due to no fault of Contractor, submit Request for Substitution (RFS).

3. SUBSTITUTIONS

A. Except as provided in Document 00200 Instructions to Bidders with respect to "or equal" items, City and Engineer will consider Contractor's substitution requests only when product becomes unavailable due to no fault of Contractor. Requests for review of proposed substitute items will not be accepted from anyone other than Contractor. The RFS will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of substantial completion on time, and whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with City for work on the Project).

B. Submit separate RFS (and four copies) for each product and support each request with:

1. Product identification
2. Manufacturer's literature
3. Samples, as applicable
4. Name and address of similar projects on which product has been used, and dates of installation
5. Name, address and telephone number of manufacturer's representative or sales engineer

DOCUMENT 01620

PRODUCT OPTIONS

6. For construction methods: Detailed description of proposed method; Drawings illustrating methods.
- C. Where required, itemize a comparison of the proposed substitution with product specified and list significant variations, including but not limited to dimensions, weights, service requirements, and functional differences. If variation from product specified is not pointed out in submittal, variation will be rejected even though submittal was favorably reviewed.
- D. State whether the substitute will require a change in any of the Contract documents (or provisions of any other direct contract with City for work on the Project) to adapt the design of the proposed substitute, and whether or not incorporation or use of the substitute in connection with Work is subject to payment of any license fee or royalty. Submit data relating to changes in construction schedule.
- E. All variations of the proposed substitute from that specified will be identified in the RFS and available maintenance, repair and replacement service will be indicated.
- F. Include accurate cost data comparing proposed substitution with product and amount of net change in Contract price, including but not limited to, an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors effected by the resulting change, all of which will be considered by City in evaluating the proposed substitute. City may require Contractor to furnish additional data about the proposed substitute.
- G. City will not consider substitutions for acceptance when:
 1. They will result in delay meeting construction milestones or completion dates.
 2. They are indicated or implied on submittals without formal request from Contractor.
 3. After Bid Opening Date and after Award of Contract, they are requested directly by subcontractor or supplier.
 4. Acceptance will require substantial revision of Contract Documents.
 5. They disrupt Contractor's job rhythm or ability to perform efficiently.
- H. Substitute products shall not be ordered without written acceptance of City.
- I. City will determine acceptability of proposed substitutions and reserve right to reject proposals due to insufficient information.
- J. Accepted substitutions will be evidenced by a change order. All Contract Documents requirements apply to Work involving substitutions.

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PRODUCT OPTIONS

4. CONTRACTOR'S REPRESENTATION AND WARRANTY

- A. Requests constitute a representation and warranty that Contractor:
1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product
 2. Will provide the same warranty for substitution as for specified product
 3. Will coordinate installation and make other changes, which may be required for Work to be complete in all respects
 4. Waives claims for additional costs, which may subsequently become apparent
 5. Will compensate City for additional redesign costs associated with substitution
 6. Will be responsible for Construction Schedule slippage due to substitution
 7. Will be responsible for Construction Schedule delay due to late ordering of available specified products caused by requests for substitution that is subsequently rejected by City.
 8. Will compensate City for all costs; including extra costs of Contract, extra cost to other contractors, and any claims brought against City, caused by late requests for substitutions or late ordering of products.

5. CITY'S DUTIES

- A. Review Contractor's RFS with reasonable promptness.
- B. Notify Contractor in writing of decision to accept or reject requested substitution.

6. ADMINISTRATIVE REQUIREMENTS

Specified products, materials, or systems for Project may include engineering or on-file standards required by the Regulatory Agency. Contractor's substitution of products, materials or systems may require either additional engineering, testing, reviews, approvals, assurances, or other information for compliance with Regulatory Agency requirements or both. Contractor shall provide all agency approvals or other additional information required and pay additional costs for required City or Engineer's services made necessary by the substitution at no increase in Contract Sum or schedule time, and as a part of substitution proposal.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01620
PRODUCT OPTIONS

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EXISTING UNDERGROUND FACILITIES

PART 1 GENERAL

1. PUBLIC FACILITIES AFFECTED

- A. Where overhead service to a structure, known to receive service, does not exist, then underground service shall be assumed to exist.
- B. Contractor's attention is directed to the existence of underground sewer, water, gas, power, telephone, and cable lines and other utilities within the areas in which Work is to be performed. Contractor shall, at least 2 Business Days, or as otherwise noted, prior to commencement of excavation, notify Underground Service Alert (USA North) at 1-800-227-2600 or 811.

2. PRIVATE FACILITIES AFFECTED

No attempt has been made to locate private utilities on private property such as sprinkler irrigation systems or electrical conduits. Contact the property owners prior to construction.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01715
EXISTING UNDERGROUND FACILITIES

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CUTTING AND PATCHING

PART 1 - GENERAL

1. RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

2. SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Divisions 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - a. Requirements in this Section apply to mechanical and electrical installations. Refer to Divisions 15 and 16 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

3. DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

4. SUBMITTALS

Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.

Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.

Products: List products to be used and firms or entities that will perform the Work.

Dates: Indicate when cutting and patching will be performed.

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CUTTING AND PATCHING

Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.

Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.

City Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

5. QUALITY ASSURANCE

Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

Cutting and patching of structural members shall be performed only by structural steel erector.

Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

Primary operational systems and equipment.

Air or smoke barriers.

Fire-protection systems.

Control systems.

Communication systems.

Conveying systems.

Electrical wiring systems.

Operating systems of special construction in Division 13 Sections.

Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

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CUTTING AND PATCHING

Water, moisture, or vapor barriers.

Membranes and flashings.

Exterior curtain-wall construction.

Equipment supports.

Piping, ductwork, vessels, and equipment.

Noise- and vibration-control elements and systems.

Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

If possible, retain original Installer or fabricator to cut and patch exposed Work listed below. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm.

Processed concrete finishes.

Ornamental metal.

Matched-veneer woodwork.

Preformed metal panels.

Firestopping.

Stucco and ornamental plaster.

Aggregate wall coating.

Wall covering.

HVAC enclosures, cabinets, or covers.

Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

DOCUMENT 01731

CUTTING AND PATCHING

6 .WARRANTY

Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

1. MATERIALS

General: Comply with requirements specified in other Sections of these Specifications.

Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

2. EXECUTION

2.1 EXAMINATION

Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

2.2 PREPARATION

Temporary Support: Provide temporary support of Work to be cut.

Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

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CUTTING AND PATCHING

Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to minimize interruption of services to occupied areas.

3. PERFORMANCE

General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

Concrete, Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.

Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

Proceed with patching after construction operations requiring cutting are complete.

Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as

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CUTTING AND PATCHING

invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather-tight condition.

DOCUMENT 01740

CLEANING

PART 1 GENERAL

1. PROGRESS CLEANING

- A. Contractor shall perform periodic cleaning to ensure that any streets and other City and public properties are maintained free from accumulation of waste materials, dust, mud, and debris.
- B. Where required, Contractor shall wet down surfaces to lay dust and prevent the blowing of dust to nearby residences or public properties.
- C. Contractor shall keep all streets clean and free of dust, mud, and debris resulting from Contractor's operations. Daily cleanup throughout the job will be necessary as Contractor progresses with its Work, but extra attention to cleanup shall be made prior to weekends and holidays. Without limiting the foregoing, Contractor shall remove trench spoil along traveled ways daily; grade and vacuum broom surfaces initially where applicable and later water flush with high-pressure sprays, being careful to avoid downstream contamination.
- D. All dust, mud, spoils, and construction debris shall be removed daily from all roadways, ditches, shoulders, and private property (fills or spoils placed on private property at private property owner's written request excepted).
- E. Disposal of Materials:
 - 1. As part of the scope of Work included within the Contract Sum, Contractor shall be fully responsible for disposing of all construction debris, dirt and spoils resulting from the Work.
 - 2. All waste materials, debris, dirt and rubbish shall be disposed of at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations.
 - 3. Contractor is cautioned that the County of Santa Clara and cities within the county have regulations governing the disposal of rubble, broken pavement, and similar materials.
 - 4. Contractor shall become familiarized with the requirements of the agency having jurisdiction over any contemplated disposal site and shall comply with all such requirements.
- F. All excess soil from performance of Work shall be disposed at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations. If Contractor elects to dispose of soil on any private property, prior to any dumping, a letter allowing such dumping shall be obtained from the property owner and presented to City. Contractor is advised that the property owner is required to obtain a fill permit from the applicable government agency(ies). In addition, placement of fill in wetland areas is subject to permit procedures of the US Army Corps of Engineers. At the completion of Work, a letter from each affected property

DOCUMENT 01740

CLEANING

owner will be required releasing Contractor, Santa Clara County, City and any City consultant from future liability.

- G. If Contractor does not properly clean the Site, in the opinion of City, then City shall have the option of using outside equipment to perform the cleanup and such cost will be withheld from the Contract Sum.

2. FINAL CLEANING

- A. Contractor shall execute final cleaning prior to final inspection, using only properly skilled workers.
- B. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from exposed interior and exterior finished surfaces.
- C. Repair, patch, and touch up marred surfaces to match adjacent finishes.
- D. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- E. Clean equipment and fixtures to a sanitary condition, clean or replace filters of mechanical equipment operated during construction, clean ducts, blowers and coils of units operated without filters during construction.
- F. Clean Site; mechanically sweep paved areas.
- G. Remove waste and surplus materials, rubbish, and construction facilities from Site.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01770

CONTRACT CLOSEOUT

PART 1 GENERAL

1. SUMMARY

This document describes contract closeout procedures including:

- A. Removal of temporary construction facilities
- B. Substantial Completion
- C. Final Completion
- D. Final Cleaning
- E. Project record documents
- F. Material, equipment and Finish Data
- G. Miscellaneous Project Record Submittals
- H. Project Guarantee
- I. Warranties
- J. Turn-In
- K. Release of Claims
- L. Fire Inspection Coordination
- M. Building Inspection Coordination
- N. Liquidated Damages

2. REMOVAL OF TEMPORARY CONSTRUCTION FACILITIES

- A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion Inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore permanent facilities used during construction to specified condition.
- D. Comply with paragraph 1.12 of Document 1500 (Temporary Facilities and Controls).

DOCUMENT 01770

CONTRACT CLOSEOUT

3. SUBSTANTIAL COMPLETION

- A. When Contractor considers Work or designated portion of the Work as substantially complete, Contractor shall submit written notice to City, with list of items to be completed or corrected. The term "Substantial Completion" is defined in Document 01420 References and Definitions.
- B. Within reasonable time City will inspect to determine status of completion.
- C. Should City determine that Work is not substantially complete, City will promptly notify Contractor in writing, listing all defects and omissions.
- D. Contractor shall remedy deficiencies and send a second written notice of substantial completion to the City. Upon receipt of proper notice the City will re-inspect the Work. If deficiencies previously noted are not corrected on re-inspection, then Contractor shall pay the cost of the re-inspection.
- E. When City concurs that Work is substantially complete, City will issue a Certificate of Substantial Completion, accompanied by Contractor's list of items to be complete or corrected as verified by City and Engineer.
- F. Manufactured units, equipment and systems that require startup must have been started up and run for periods prescribed by City, all associated training completed and all spare parts and O & M manuals turned over to the City before a Certificate of Substantial Completion will be issued. The term "Substantial Completion" is defined in Document 01420 References and Definitions. A punch list examination will be performed upon Substantial Completion. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the work by Contractor, Contractor through City will reimburse these visits.

A punch list examination will be performed upon Substantial Completion. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, Contractor will reimburse City for costs associated with these visits.

4. FINAL COMPLETION

- A. Final Completion is defined in Document 01420 References and Definitions. Final Completion occurs when Work meets requirements for City's Final Acceptance. When Contractor considers Work is finally complete, submit written certification that:
 - 1. Contractor has inspected Work for compliance with Contract Documents, and all requirements for Final Acceptance have been met.
 - 2. Except for Contractor maintenance after Final Acceptance, Work has been completed in accordance with Contract Documents and deficiencies listed

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CONTRACT CLOSEOUT

with Certificate of Substantial Completion have been corrected. Equipment and systems have been tested in the presence of City's representative, and are operative. All user manuals and warranties have been submitted and accepted by the City.

3. Work is complete and ready for final inspection.
- B. In addition to submittals required by conditions of Contract, Contractor shall provide submittals required by governing authorities and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- C. When City finds Work is acceptable and final submittal is complete, City will issue final change order reflecting approved adjustments to Contract Sum not previously made by Change Order. Should Engineer or City determine that Work is incomplete or defective:
 1. City promptly will so notify Contractor, in writing, listing the incomplete or defective items.
 2. Contractor shall promptly remedy the deficiencies and notify the City when it is ready for re-inspection.
 3. When Engineer and City determine that the Work is acceptable under the Contract Documents, City will request Contractor to make closeout submittals.
- D. Final adjustments of accounts:
 1. Contractor shall submit a final statement of accounting to City, showing all adjustments to the Contract Sum and complete and execute Document 00650 Agreement and Release of Any and All Claims.
 2. If so required, City shall prepare a final Change Order for submittal to Contractor, showing adjustment to the Contract Sum that were not previously made into a Contract Modification.
5. **FINAL CLEANING**
 - A. Execute final cleaning prior to final inspection.
 - B. Clean surfaces as required to comply with building codes and regulations.
 - C. Restore staging areas to original condition.
 - D. Remove waste and surplus materials, rubbish, and construction facilities from Site.
6. **MATERIAL, EQUIPMENT AND FINISH DATA**

Contractor shall submit two sets of data for primary materials, equipment and finishes as required under each specification document prior to final inspection, bound in 8-1/2 inches

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CONTRACT CLOSEOUT

by 11 inches three-ring binders with durable plastic covers to City for City's records.

7. MISCELLANEOUS PROJECT RECORD SUBMITTALS

Refer to other Specification Documents for miscellaneous record keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to City for City's records.

8. PROJECT GUARANTEE

- A. Requirements for Contractor's guarantee of completed Work are included in Document 00700 General Conditions, Paragraph 9. Contractor shall guarantee Work done under Contract against failures, leaks or breaks or other unsatisfactory conditions due to defective equipment, materials or workmanship, and perform repair work or replacement required, at Contractor's sole expense, for period of two years from date of Final Acceptance.
- B. Neither recordation of final acceptance nor final certificate for payment nor provision of the Contract nor partial or entire use or occupancy of premises by City shall constitute acceptance of Work not done in accordance with Contract Documents nor relieve Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.
- C. City may make repairs to defective Work as set forth in paragraph 1.09.C of Document 00700 General Conditions, if, within 5 working days after mailing of written notice of defective work to Contractor or authorized agent, Contractor shall neglect to make or undertake repair with due diligence; provided, however, that in case of leak or emergency where, in opinion of City, delay would cause hazard to health or serious loss or damage, repairs may be made without notice being sent to Contractor, and Contractor shall pay cost thereof.
- D. If, after installation, operation or use of materials or equipment to be furnished under Contract proves to be unsatisfactory to City, City shall have right to operate and use materials or equipment until it can, without damage to City, be taken out of service for correction or replacement. Period of use of defective materials or equipment pending correction or replacement shall in no way decrease guarantee period required for acceptable corrected or replaced items of materials or equipment.
- E. Nothing in this Document shall be construed to limit, relieve or release Contractor's, subcontractors' and equipment suppliers' liability to City for damages sustained as result of latent defects in equipment caused by negligence of suppliers' agents, employees or subcontractors. Stated in another manner, warranty contained in the Contract Documents shall not amount to, nor shall it be deemed to be, waiver by City of any rights or remedies (or time limits in which to enforce such rights or remedies) it may have for defective workmanship or defective materials under laws of this State pertaining to acts of negligence.

DOCUMENT 01770

CONTRACT CLOSEOUT

9. WARRANTIES

- A. Execute Contractor's submittals and assemble warranty documents, and operations and maintenance manuals, executed or supplied by subcontractors, suppliers, and manufacturers.
 - 1. Provide table of contents and assemble in 8-1/2 inches by 11 inches three-ring binder with durable plastic cover, appropriately separated and organized.
 - 2. Include contact names and phone numbers for City personnel to call during warranty period.
 - 3. Assemble in Specification Document order.

- B. Submit material prior to final application for payment.
 - 1. For equipment put into use with City's permission during construction, submit within ten (10) working days after first operation.
 - 2. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten (10) working days after acceptance, listing date of acceptance as start of warranty period.

- C. Warranties are intended to protect City against failure of work and against deficient, defective and faulty materials and workmanship, regardless of sources.

- D. Limitations: Warranties are not intended to cover failures that result from the following:
 - 1. Unusual or abnormal phenomena of the elements
 - 2. Vandalism after substantial completion
 - 3. Insurrection or acts of aggression including war

- E. Related Damages and Losses: Remove and replace Work which is damaged as result of defective Work, or which must be removed and replaced to provide access for correction of warranted Work.

- F. Warranty Reinstatement: After correction of warranted Work, reinstate warranty for corrected Work to date of original warranty expiration or to a date not less than 730 days after corrected Work was done, whichever is later.

- G. Replacement Cost: Replace or restore failing warranted items without regard to anticipated useful service lives.

- H. Warranty Forms: Submit drafts to City for approval prior to execution. Forms shall not detract from or confuse requirements or interpretations of Contract Documents.
 - 1. Warranty shall be countersigned by manufacturers.

DOCUMENT 01770

CONTRACT CLOSEOUT

2. Where specified, warranty shall be countersigned by subcontractors and installers.
- I. Rejection of Warranties: City reserves right to reject unsolicited and coincidental product warranties that detract from or confuse requirements or interpretations of Contract Documents.
- J. Term of Warranties: For materials, equipment, systems and workmanship warranty period shall be one (1) years minimum from date of final completion of entire Work except where:
 1. Detailed specifications for certain materials, equipment or systems require longer warranty periods.
 2. Materials, equipment or systems are put into beneficial use of City prior to Final Completion as agreed to in writing by City.
- K. Warranty of Title: No material, supplies, or equipment for Work under Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all work to deliver premises, together with improvements and appurtenances constructed or placed thereon by Contractor, to City free from any claim, liens, security interest, or charges, and further agrees that neither Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by Contract shall have right to lien upon premises or improvement or appurtenances thereon. Nothing contained in this Paragraph, however, shall defeat or impair right of persons furnishing materials or labor under bond given by Contractor for their protection or any rights under law permitting persons to look to funds due Contractor in hands of City.

10. TURN-IN

Contract Documents will not be closed out and final payment will not be made until all personnel Identification Media, vehicle permits and keys issued to Contractor during prosecution of Work are turned in to City.

11. RELEASE OF CLAIMS

Contract Documents will not be closed out and final payment will not be made until Document 00650 Agreement and Release of Any and All Claims, is completed and executed by Contractor and City.

12. FIRE INSPECTION COORDINATION

Contractor shall coordinate fire inspection and secure sufficient notice to City to permit convenient scheduling.

DOCUMENT 01770

CONTRACT CLOSEOUT

13. **BUILDING INSPECTION COORDINATION**

Contractor shall coordinate with City inspectors as required.

14. **LIQUIDATED DAMAGES**

If assessment of Liquidated damages as provided by Contract Documents occurs during the project, such assessment shall stop at the date the Contractor achieves Substantial Completion. Contractor shall then have a period of 30 calendar days to complete all activities to achieve Final Completion. If Final Completion is not achieved in this period, Liquidated Damages will resume at the daily rates in Document 00520 until such time as Final Completion is achieved by the Contractor

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF DOCUMENT

DOCUMENT 01770
CONTRACT CLOSEOUT

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PART 1 GENERAL

1. SUMMARY

- A. This document specifies administrative and procedural requirements for Project Record Documents.
- B. Project Record Documents required include:
 - 1. Marked-up copies of Contract Plans
 - 2. Marked-up copies of Shop Drawings
 - 3. Newly prepared Drawings
 - 4. Marked-up copies of Specifications, Addenda, Change Orders and other Contract Modifications
 - 5. Marked-up Project Data submittals
 - 6. Record Samples
 - 7. Field records for variable and concealed conditions
 - 8. Record information on Work that is recorded only schematically
- C. Specific Project Record Documents requirements that expand requirements of this Document are included in the individual Documents of the Specifications.
- D. General Project closeout requirements are included in Document 01770 "Contract Closeout".
- E. Maintenance of Documents and Samples:
 - 1. Store Project Record Documents and samples in the field office apart from Contract Documents used for construction.
 - 2. Do not permit Project Record Documents to be used for construction purposes.
 - 3. Maintain Project Record Documents in good order, and in a clean, dry, legible condition.
 - 4. Make documents and samples available at all times for inspection by Engineer and City.
- F. City will provide one set of the construction drawings and one project manual for Contractor's use for recording as-built conditions.

2. PROJECT RECORD DRAWINGS

- A. Mark-up Procedure: During the construction period, maintain a set of blueline or blackline prints of Contract Plans and Shop Drawings for Project Record Document purposes. Label each document (on first sheet or page) "PROJECT RECORD" in 2 in. high printed letters. Keep record documents current. Note: A reference by number to a Change Order, Construction Change Directive, RFI, RFQ, Field Instructions or other such document is not acceptable as sufficient record information on any record document. Do not permanently conceal any Work until required information has been recorded.

1. Mark these Drawings to indicate the actual installation where the installation varies appreciably from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include but are not limited to:
 - a. Dimensional changes to the Drawings
 - b. Revisions to details shown on the Drawings
 - c. Depths of various elements of foundation in relation to main floor level or survey datum.
 - d. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - e. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - f. Establish locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, and similar items.
 - g. Provide actual numbering of each electrical circuit.
 - h. Field changes of dimension and detail.
 - i. Revisions to routing of piping and conduits
 - j. Revisions to electrical circuitry
 - k. Actual equipment locations
 - l. Duct size and routing
 - m. Changes made by Change Order, Construction Change Directive or Field Instruction
 - n. Details not on original Contract Plans
 2. Mark completely and accurately Project Record Drawing prints of Contract Plans or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on Contract Plans location.
 3. Mark Project Record Drawing sets with red erasable colored pencil; use other colors to distinguish between changes for different categories of the Work at the same location.
 4. Mark important additional information that was either shown schematically or omitted from original Drawings.
 5. Note Construction Change Directive numbers; Field Instruction numbers; alternate numbers; Change Order numbers and similar identification.
 6. Responsibility for Mark-up: Where feasible, the individual or entity who obtained Project Record Drawing data, whether the individual or entity is the installer, subcontractor, or similar entity, is required to prepare the mark-up on Project Record Drawings.
 - a. Accurately record information in an understandable and legible drawing technique.
 - b. Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.
- B. Preparation of Record Drawings: Immediately prior to inspection for Certification of Substantial Completion, review completed marked-up Project Record Drawings with City and Engineer. These drawings shall be submitted to MTH

Engineers to prepare a full set of AutoCAD plots of the Contract Plans and Shop Drawings.

1. Incorporate changes and additional information previously marked on print sets. Erase, redraw, and add details and notations where applicable. Identify and date each Drawing; include the printed designation "PROJECT RECORD DRAWINGS" in a prominent location on each Drawing.
 2. Refer instances of uncertainty to City for resolution.
 3. Distribution: Whether or not changes and additional information were recorded, organize and bind original marked-up set of prints that were maintained during the construction period into manageable sets. Bind the set with durable paper cover sheets, with appropriate identification, including titles, dates and other information on cover sheets.
- C. Distribution of Marked-Up Drawings: Submit the marked-up Project Record Drawings set to City for City's records.
- D. Shop Drawings and Samples: Maintain as record documents; legibly annotate Shop Drawings and Samples to record changes made after review.
- E. In addition to requirements of this Document, comply with supplemental requirements of Divisions 15 and 16.
- F. Where Divisions 2 to 16 of the Specifications require the preparation of large scale, detailed layout drawings of the Work of those Divisions. These layout drawings are not Shop Drawings as defined by Document 00700 (General Conditions), but together with Shop Drawings or layout drawings of all other affected Documents are used to check, coordinate, and integrate the work of the various Documents.

Include these layout drawings as part of the Project Record Documents.

3. PROJECT RECORD SPECIFICATIONS

During the construction period, maintain one copy of the Project Specifications, including addenda and modifications issued, for Project Record Document purposes.

- A. Mark the Project Record Specifications to indicate the actual installation where the installation varies substantially from that indicated in Specifications and Modifications issued. Note related Project Record Drawing information, where applicable. Give particular attention to substitutions, selection of product options, Change Order, Construction Change Directive and Field Instruction work, and information on concealed installation that would be difficult to identify or measure and record later.
1. In each Specification Document where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
 2. Record the name of the manufacturer, catalog number, supplier and installer, and other information necessary to provide a record of

selections made and to document coordination with Project Record Product Data submittals and maintenance manuals.

3. Note related Project Record Product Data, where applicable, for each principal product specified, indicate whether Project Record Product Data has been submitted in maintenance manual instead of submitted as Project Record Product Data.
4. Upon completion of mark-up, submit Project Record Specifications to City for City's records.

5. PROJECT RECORD PRODUCT DATA

A. During the construction period, maintain one copy of each Project Record Product Data submittal for Project Record Document purposes.

1. Mark Project Record Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Project Record Product Data submitted. Include significant changes in the product delivered to the site, and changes in manufacturer's instructions and recommendations for installation.
2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
3. Note related Change Orders and mark-up of Project Record Drawings, where applicable.
4. Upon completion of mark-up, submit a complete set of Project Record Product Data to City for City's records.
5. Where Project Record Product Data is required as part of maintenance manuals, submit marked-up Project Record Product Data as an insert in the manual, instead of submittal as Project Record Product Data.
6. The prime Contractor is responsible for mark-up and submittal of record Project Record Product Data for its own Work.

B. MATERIAL, EQUIPMENT AND FINISH DATA

1. Provide data for primary materials, equipment and finishes as required under each specification document.
2. Submit two sets prior to final inspection, bound in 8-1/2 inches by 11 inches three-ring binders with durable plastic covers; provide typewritten table of contents for each volume.
3. Arrange by Specification division and give names, addresses, and telephone numbers of subcontractors and suppliers. List:
 - a. Trade names.
 - b. Model or type numbers.
 - c. Assembly diagrams.
 - d. Operating instructions.
 - e. Cleaning instructions.
 - f. Maintenance instructions.
 - g. Recommended spare parts.
 - h. Product data.

6. MISCELLANEOUS PROJECT RECORD SUBMITTALS

Refer to other Specification Documents for miscellaneous record keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to the City for City's records. Categories of requirements resulting in miscellaneous records include, but are not limited to, the following

- A. Field records on excavations and foundations
- B. Field records on underground construction and similar work
- C. Survey showing locations and elevations of underground lines
- D. Invert elevations of drainage piping
- E. Surveys establishing building lines and levels
- F. Authorized measurements utilizing unit prices or allowances
- G. Records of plant treatment
- H. Ambient and substrate condition tests
- I. Certifications received in lieu of labels on bulk products
- J. Batch mixing and bulk delivery records
- K. Testing and qualification of tradespersons
- L. Documented qualification of installation firms
- M. Load and performance testing
- N. Inspections and certifications by governing authorities
- O. Leakage and water-penetration tests
- P. Fire resistance and flame spread test results
- Q. Final inspection and correction procedures

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

1. RECORDING

Post changes and modifications to the Documents as they occur. Do not wait until the end of the Project. City and/or Engineer may periodically review Project Record

Documents to assure compliance with this requirement.

2. SUBMITTAL

A. At completion of Project, deliver record documents to City.

B. Accompany submittal with transmittal letter containing:

Date

Project title and number

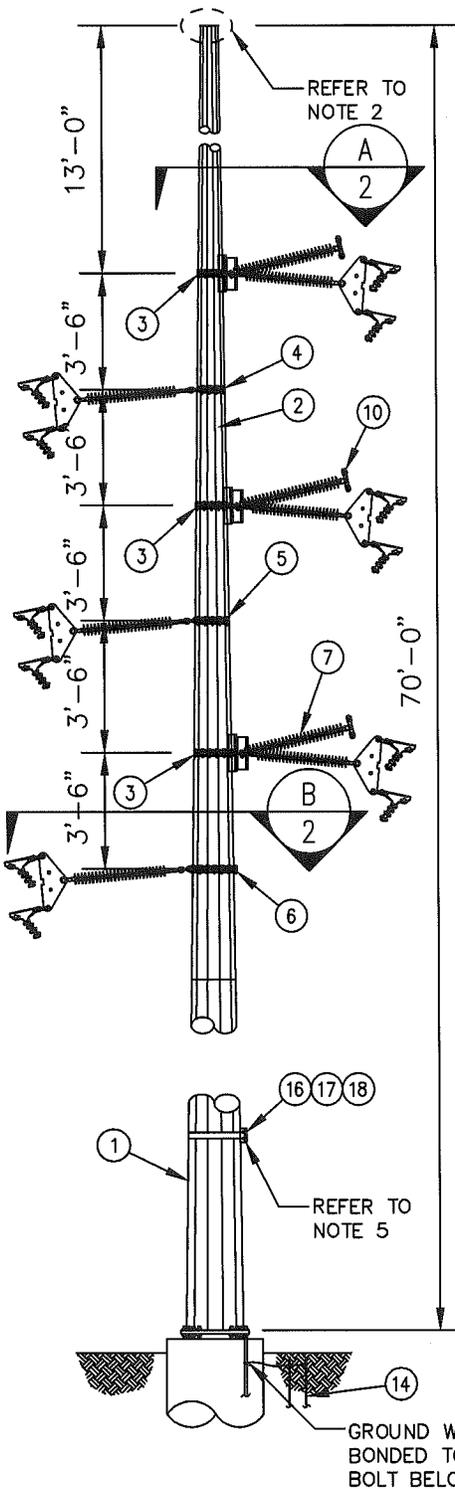
Contractor's name and address

Number and title of each record documents

Certification that each document as submitted is complete and accurate, and signature of Contractor, or Contractor's authorized representative

END OF DOCUMENT

60 KV STEEL POLE, STRUCTURE 1



ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	VALMONT 223679A (STR. 24)	1	BOTTOM STEEL POLE SECTION (679A), 38'
2	VALMONT 223679B (STR 24)	1	MIDDLE STEEL POLE SECTION (679B), 36'-9"
3	MACLEAN# UCB-27-2ETEL162	3	POLE BAND ASSEMBLY, 27.5" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET
4	MACLEAN# UCB30-27-E	1	POLE BAND ASSEMBLY, 27" DIAMETER, 30 KIP, W/ 1 EYE LINK
5	MACLEAN# UCB30-28.5-E	1	POLE BAND ASSEMBLY, 28.5" DIAMETER, 30 KIP, W/ 1 EYE LINK
6	MACLEAN# UCB30-30.5-E	1	POLE BAND ASSEMBLY, 30.5" DIAMETER, 30 KIP, W/ 1 EYE LINK
7	MACLEAN# H191042FX01	3	INSULATOR, POST TYPE, HORIZONTAL, 69 kV, SILICONE RUBBER, W/ FLAT BENDABLE BASE
8	HUBBELL# LCU70066	3	CONNECTOR, 3 BOLT (954 AAC)
9	BIN NO. 71180	6	CONNECTOR, JUMPER. NON-TENSION (715T-13 ACCR OR 954 AAC)
10	MACLEAN# LPH3D-18-140	3	CLAMP, JUMPER, (FOR TWIN 715-T13 ACCR)
11	HUGHES BROTHERS# B7- - - -	6	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED
12	BIN NO. 70044	12	WASHER, 3/4" FLAT, ROUND
13	HUGHES BROTHERS# MF70	6	LOCKNUT, FOR 3/4" BOLT
14	N/A	1	GROUND ROD ASSEMBLY
15	OH-3041, (SIMILAR)	9	DE STRAIN INSULATOR ASSEMBLY
16	N/A	1	STAINLESS STEEL BAND, 3/4" W, LENGTH AS REQUIRED
17	HUBBELL# CBAB58	1	BANDING CLAMP
18	PREFORMED LINE PRODUCTS# 480011H2	1	CABLE SUPPORT, BAND MOUNTED, W/HARDWARE KIT

NOTES:

1. DEADEND INSULATOR ASSEMBLY TO BE INSTALLED SIMILAR TO CITY OF SANTA CLARA DRAWING NUMBER OH-3041.
2. FOR POLE CAP ASSEMBLY DETAILS REFER TO DRAWING SVP-A-T005-7.
3. CLAMP BOTH EXISTING 954 KCMIL AAC, "MAGNOLIA" CONDUCTORS TOGETHER USING THE 3-BOLT CONNECTOR. THE CONDUCTOR WILL TERMINATE AT THIS CONNECTOR AS SHOWN IN SECTION B.
4. FOR ITEM #3, THE DIAMETER GIVEN IS FOR THE MIDDLE PHASE. TO OBTAIN A TIGHT FIT AROUND THE STEEL POLE, REMOVE POLE BAND LINKS FROM THE UPPER POLE BAND AND INSERT THEM INTO THE LOWER POLE BAND. THE SPECIFIC LINKS TO REMOVE ARE SHOWN ON THE MANUFACTURER'S DRAWING.
5. ATTACH EXISTING COMMUNICATION CABLE WITH MESSENGER WIRE TO THE STEEL POLE, AT THE SAME HEIGHT AS EXISTING CABLE.

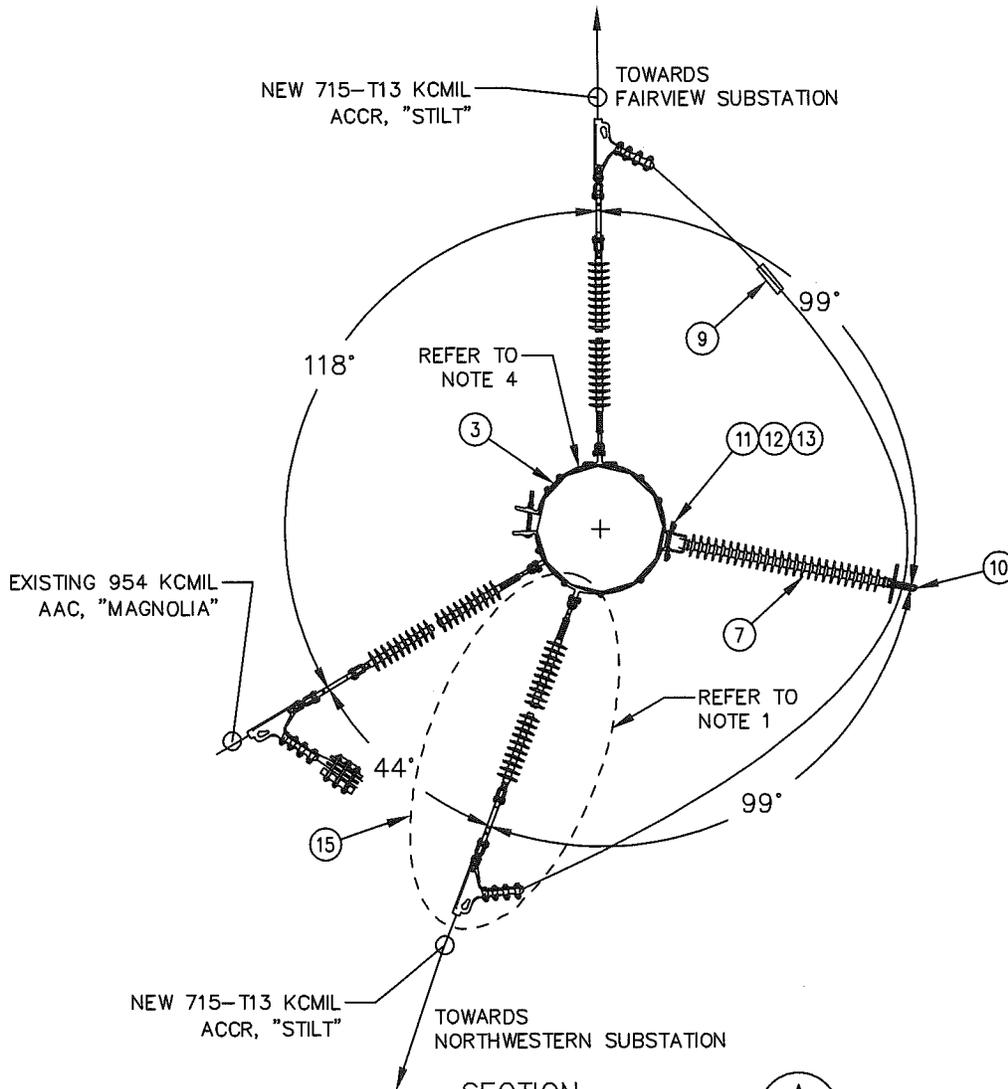
FOR BIDDING PURPOSES ONLY

12/3/2014

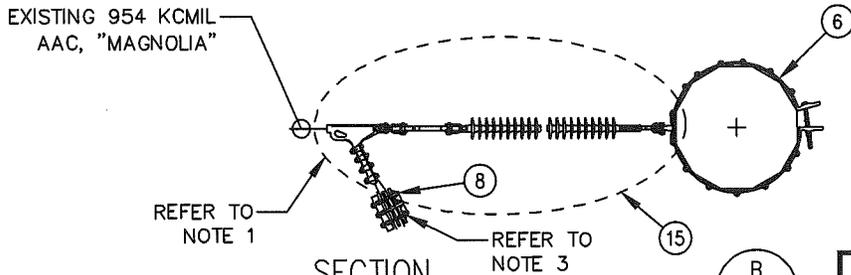
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REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP				FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA			
APPROVED: GS							
				SHEET 1 OF 2			
				DRAWING NO: SVP-A-T005-1			
				REV B			

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60 KV STEEL POLE, STRUCTURE 1



SECTION A
POLE-BAND-ASSEMBLY
FOR NEW "STILT" CONDUCTOR

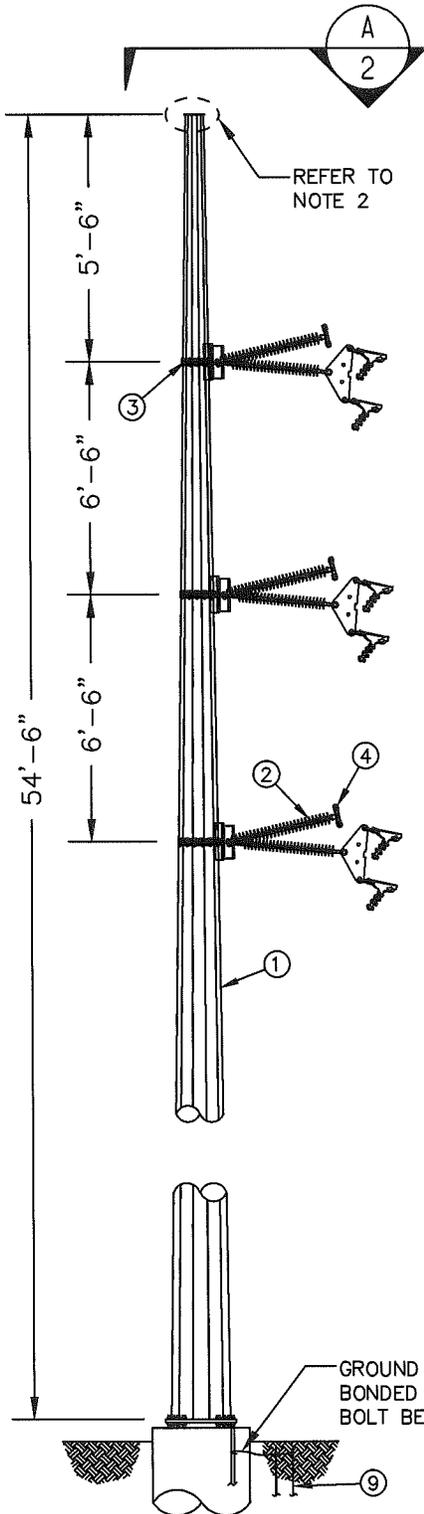


SECTION B
POLE-BAND-ASSEMBLY
FOR EXISTING "MAGNOLIA" CONDUCTOR

FOR BIDDING PURPOSES ONLY
12/3/2014

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REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 KV TRANSMISSION LINE CITY OF SANTA CLARA				DRAWN BY: DJW	
APPROVED: GS						SHEET 2 OF 2	
						DRAWING NO: SVP-A-T005-1	
						REV B	

60 KV STEEL POLE, STRUCTURE 2



ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	VALMONT 223687A (STR. 32)	1	BOTTOM STEEL POLE SECTION (687A)
2	MACLEAN# H191042FX01	3	INSULATOR, POST TYPE, HORIZONTAL, 69 kV, SILICONE RUBBER, W/ FLAT BENDABLE BASE
3	MACLEAN# UCB-26-2ETEL162	3	POLE BAND ASSEMBLY, 25.6" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET
4	MACLEAN# LPH3D-18-140	3	CLAMP, JUMPER, (FOR TWIN 715-T13 ACCR)
5	HUGHES BROTHERS# B7- - - -	6	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED
6	BIN NO. 70044	12	WASHER, 3/4" FLAT, ROUND
7	HUGHES BROTHES# MF70	6	LOCKNUT, FOR 3/4" BOLT
8	BIN NO. 71180	6	CONNECTOR, JUMPER, NON-TENSION (715T-13 ACCR or 954 AAC)
9	N/A	1	GROUND ROD ASSEMBLY
10	OH-3041 (SIMILAR)	6	DE STRAIN INSULATOR ASSEMBLY

NOTES:

- DEADEND INSULATOR ASSEMBLY TO BE INSTALLED SIMILAR TO CITY OF SANTA CLARA DRAWING NUMBER OH-3041.
- FOR POLE CAP ASSEMBLY DETAILS REFER TO DRAWING SVP-A-T005-7.
- FOR ITEM #3, THE DIAMETER GIVEN IS FOR THE MIDDLE PHASE. TO OBTAIN A TIGHT FIT AROUND THE STEEL POLE, REMOVE POLE BAND LINKS FROM THE UPPER POLE BAND AND INSERT THEM INTO THE LOWER POLE BAND. THE SPECIFIC LINKS TO REMOVE ARE SHOWN ON THE MANUFACTURER'S DRAWING.

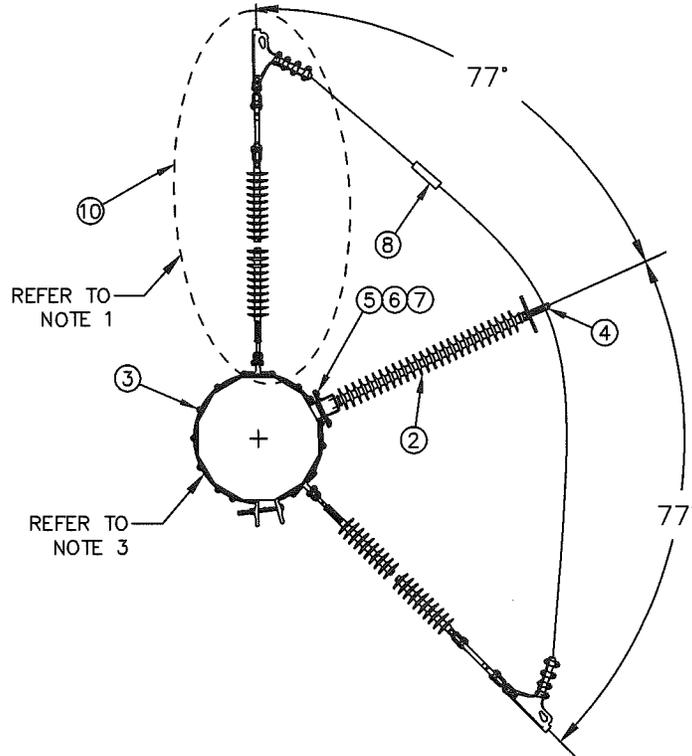
FOR BIDDING PURPOSES ONLY

12/3/2014

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BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA				DRAWN BY: DJW	
APPROVED: GS						SHEET 1 OF 2	
						DRAWING NO: SVP-A-T005-2	
						REV B	

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60 KV STEEL POLE, STRUCTURE 2



SECTION A
-
POLE-BAND-ASSEMBLY

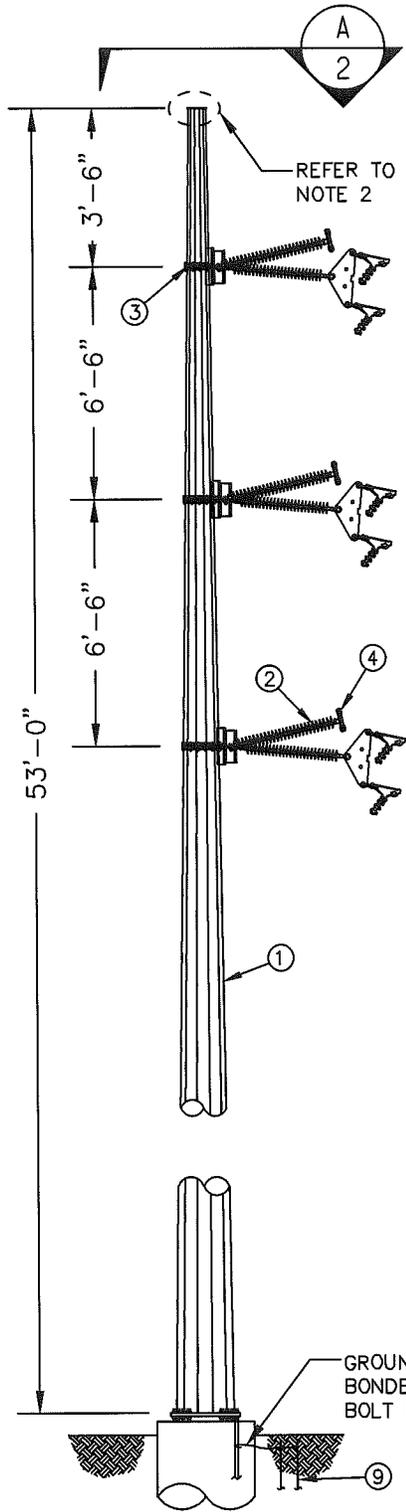
**FOR BIDDING
PURPOSES ONLY**

12/3/2014

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BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA	DRAWN BY: DJW				
APPROVED: GS			SHEET 2 OF 2				
			DRAWING NO: SVP-A-T005-2		REV		
				B			

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60 KV STEEL POLE, STRUCTURE 3



ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	VALMONT 223686A (STR. 31)	1	BOTTOM STEEL POLE SECTION (686A)
2	MACLEAN# H191042FX01	3	INSULATOR, POST TYPE, HORIZONTAL, 69 kV, SILICONE RUBBER, W/ FLAT BENDABLE BASE
3	MACLEAN# UCB-25-2ETEL162	3	POLE BAND ASSEMBLY, 25.1" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET
4	MACLEAN# LPH3D-18-140	3	CLAMP, JUMPER, (FOR TWIN 715-T13 ACCR)
5	HUGHES BROTHERS# B7- - - -	6	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED
6	BIN NO. 70044	12	WASHER, 3/4" FLAT, ROUND
7	HUGHES BROTHERS# MF70	6	LOCKNUT, FOR 3/4" BOLT
8	BIN NO. 71180	6	CONNECTOR, JUMPER, NON-TENSION (715T-13 ACCR or 954 AAC)
9	N/A	1	GROUND ROD ASSEMBLY
10	OH-3041 (SIMILAR)	6	DE STRAIN INSULATOR ASSEMBLY

NOTES:

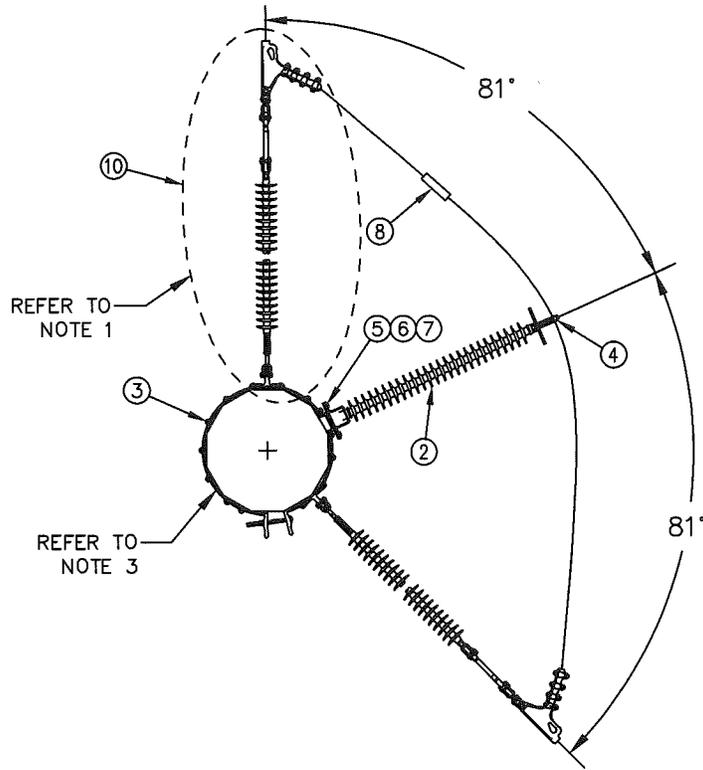
- DEADEND INSULATOR ASSEMBLY TO BE INSTALLED SIMILAR TO CITY OF SANTA CLARA DRAWING NUMBER OH-3041.
- FOR POLE CAP ASSEMBLY DETAILS REFER TO DRAWING SVP-A-T005-7.
- FOR ITEM #3, THE DIAMETER GIVEN IS FOR THE MIDDLE PHASE. TO OBTAIN A TIGHT FIT AROUND THE STEEL POLE, REMOVE POLE BAND LINKS FROM THE UPPER POLE BAND AND INSERT THEM INTO THE LOWER POLE BAND. THE SPECIFIC LINKS TO REMOVE ARE SHOWN ON THE MANUFACTURER'S DRAWING.

FOR BIDDING PURPOSES ONLY
12/3/2014

A	7/28/14 ISSUED FOR REVIEW	GS	B	12/3/14	RELEASED FOR BIDDING	GS	
REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP			FAIRVIEW SUBSTATION LOOP-IN			DRAWN BY: DJW	
APPROVED: GS			60 kV TRANSMISSION LINE			SHEET 1 OF 2	
			CITY OF SANTA CLARA			DRAWING NO: SVP-A-T005-3	
						REV B	

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60 KV STEEL POLE, STRUCTURE 3



SECTION

POLE-BAND-ASSEMBLY

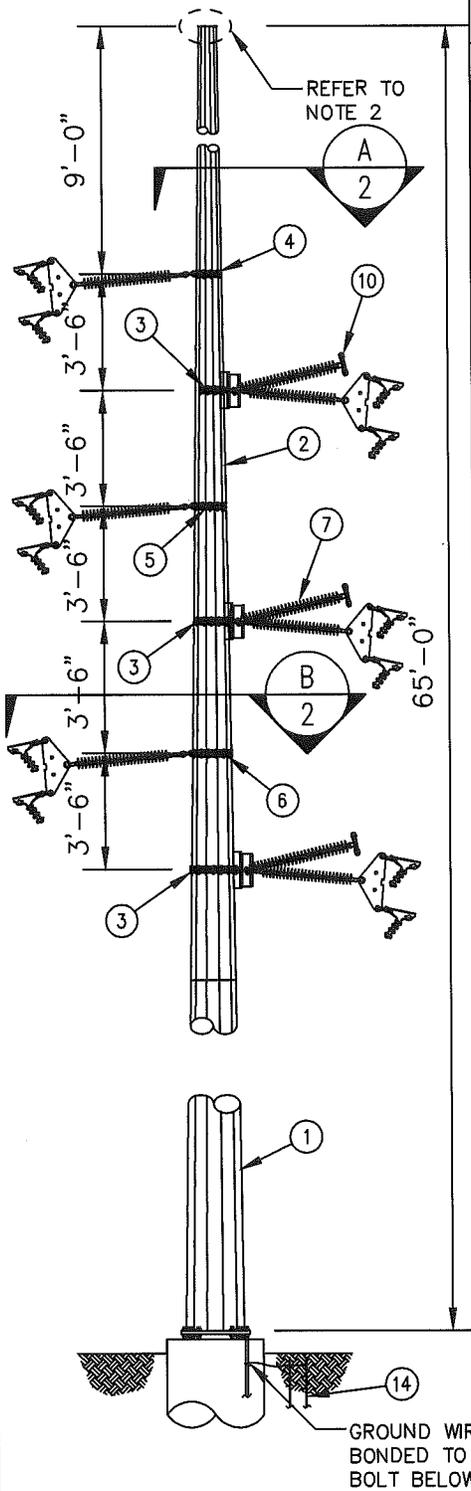


**FOR BIDDING
PURPOSES ONLY**

12/3/2014

REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
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BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA				DRAWN BY: DJW	
APPROVED: GS						SHEET 2 OF 2	
						DRAWING NO: SVP-A-T005-3	
						REV B	

60 KV STEEL POLE, STRUCTURE 4



ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	VALMONT 223680A (STR. 25)	1	BOTTOM STEEL POLE SECTION (680A), 35'
2	VALMONT 223680B (STR 25)	1	MIDDLE STEEL POLE SECTION (680B), 35'-5"
3	MACLEAN# UCB-33-2ETEL162	3	POLE BAND ASSEMBLY, 32.8" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET
4	MACLEAN# UCB30-30.5-E	1	POLE BAND ASSEMBLY, 30.5" DIAMETER, 30 KIP, W/ 1 EYE LINK
5	MACLEAN# UCB30-32.5-E	1	POLE BAND ASSEMBLY, 32.5" DIAMETER, 30 KIP, W/ 1 EYE LINK
6	MACLEAN# UCB30-34-E	1	POLE BAND ASSEMBLY, 34" DIAMETER, 30 KIP, W/ 1 EYE LINK
7	MACLEAN# H191042FX01	3	INSULATOR, POST TYPE, HORIZONTAL, 69 kV, SILICONE RUBBER, W/ FLAT BENDABLE BASE
8	HUBBELL# LCU70066	3	CONNECTOR, 3 BOLT (954 AAC)
9	BIN NO. 71180	6	CONNECTOR, JUMPER. NON-TENSION (715T-13 ACCR OR 954 AAC)
10	MACLEAN# LPH3D-18-140	3	CLAMP, JUMPER, (FOR TWIN 715-T13 ACCR)
11	HUGHES BROTHERS# B7_ _ _ _	6	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED
12	BIN NO. 70044	12	WASHER, 3/4" FLAT, ROUND
13	HUGHES BROTHERS# MF70	6	LOCKNUT, FOR 3/4" BOLT
14	N/A	1	GROUND ROD ASSEMBLY
15	OH-3041 (SIMILAR)	9	DE STRAIN INSULATOR ASSEMBLY

NOTES:

1. DEADEND INSULATOR ASSEMBLY TO BE INSTALLED SIMILAR TO CITY OF SANTA CLARA DRAWING NUMBER OH-3041.
2. FOR POLE CAP ASSEMBLY DETAILS REFER TO DRAWING SVP-A-T005-7.
3. CLAMP BOTH EXISTING 954 KCMIL AAC, "MAGNOLIA" CONDUCTORS TOGETHER USING THE 3-BOLT CONNECTOR. THE CONDUCTOR WILL TERMINATE AT THIS CONNECTOR AS SHOWN IN SECTION B.
4. FOR ITEM #3, THE DIAMETER GIVEN IS FOR THE MIDDLE PHASE. TO OBTAIN A TIGHT FIT AROUND THE STEEL POLE, REMOVE POLE BAND LINKS FROM THE UPPER POLE BAND AND INSERT THEM INTO THE LOWER POLE BAND. THE SPECIFIC LINKS TO REMOVE ARE SHOWN ON THE MANUFACTURER'S DRAWING.

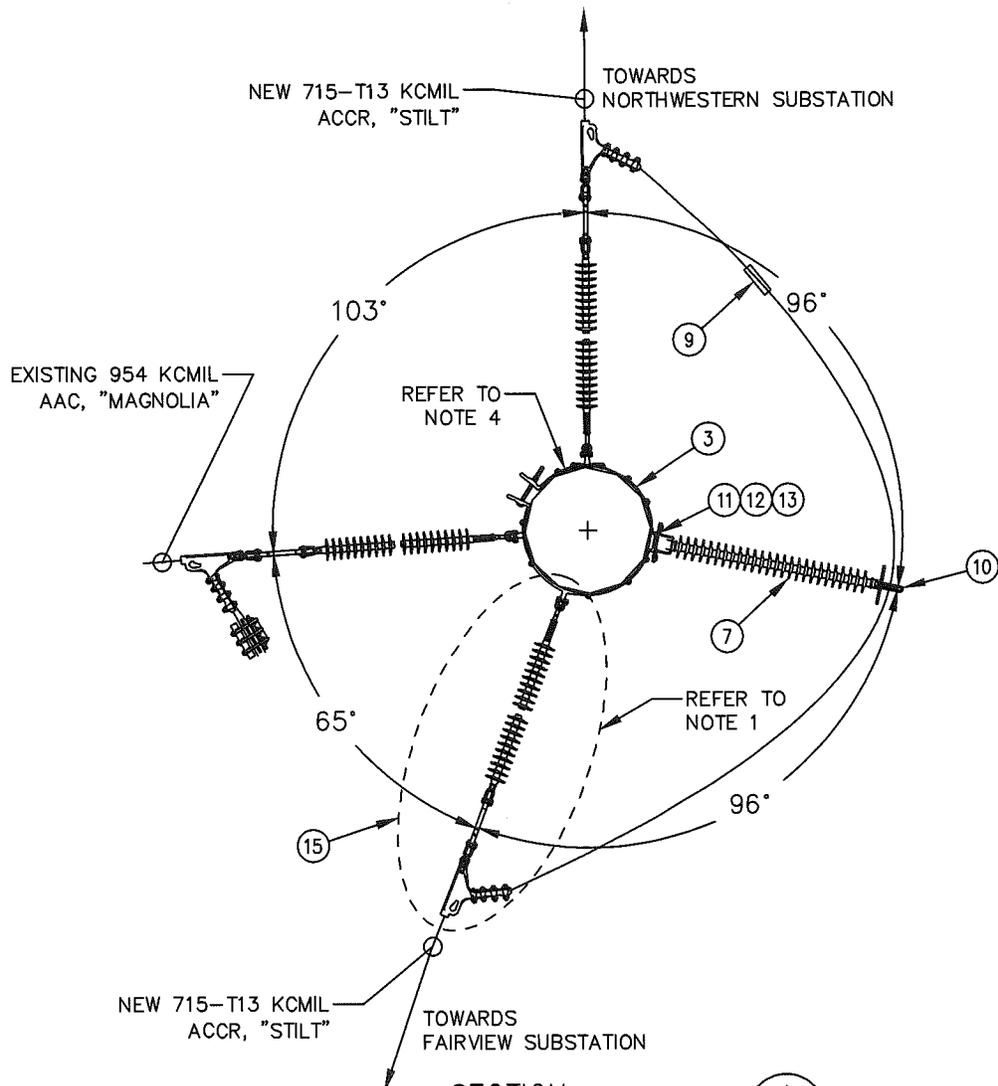
FOR BIDDING PURPOSES ONLY

12/3/2014

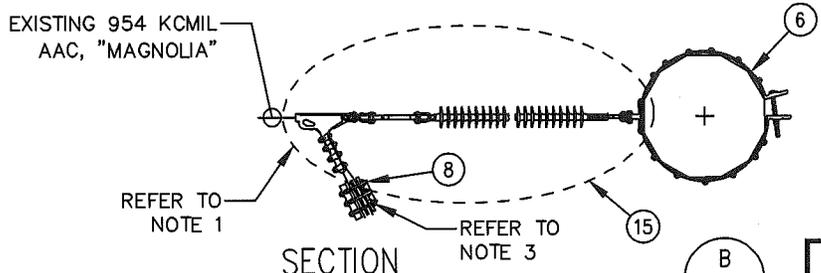
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REV	DATE	DESCRIPTION		APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA				DRAWN BY: DJW		
APPROVED: GS						SHEET 1 OF 2		
						DRAWING NO: SVP-A-T005-4		
						REV B		

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60 KV STEEL POLE, STRUCTURE 4



SECTION A
 POLE-BAND-ASSEMBLY
 FOR NEW "STILT" CONDUCTOR



SECTION B
 POLE-BAND-ASSEMBLY
 FOR EXISTING "MAGNOLIA" CONDUCTOR

**FOR BIDDING
PURPOSES ONLY**

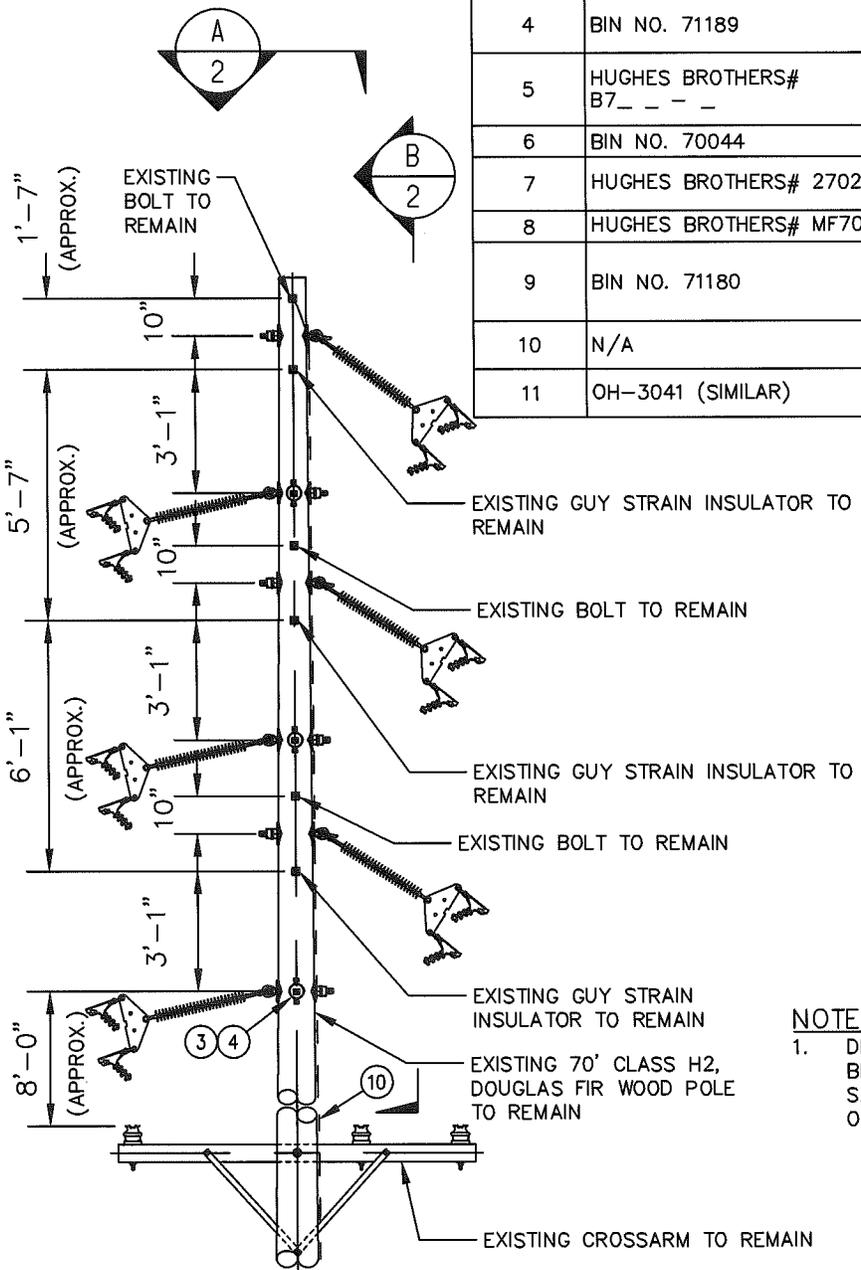
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REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 KV TRANSMISSION LINE CITY OF SANTA CLARA				DRAWN BY: DJW	
APPROVED: GS						SHEET 2 OF 2	
						DRAWING NO: SVP-A-T005-4	
						REV B	

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60 KV EXISTING WOOD POLE, STRUCTURE B

ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	HUGHES BROTHERS# CF692-78R	3	INSULATOR, GUY STRAIN, 78", W/ CLEVIS - CLEVIS & 1 ROLLER
2	PREFORMED LINE PRODUCTS# GDE-1108	3	GUY GRIP, FOR 7/16" EHS
3	MACLEAN# H1CD036VX01	3	INSULATOR, POST TYPE, HORIZONTAL, 3' LONG, POLYMER, W/ FIXED GAIN BASE & DOUBLE TRUNNION END FITTINGS
4	BIN NO. 71189	6	CLAMP, TUNNION (715T-13 ACCR)
5	HUGHES BROTHERS# B7- - - -	6	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED
6	BIN NO. 70044	6	WASHER, 3/4" FLAT, ROUND
7	HUGHES BROTHERS# 2702.7	6	WASHER, SPRING CLIP, FOR 3/4" BOLT
8	HUGHES BROTHERS# MF70	6	LOCKNUT, FOR 3/4" BOLT
9	BIN NO. 71180	6	CONNECTOR, JUMPER NON TENSION (715T-13 ACCR OR 954 AAC)
10	N/A	A/R	BONDING MATERIALS, AS REQUIRED
11	OH-3041 (SIMILAR)	6	DE STRAIN INSULATOR ASSEMBLY



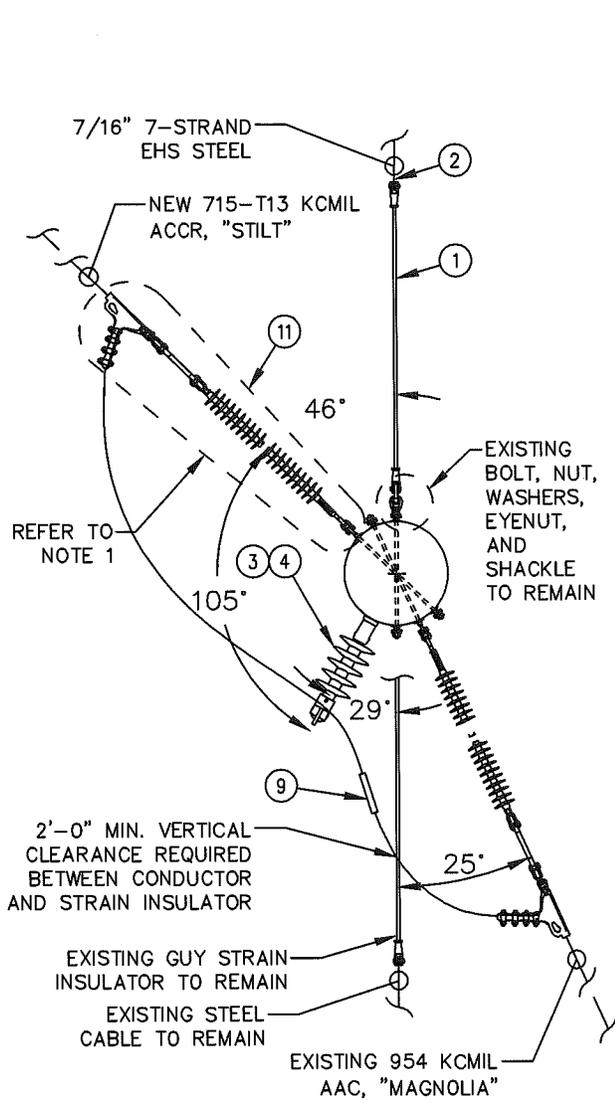
NOTES:
 1. DEADEND INSULATOR ASSEMBLY TO BE INSTALLED SIMILAR TO CITY OF SANTA CLARA DRAWING NUMBER OH-3041.

FOR BIDDING PURPOSES ONLY
 12/3/2014

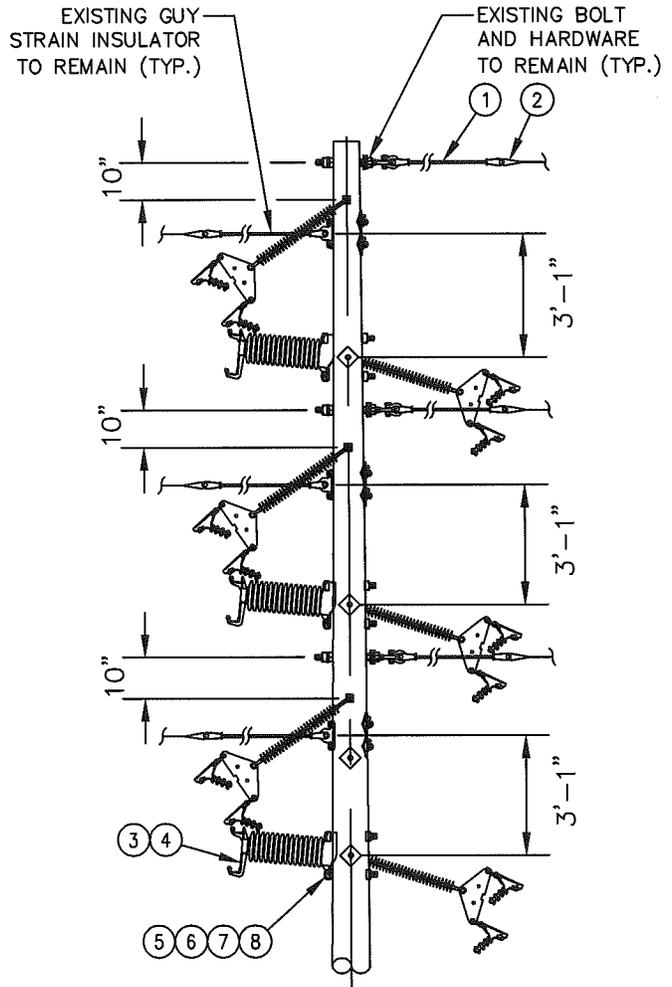
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REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP			FAIRVIEW SUBSTATION LOOP-IN				DRAWN BY: SLB
APPROVED: GS			60 KV TRANSMISSION LINE				SHEET 1 OF 2
			CITY OF SANTA CLARA				DRAWING NO: SVP-A-T005-5
							REV B

L:\Silicon Valley Power\015 Fairview Substation\11 Drawings\04 Framing Drawing\00 CURRENT\04 Framing Drawing\SVP-A-T005-5-SH1-B.dwg albramey 12/1/2014 4:47 PM

60 KV EXISTING WOOD POLE, STRUCTURE B



SECTION A
INSULATOR ATTACHMENT AND ORIENTATION



SECTION B
INSULATOR ATTACHMENT

FOR BIDDING PURPOSES ONLY

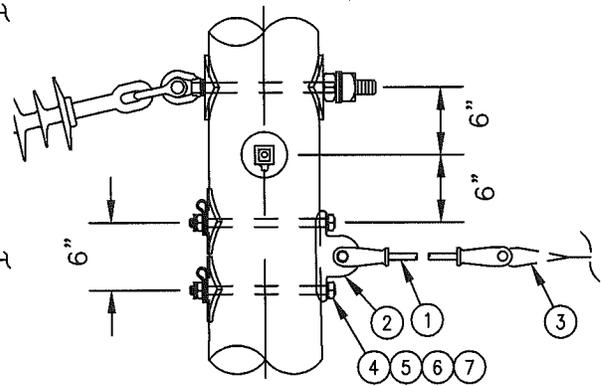
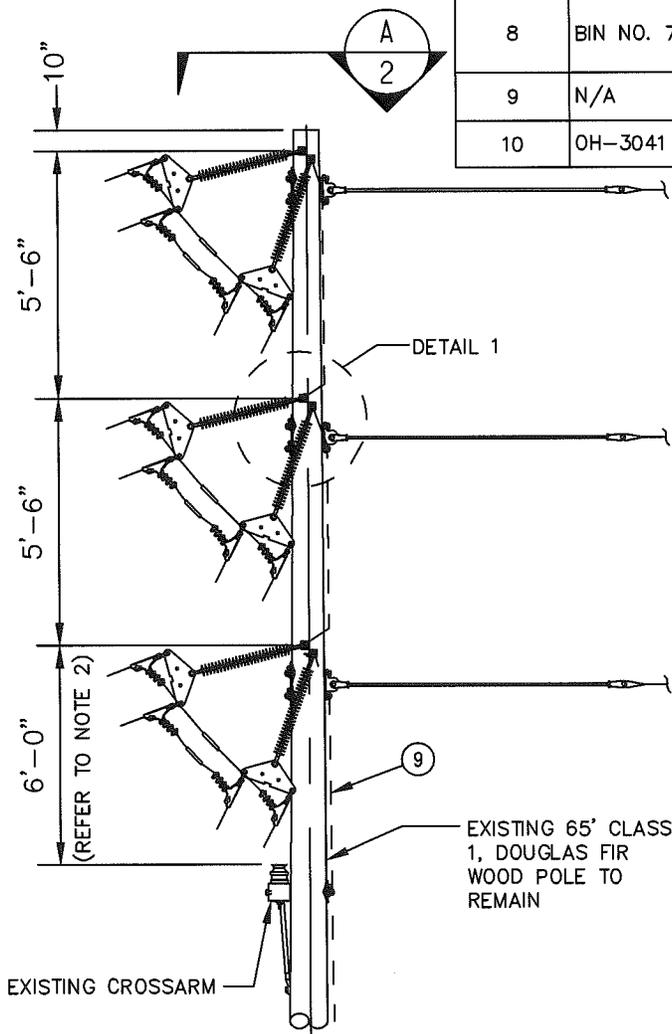
12/3/2014

REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
A	7/28/14	ISSUED FOR REVIEW	GS	B	12/3/14	RELEASED FOR BIDDING	GS

BY: ALP	FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA	DRAWN BY: SLB	SHEET 2 OF 2 DRAWING NO: SVP-A-T005-5	REV B
APPROVED: GS				

60 KV EXISTING WOOD POLE, STRUCTURE C

ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	HUGHES BROTHERS# CF692-78R	3	INSULATOR, GUY STRAIN, 78", W/ CLEVIS - CLEVIS & 1 ROLLER
2	HUGHES BROTHERS# 2817R4.5-13-13	3	GUY ATTACHMENT, DEAD END TEE, CURVED BASE, 60 KIP
3	PREFORMED LINE PRODUCTS# GDE-1108	3	GUY GRIP, FOR 7/16" EHS
4	HUGHES BROTHERS# B7_ _ _	6	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED
5	BIN NO. 70049	6	WASHER, SQUARE, CURVED 4" X 4", FOR 3/4" BOLT
6	HUGHES BROTHERS# 2702.7	6	WASHER, SPRING CLIP, FOR 3/4" BOLT
7	HUGHES BROTHES# MF70	6	LOCKNUT, FOR 3/4" BOLT
8	BIN NO. 71180	6	CONNECTOR, JUMPER. NON-TENSION (715T-13 ACCR OR 954 AAC)
9	N/A	A/R	BONDING MATERIALS, AS REQUIRED
10	OH-3041 (SIMILAR)	6	DE STRAIN INSULATOR ASSEMBLY



DETAIL
 TYPICAL GUY AND INSULATOR ATTACHMENT DETAIL

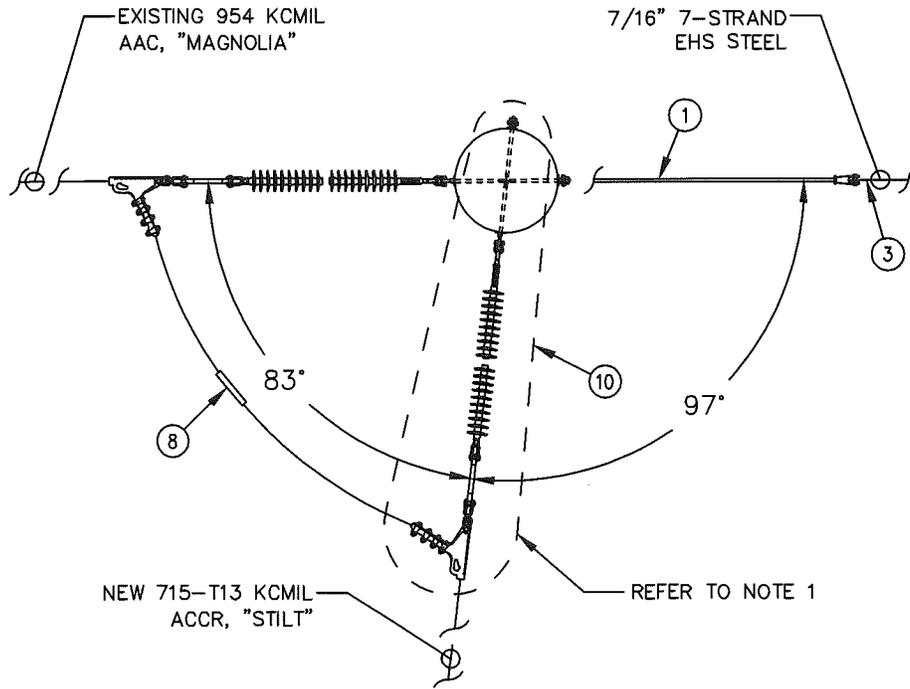
- NOTES:**
- DEADEND INSULATOR ASSEMBLY TO BE INSTALLED SIMILAR TO CITY OF SANTA CLARA DRAWING NUMBER OH-3041.
 - LOWER EXISTING CROSSARM BY APPROXIMATELY 2'-11".

FOR BIDDING PURPOSES ONLY
 12/3/2014

A	7/28/14	ISSUED FOR REVIEW	GS	B	12/3/14	RELEASED FOR BIDDING	GS
REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA				DRAWN BY: SLB	
APPROVED: GS						SHEET 1 OF 2	
						DRAWING NO: SVP-A-T005-6	
						REV B	

L:\Silicon Valley Power\SVP-015 Fairview Substation\11 Drawings\00 CURRENT\04 Framing Drawing\SVP-A-T005-6-SH1-B.dwg silbarney 12/1/2014 4:50 PM

60 KV EXISTING WOOD POLE, STRUCTURE C



SECTION
INSULATOR ATTACHMENT
AND ORIENTATION



**FOR BIDDING
PURPOSES ONLY**

12/3/2014

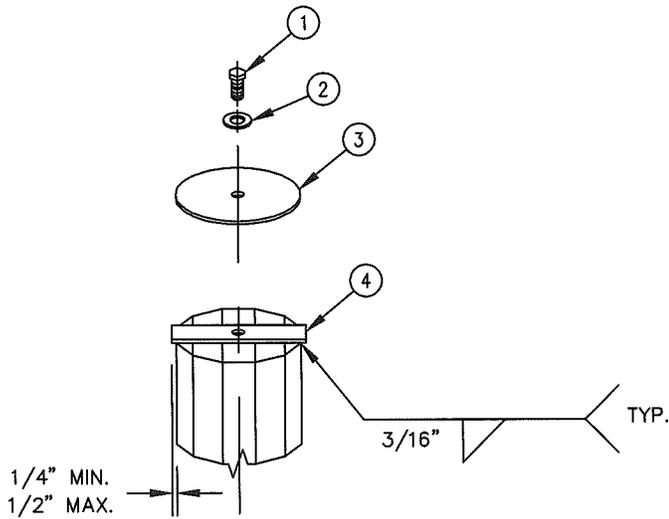
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REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA	DRAWN BY: SLB		SHEET 2 OF 2		
APPROVED: GS			DRAWING NO: SVP-A-T005-6		REV	B	

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POLE CAP DETAIL

STR. #	POLE CAP DIAMETER "D"	BAR LENGTH "L"
1	23 1/2"	22 3/4"
2	24"	23"
3	23 3/4"	23"
4	28 1/4"	27 1/4"

ITEM #	DRAWING/CATALOG #	QTY	DESCRIPTION
1	HUGHES BROTHERS# B72-1-3/4	1	3/4" X 2" MACHINE BOLT GALVANIZED
2	BIN NO. 70044	1	WASHERS, 3/4" FLAT, ROUND
3	N/A	1	3/16" THICK X "D" POLE CAP W/ 13/16" DIA. HOLE @ CENTER, GALVANIZED
4	N/A	1	1/2" X 3" X "L" BAR W/ HOLE TAPPED FOR 3/4" 10 UNC BOLT @ CENTER, GALVANIZED



NOTES:

1. GALVANIZE CAP ASSEMBLY BEFORE INSTALLING IT.

FOR BIDDING PURPOSES ONLY

12/3/2014

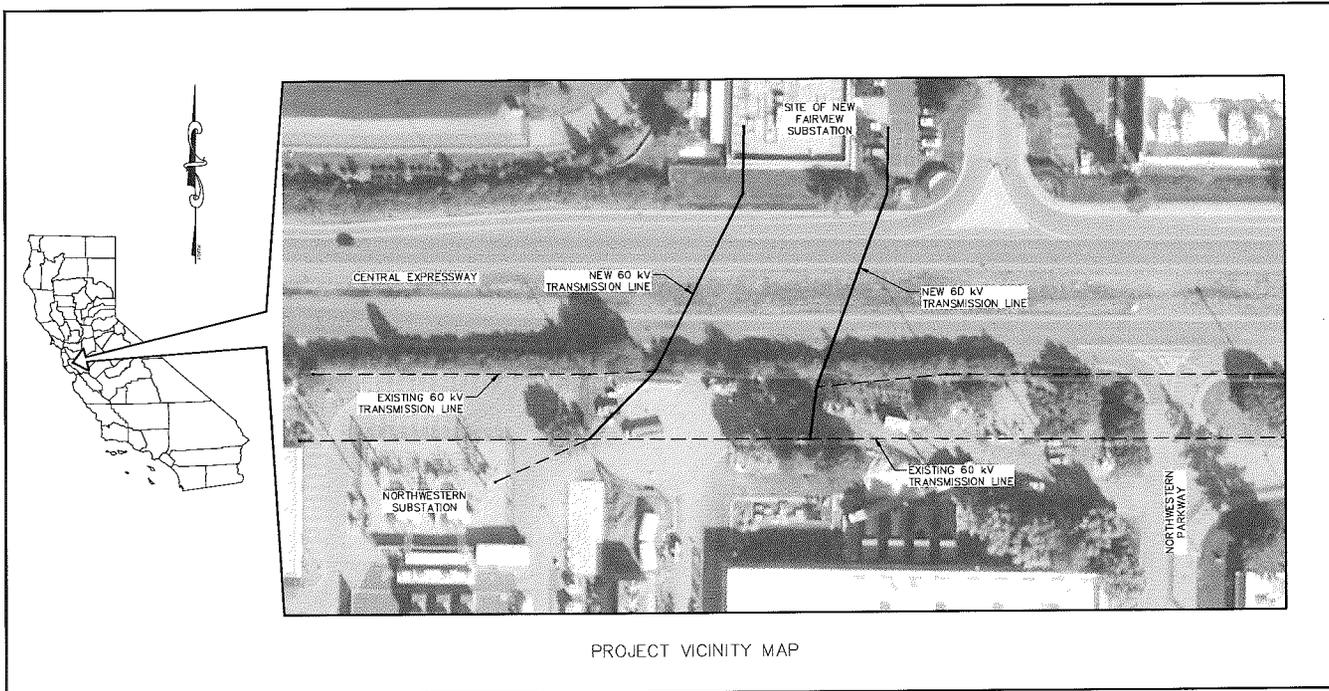
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REV	DATE	DESCRIPTION	APPR.	REV	DATE	DESCRIPTION	APPR.
BY: ALP		FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE CITY OF SANTA CLARA	DRAWN BY: SLB		SHEET 1 OF 1		
APPROVED: GS			DRAWING NO: SVP-A-T005-7		REV	B	

**SILICON VALLEY POWER - FAIRVIEW SUBSTATION LOOP-IN
60 KV TRANSMISSION LINE
SVP-B-T006: MATERIAL LIST - REVISION B - RELEASED FOR BIDDING**

STOCK NO.	ITEM DESCRIPTION	SVP BIN NO. OR VENDOR CATALOG NO.	Str 1	Str 2	Str 3	Str 4	Str B	Str C	Total	
			QTY	QTY	QTY	QTY	QTY	QTY	QUANTITY	UNIT
1	INSULATOR, SUSPENSION 60 kV, RUBBER	73058	9	6	6	9	6	6	42	EA
2	INSULATOR, POST TYPE, HORIZONTAL, 69 kV, SILICONE RUBBER, W/ FLAT BENDABLE BASE	MACLEAN# H191042FX01	3	3	3	3	0	0	12	EA
3	CLAMP, JUMPER, (FOR TWIN 715-T13 ACCR)	MACLEAN# LPH3D-18-140	3	3	3	3	0	0	12	EA
4	SHACKLE, ANCHOR	77119	9	6	6	9	6	6	42	EA
5	YOKE ASSEMBLY, STRAIN, W/ SOCKET CLEVIS AND 2 BALL CLEVISES	82028	9	6	6	9	6	6	42	EA
6	CLAMP, DEAD END, W/ SOCKET-EYE (715T-13 ACCR OR 954 AAC)	71190	18	12	12	18	12	12	84	EA
7	CONNECTOR, JUMPER NON TENSION (715T-13 ACCR OR 954 AAC)	71180	6	6	6	6	6	6	36	EA
8	POLE BAND ASSEMBLY, 27.5" DIAMETER, 15 KIP, W/2 EYE LINKS & BRACKET	MACLEAN# UCB-27-2ETEL162	3	0	0	0	0	0	3	EA
9	POLE BAND ASSEMBLY, 25.6" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET	MACLEAN# UCB-26-2ETEL162	0	3	0	0	0	0	3	EA
10	POLE BAND ASSEMBLY, 25.1" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET	MACLEAN# UCB-25-2ETEL162	0	0	3	0	0	0	3	EA
11	POLE BAND ASSEMBLY, 32.8" DIAMETER, 15 KIP, W/ 2 EYE LINKS & BRACKET	MACLEAN# UCB-33-2ETEL162	0	0	0	3	0	0	3	EA
12	POLE BAND ASSEMBLY, 27" DIAMETER, 30 KIP, W/ 1 EYE LINK	MACLEAN# UCB30-27-E	1	0	0	0	0	0	1	EA
13	POLE BAND ASSEMBLY, 28.5" DIAMETER, 30 KIP, W/ 1 EYE LINK	MACLEAN# UCB30-28.5-E	1	0	0	0	0	0	1	EA
14	POLE BAND ASSEMBLY, 30.5" DIAMETER, 30 KIP, W/ 1 EYE LINK	MACLEAN# UCB30-30.5-E	1	0	0	1	0	0	2	EA
15	POLE BAND ASSEMBLY, 32.5" DIAMETER, 30 KIP, W/ 1 EYE LINK	MACLEAN# UCB30-32.5-E	0	0	0	1	0	0	1	EA
16	POLE BAND ASSEMBLY, 34" DIAMETER, 30 KIP, W/ 1 EYE LINK	MACLEAN# UCB30-34-E	0	0	0	1	0	0	1	EA
17	CONNECTOR, 3 BOLT (954 AAC)	HUBBELL# LCU70066	3	0	0	3	0	0	6	EA
18	CLAMP, TUNNION (715T-13 ACCR)	71189	0	0	0	0	6	0	6	EA
19	3/4" MACHINE BOLT W/ GALVANIZED NUT, LENGTH AS REQUIRED	HUGHES BROTHERS# B7 _ _ _	6	6	6	6	6	6	36	EA
20	BOLT, ALL THREAD, 3/4" W/ 4 NUTS, LENGTH AS REQUIRED	70059/60/61	0	0	0	0	6	6	12	EA
21	EYENUT, OVAL W/ 3/4" TAPPED BOLT HOLE	70065	0	0	0	0	6	6	12	EA
22	WASHER, 3/4" FLAT, ROUND	70044	13	13	13	13	18	12	82	EA
23	WASHER, SQUARE, CURVED 4" X 4", FOR 3/4" BOLT	70049	0	0	0	0	12	18	30	EA
24	WASHER, 3/4" LOCK HELICAL, ZINC PLATED	70042	0	0	0	0	6	6	12	EA
25	WASHER, SPRING CLIP, FOR 3/4" BOLT	HUGHES BROTHERS# 2702.7	0	0	0	0	6	6	12	EA
26	LOCKNUT, FOR 3/4" BOLT	HUGHES BROTHERS# MF70	6	6	6	6	6	6	36	EA
27	INSULATOR, POST TYPE, HORIZONTAL, 3' LONG, POLYMER, W/ FIXED GAIN BASE & DOUBLE TRUNNION END FITTINGS	MACLEAN# H1CD036VX01	0	0	0	0	3	0	3	EA
28	3/16" THICK X "D" POLE CAP W/ 3/16" DIA. HOLE @ CENTER, GALVANIZED, REFER TO DRAWING SVP-A-T004-7 FOR DIMENSION "D"	N/A	1	1	1	1	0	0	4	EA
29	1/2" X 3" X "L" BAR W/ HOLE TAPPED FOR 3/4" 10 UNC BOLT @ CENTER, GALVANIZED, REFER TO DRAWING SVP-A-T005-7 FOR DIMENSION "L"	N/A	1	1	1	1	0	0	4	EA
30	GROUND ROD ASSEMBLY	N/A	1	1	1	1	0	0	4	EA
31	BONDING MATERIALS, AS REQUIRED	N/A	0	0	0	0	A/R	A/R	A/R	EA
32	GUY WIRE, 7/16" 7-STRAND, EHS, GALVANIZED	81059	0	0	0	0	575	0	575	FT
33	GUY GRIP, FOR 7/16" EHS	PREFORMED LINE PRODUCTS# GDE-1108	0	0	0	0	3	3	6	EA
34	GUY ATTACHMENT, DEAD END TEE, CURVED BASE, 60 KIP	HUGHES BROTHERS# 2817R4.5-13-13	0	0	0	0	0	3	3	EA
35	INSULATOR, GUY STRAIN, 78", W/ CLEVIS - CLEVIS & 1 ROLLER	HUGHES BROTHERS# CF692-78R	0	0	0	0	3	3	6	EA
36	3/4" X 2" MACHINE BOLT, GALVANIZED	HUGHES BROTHERS# B72-1-3/4	1	1	1	1	0	0	4	EA
37	CONDUCTOR, 715-T13 KCMIL, 24/7 STRANDING, ACCR "STILT"	3M	0	0	0	0	0	0	3300	FT
38	STAINLESS STEEL BAND, 3/4" W, LENGTH AS REQUIRED	N/A	1	0	0	0	0	0	1	EA
39	BANDING CLAMP	HUBBELL# CBAB58	1	0	0	0	0	0	1	EA
40	CABLE SUPPORT, BAND MOUNTED, W/ HARDWARE KIT	PREFORMED LINE PRODUCTS# 480011H2	1	0	0	0	0	0	1	EA

NOTE: WIRE QUANTITIES FOR STOCK NUMBERS 32 AND 37 ARE ACTUAL INTALLED WIRE LENGTHS, AND DO NOT INCLUDE ADDITIONAL LENGTH FOR STRINGING OPERATIONS.

FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE



DRAWING INDEX			
DRAWING OR DOCUMENT NUMBER	QUANTITY OF SHEETS	REV	DESCRIPTION
SVP-D-T001	1	B	COVER AND INDEX SHEET
SVP-D-T002	1	B	PHASING DIAGRAM
SVP-D-T003	4	B	PLAN AND PROFILE
SVP-D-T004	1	B	STRUCTURE FOUNDATION DRAWING
SVP-A-T005-1	2	B	STRUCTURE 1 FRAMING
SVP-A-T005-2	2	B	STRUCTURE 2 FRAMING
SVP-A-T005-3	2	B	STRUCTURE 3 FRAMING
SVP-A-T005-4	2	B	STRUCTURE 4 FRAMING
SVP-A-T005-5	2	B	STRUCTURE B FRAMING
SVP-A-T005-6	2	B	STRUCTURE C FRAMING
SVP-A-T005-7	1	B	STEEL POLE CAP DETAIL
SVP-B-T006	1	B	MATERIAL LIST

**FOR BIDDING
PURPOSES ONLY**

12/3/2014

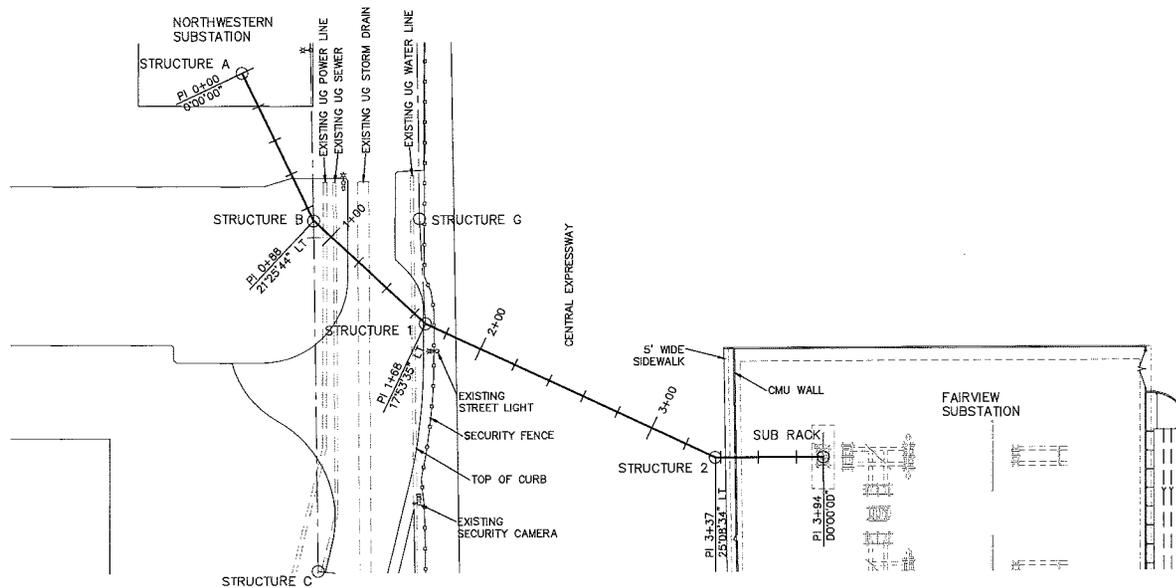
Engineering with Distinction
VECI ELECTRICAL CONSULTANTS, INC.
6740 NORTH ORANGE RD., STE 100
TUCSON, ARIZONA 85704
(520)219-9533 FAX: (520)219-9049

REV	DESCRIPTION	REVISION RECORD	DRAFTER	DATE	DESIGNED	DATE	CHECKED	DATE	APPROVED	DATE	W.O.
B	RELEASED FOR BIDDING		SLB	12/2014	ALP	12/2014	GS	12/2014	GS	12/2014	
A	ISSUED FOR REVIEW		SLB	06/2014	ALP	06/2014	MGP	06/2014	GS	06/2014	REF.

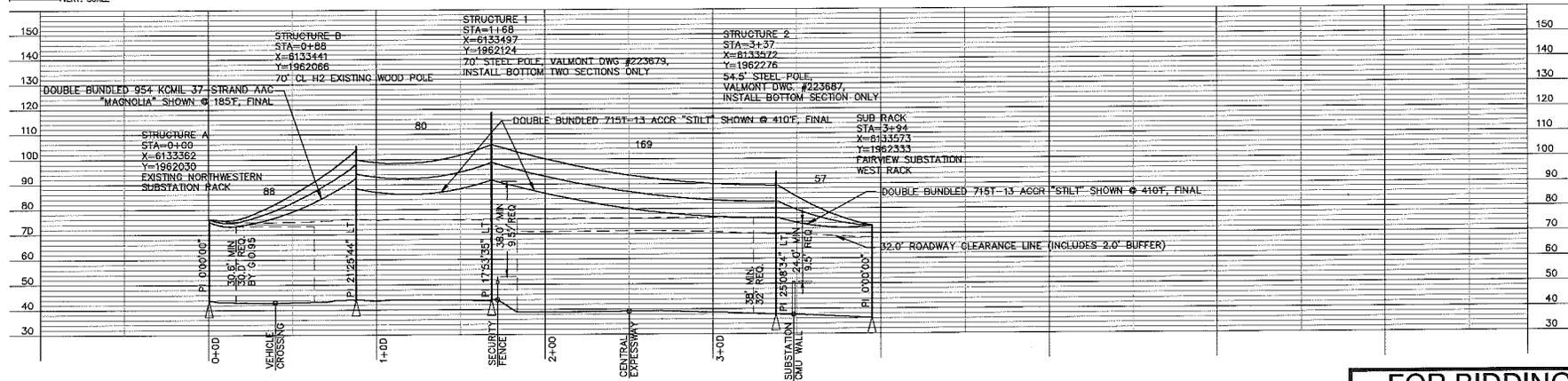
SILICON VALLEY POWER	
CITY OF SANTA CLARA	
FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE COVER AND INDEX SHEET	
SCALE:	DWG. SVP-D-T001



SHEET NO.
1
OF
1



1/32.0 FT. — HORIZ. SCALE
1/20.0 FT. — VERT. SCALE



NOTES:

1. COORDINATES SHOWN ARE BASED ON NAD83, CA ZONE 3, STATE PLANE COORDINATES. COORDINATES ARE IN U.S. SURVEY FOOT.

FOR BIDDING PURPOSES ONLY

12/3/2014



TABLE OF TERMS:

DD — DOWN GUY
PISA — POWER INSERTED SCREW ANCHOR
UG — UNDERGROUND

LEGEND FOR PLAN VIEW:

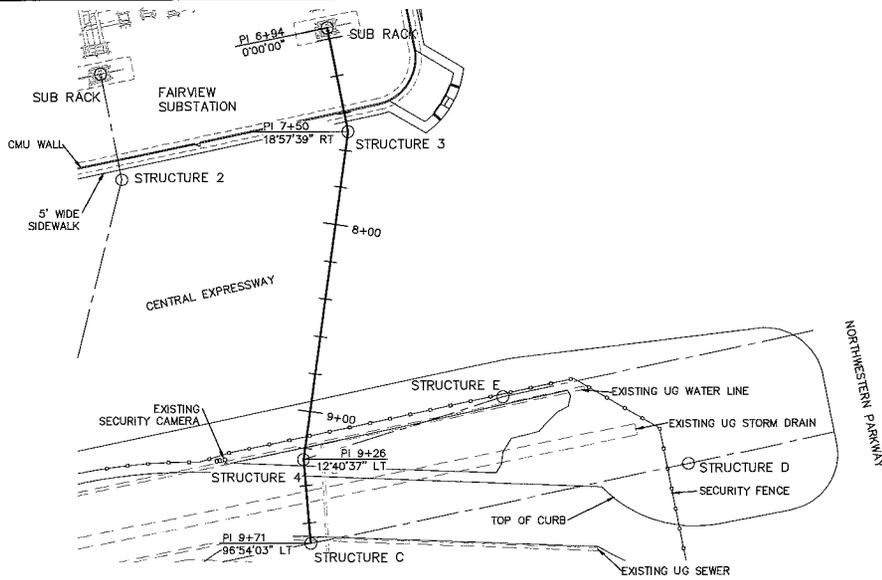
— ALIGNMENT SHOWN IN PROFILE VIEW
--- OTHER ALIGNMENTS
--- UNDERGROUND UTILITIES
--- FENCE
--- TOP OF CURB

REV	DESCRIPTION	REVISION RECORD	DRAWN	DATE	DESIGNED	DATE	CHECKED	DATE	APPROVED	DATE	W.O.
B	RELEASED FOR BIDDING		SLB	12/20/14	ALP	12/20/14	GS	12/20/14	GS	12/20/14	
A	ISSUED FOR REVIEW		DJW	07/20/14	ALP	07/20/14	MGP	07/20/14	GS	07/20/14	

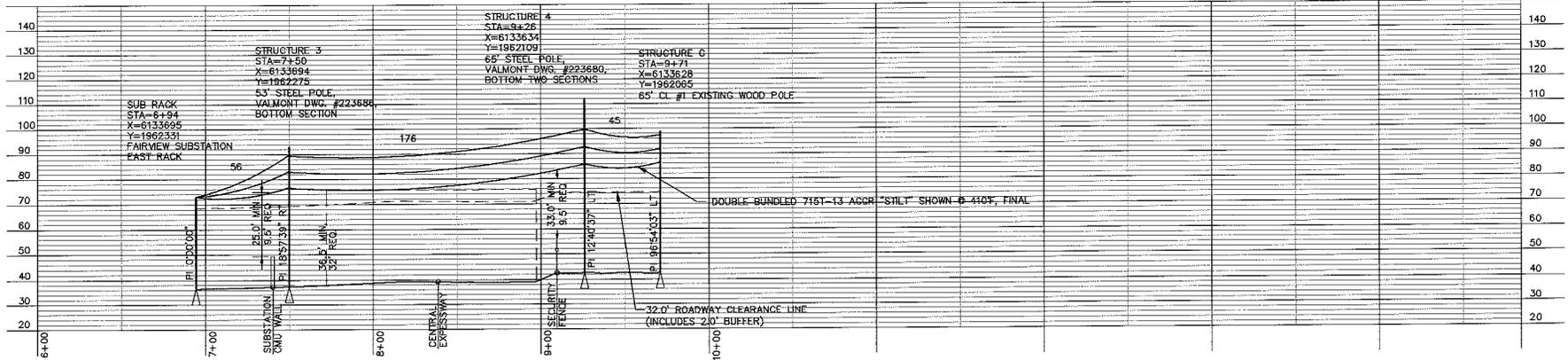
SILICON VALLEY POWER	
CITY OF SANTA CLARA	
FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE PLAN AND PROFILE	
SCALE:	SEE SCALE BARS
DWG.:	SVP-D-T003



SHEET NO.
1
OF
4



38.8 FT. HORIZ. SCALE
28.8 FT. VERT. SCALE



FOR BIDDING PURPOSES ONLY

12/3/2014

NOTES:
1. COORDINATES SHOWN ARE BASED ON NAD83, CA ZONE 3, STATE PLANE COORDINATES. COORDINATES ARE IN U.S. SURVEY FOOT.



ELECTRICAL CONSULTANTS, INC.
6740 NORTH ORACLE RD. STE 100
TUCSON, ARIZONA 85704
(520)219-9933 FAX (520)219-0949

TABLE OF TERMS:
DG - DOWN GUY
PISA - POWER INSERTED SCREW ANCHOR
UG - UNDERGROUND

LEGEND FOR PLAN VIEW:

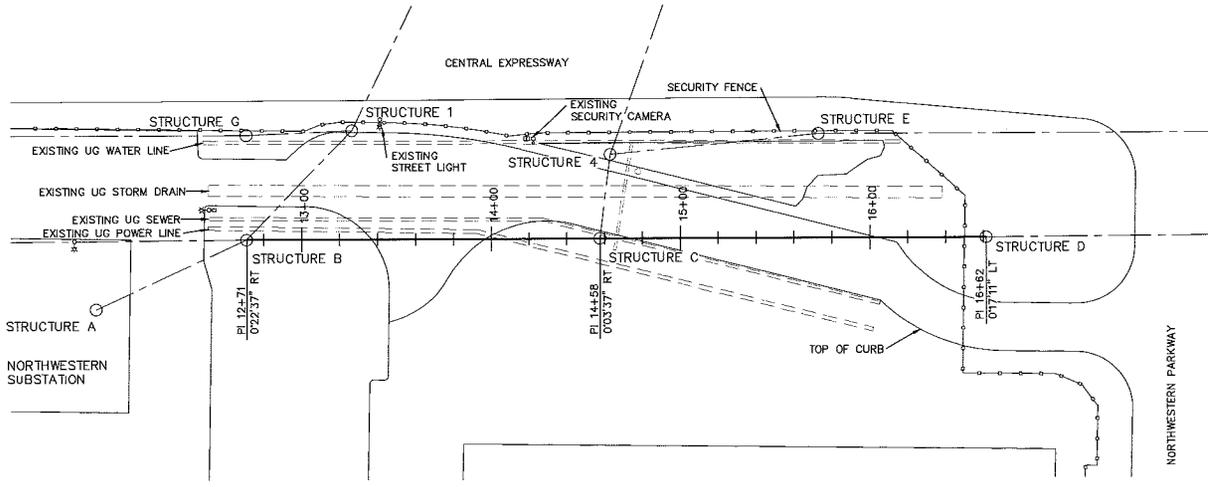
	ALIGNMENT SHOWN IN PROFILE VIEW
	OTHER ALIGNMENTS
	UNDERGROUND UTILITIES
	FENCE
	TOP OF CURB

REV	DESCRIPTION	REVISION RECORD	DATE	DESIGNED	DATE	CHECKED	DATE	APPROVED	DATE	W.O.
B	RELEASED FOR BIDDING		SLB	12/2014	ALP	12/2014	GS	12/2014	GS	12/2014
A	ISSUED FOR REVIEW		DJW	07/2014	ALP	07/2014	MGF	07/2014	GS	07/2014
REF.										

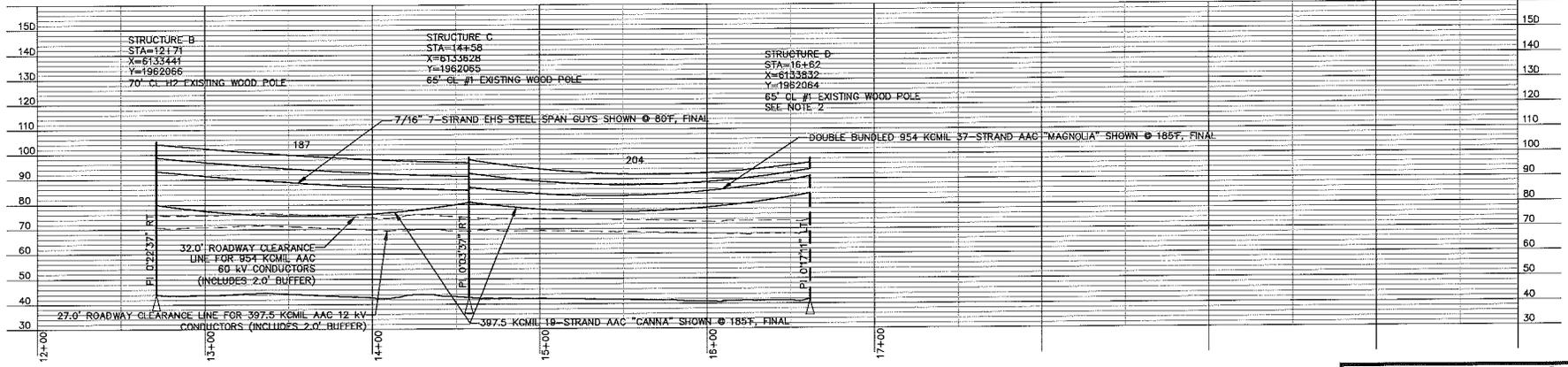
SILICON VALLEY POWER	
CITY OF SANTA CLARA	
FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE PLAN AND PROFILE	
SCALE:	SEE SCALE BARS
DWG.:	SVP-D-T003



SHEET NO.
2
OF
4



30.0 FT. HORIZ. SCALE
20.0 FT. VERT. SCALE



FOR BIDDING PURPOSES ONLY

12/3/2014

NOTES:

- COORDINATES SHOWN ARE BASED ON NAD83, CA ZONE 3, STATE PLANE COORDINATES. COORDINATES ARE IN U.S. SURVEY FOOT.
- STRUCTURE D HAS NOT BEEN MODIFIED FROM ITS EXISTING CONFIGURATION. ANY REQUIRED MODIFICATIONS WILL BE COORDINATED DURING CONSTRUCTION.



TABLE OF TERMS:	
DC	- DOWN GUY
PISA	- POWER INSERTED SCREW ANCHOR
UG	- UNDERGROUND
LEGEND FOR PLAN VIEW:	
	ALIGNMENT SHOWN IN PROFILE VIEW
	OTHER ALIGNMENTS
	UNDERGROUND UTILITIES
	FENCE
	TOP OF CURB

REV	DESCRIPTION	REVISION RECORD	DRAWN	DATE	DESIGNED	DATE	CHECKED	DATE	APPROVED	DATE	W.O.
B	RELEASED FOR BIDDING		SLB	12/2014	ALP	12/2014	GS	12/2014	GS	12/2014	
A	ISSUED FOR REVIEW		DJW	07/2014	ALP	07/2014	MGP	07/2014	GS	07/2014	REF.

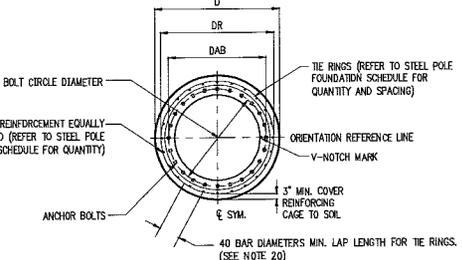
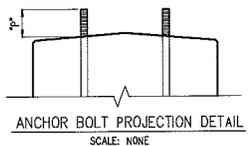
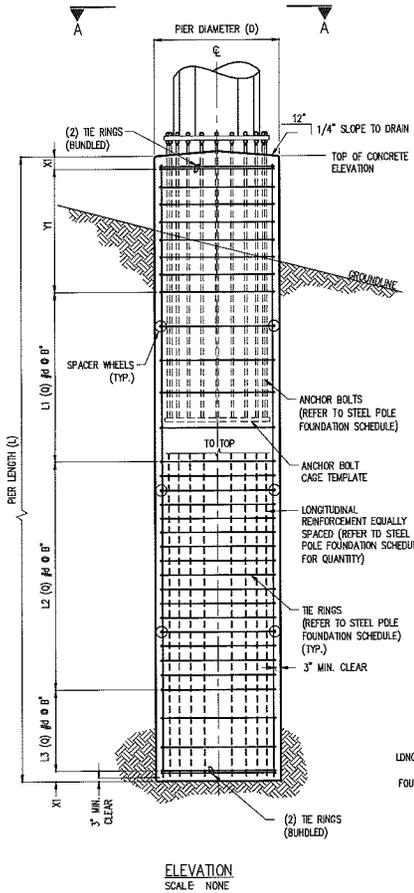
SILICON VALLEY POWER	
CITY OF SANTA CLARA	
FAIRVIEW SUBSTATION LOOP-IN 60 kV TRANSMISSION LINE PLAN AND PROFILE	
SCALE:	SEE SCALE BARS
DWG.:	SVP--0-TD03



SHEET NO.
3
OF
4

STEEL POLE FOUNDATION SCHEDULE

STRUCTURE NUMBER	DRILLED PIER			ANCHOR BOLTS			LONGITUDINAL BARS			TIE RINGS									ESTIMATED REBAR CAGE WT. (LBS)													
	DIAMETER "D"	LENGTH "L"	TOP OF CONCRETE ELEVATION (SEE NOTE 2)	VOLUME OF CONCRETE (CUBIC YARDS - NEATLINE)	VALMONT ANCHOR BOLT CAGE ASSEMBLY NO.	ANCHOR BOLT DIAMETER "DAB"	ANCHOR BOLT LENGTH (SEE NOTE 5)	ANCHOR BOLT PROJECTION "P"	QUANTITY	REBAR CAGE DIAMETER "DR"	LENGTH	BAR SIZE	QUANTITY	X1			Y1			L1			L2			L3			BAR SIZE "C"	TIE LENGTH	APPROXIMATE TIE DIAMETER	
1	5'-6"	28'-0"	48.0	24.6	3584	3'-6"	11'-0"	9 3/4"	12	4'-9"	27'-4"	#11	20	6"	2	BUNDLED	2'-0"	4	6"	9'-4"	7	16"	10'-0"	10	12"	5'-8"	4	16"	#5	17'-4"	4'-10"	3,500
2	5'-6"	25'-0"	39.7	22.0	3592	3'-9"	21'-4"	9 3/4"	12	4'-9"	24'-4"	#11	16	6"	2	BUNDLED	2'-0"	4	6"	22'-0"	16	16"	-	-	-	-	-	-	#5	17'-4"	4'-10"	2,600
3	5'-0"	25'-0"	39.4	18.2	3593	3'-4"	8'-0"	9 1/2"	12	4'-9"	24'-4"	#11	16	6"	2	BUNDLED	2'-0"	4	6"	8'-0"	6	16"	8'-0"	6	12"	8'-0"	6	16"	#5	15'-0"	4'-4"	2,500
4	6'-0"	28'-0"	46.6	29.3	3565	4'-2"	11'-0"	10"	20	5'-3"	27'-4"	#11	20	6"	2	BUNDLED	2'-0"	4	6"	9'-4"	7	16"	8'-4"	10	10"	7'-4"	5	16"	#5	18'-10"	5'-4"	3,500



- NOTES:**
1. STABILIZING AGENTS MAY BE USED TO PREVENT CAVING OF EXCAVATION AS APPROVED BY THE ENGINEER.
 2. CASINGS MAY BE USED TO STABILIZE EXCAVATIONS AGAINST CAVING, HOWEVER, THE FULL CASING MUST BE REMOVED AFTER CONCRETE PLACEMENT. USE OF ANY CASING MUST BE APPROVED BY THE ENGINEER. CORRUGATED METAL PIPE (CMP) SHALL NOT BE USED.
 3. ALL LOOSE MATERIAL AND WATER SHALL BE REMOVED FROM THE BOTTOM OF THE PIER EXCAVATION PRIOR TO CONCRETE PLACEMENT (DRY HOLES ONLY).
 4. LONGITUDINAL BARS AND TIE RINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615, GRADE 60.
 5. THE EXISTING ANCHOR BOLT CAGE FOR STRUCTURE 2 WILL NEED TO BE CUT SHORT. CUT SIX (6) ANCHOR BOLTS AND FOUR (4) STEEL ANGLE MEMBERS (VALMONT PART NUMBER 20D042C) AT A DISTANCE OF 21'-6" MEASURED FROM THE TOP OF THE ANCHOR BOLT CAGE.
 6. MAXIMUM AGGREGATE SIZE SHALL BE LIMITED TO ONE FIFTH THE CLEAR SPACING BETWEEN VERTICAL REINFORCING BARS, (PER ACI 336.3R-93, SECTION 4.2.2). IF THE PIER IS CONSTRUCTED USING THE SLURRY DISPLACEMENT METHOD, THE MAXIMUM AGGREGATE SIZE SHALL BE 3/4", (PER ACI 336.3R-93, SECTION 4.4.4).
 7. ALL VERTICAL STEEL REINFORCING BARS SHALL BE THE FULL LENGTH OF THE DRILLED PIER AS SHOWN IN THE ELEVATION DETAIL. IF SPLICES ARE REQUIRED, THEY SHALL BE LAP SPLICES CONFORMING TO THE LATEST EDITION OF ACI-318. LAP SPLICES SHALL NOT BE USED ON BARS LARGER THAN #11.
 8. STEEL REINFORCEMENT CAGE SHALL BE SUPPORTED AT LEAST THREE (3) IN. OFF THE BOTTOM OF THE PIER EXCAVATION PRIOR TO CONCRETE PLACEMENT.
 9. MINIMUM CONCRETE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS. SLUMP SHALL BE PER ACI 336.3R-93.
 10. FOR CONCRETE PLACED IN SUBMERGED WATER CONDITIONS, THE CONCRETE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI. THE SLUMP AT PLACEMENT SHALL BE PER ACI 336.3R-93, SECTION 4.4.4(e).
 11. IF CONCRETE IS PLACED VIA A SLURRY DISPLACEMENT METHOD, THE CONCRETE MIX DESIGN AND PLACEMENT SHALL CONFORM TO THOSE SPECIFIED IN ACI 336.3R, SECTION 4.4.
 12. THE TOP FIFTEEN (15) FT. OF CONCRETE SHALL BE PROPERLY COMPACTED USING INTERNAL VIBRATORS HAVING A SPEED NOT LESS THAN 6,000 RPM. CONCRETE PLACED UNDER WATER SHALL NOT BE VIBRATED PER ACI 336.3R-93.
 13. CONCRETE MAY BE PLACED BY FREE FALL PER ACI 336.3R-93.
 14. ALL EXPOSED CONCRETE SURFACES SHALL BE FINISHED WITH A STEEL TROWEL PER ACI 301, LATEST EDITION.
 15. ALL EXPOSED CONCRETE SURFACES SHALL BE SEALED WITHIN FOUR (4) HOURS AFTER FINISHING WITH AN APPROVED CONCRETE CURING COMPOUND.
 16. ALL FORMED SURFACES SHALL BE SEALED WITH AN APPROVED CURING COMPOUND IMMEDIATELY AFTER FORM REMOVAL.
 17. GROUND SURFACES SHALL BE GRADED SO THAT WATER WILL FLOW AWAY FROM THE DRILLED PIER.
 18. CONCRETE SHALL BE FORMED AT LEAST SIX (6) IN. BELOW FINISHED GRADE. CONCRETE BELOW THE FORM SHALL BE PLACED AGAINST UNDISTURBED SOIL. ONLY STEEL FORMS, CLEANED OF ALL DELETERIOUS SUBSTANCES, SHALL BE USED. FORM RELEASE AGENTS MAY BE USED AS SUBMITTED TO AND APPROVED BY THE ENGINEER. ANY APPROVED FORM RELEASE AGENT MUST BE STAIN FREE.
 19. IF ACTUAL SOIL CONDITIONS DIFFER FROM THOSE NOTED WITHIN THE DRAWINGS AND/OR GEOTECHNICAL DATA PROVIDED, THE CONTRACTOR MUST CONTACT THE ENGINEER BEFORE PROCEEDING WITH THE EXCAVATION.
 20. ROTATE TIE RING LAP LOCATION 45° BETWEEN CONSECUTIVE TIES.
 21. THE MAXIMUM WATER/CEMENT RATIO FOR THE CONCRETE MIX IS LIMITED TO 0.50, (SEE ACI 301-10, TABLE 4.2.2.7.c, EXPOSURE CLASS P1).
 22. THE MAXIMUM WATER-SOLUBLE CHLORIDE ION (Cl⁻) CONTENT IN CONCRETE MIX IS 0.30 PERCENT BY WEIGHT OF CEMENT, (SEE ACI 301-10, TABLE 4.2.2.7.d, EXPOSURE CLASS C1).
 23. ELEVATION VALUES ARE BASED ON NAD83, CA ZONE 3, STATE PLANE COORDINATES, AND ARE TAKEN AT THE TOP, OUTSIDE PERIMETER OF EACH DRILLED PIER.

FOR BIDDING PURPOSES ONLY
12/3/2014

ECI ELECTRICAL CONSULTANTS, INC.
6740 NORTH ORACLE RD, STE 100
TUCSON, ARIZONA 85744
(520) 219-9933 FAX: (520) 219-9949

REV	DESCRIPTION	DATE	DESIGNED	DATE	CHECKED	DATE	APPROVED	DATE	W.O.
B	RELEASED FOR BIDDING	12/2/2014	ALP	12/2/2014	GS	12/2/2014	GS	12/2/2014	
A	ISSUED FOR REVIEW	07/28/14	ALP	07/28/14	MGP	07/28/14	GS	07/28/14	

SILICON VALLEY POWER
CITY OF SANTA CLARA
FAIRVIEW SUBSTATION LOOP-1N
60 kV TRANSMISSION LINE
STRUCTURE FOUNDATION DRAWING

SCALE: NONE
DWG. SVP-0-T004



SHEET NO.
1
OF
1

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7A.16

City of Santa Clara, California



Date: January 30, 2015
To: City Manager for Council Action
From: Director of Human Resources
Subject: Approval of the Job Description for Traffic Control Special Events (As-Needed) and Setting of the Pay Rate for Same at \$22 per Hour

EXECUTIVE SUMMARY:

Additional traffic enforcement services are needed for 49er football game days and other special events taking place at Levi's Stadium. Staff is recommending approval to hire non-sworn personnel to assist with traffic control on an as-needed or part-time basis.

This is an as-needed "at will" classification, where the incumbents serve at the discretion of the City Manager. The incumbents in this classification will be expected to demonstrate strong ethical, professional, service-oriented leadership and interpersonal skills; set a good example; and correctly apply the tenants of the City's Code of Ethics and Values. Applicants will be held to the rigorous hiring standards used at the City's Police Department for non-sworn positions.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Approval of the job description for Traffic Control Special Events (As-Needed) will allow the City to begin the recruitment. It will be more cost effective to hire non-sworn personnel for traffic control positions. There are no disadvantages.

ECONOMIC/FISCAL IMPACT:

There is no economic or fiscal impact to the City in approving the new job description, other than administrative staff time and expense. Funding for these positions is included in the stadium funding for fiscal year 2014-2015. The \$22.00 per hour pay rate will be reviewed annually.

RECOMMENDATION:

That the Council approve the job description for Traffic Control Special Events (As-Needed), and set the pay rate for same at \$22.00 per hour.

APPROVED:


Elizabeth C. Brown
Director of Human Resources


Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) Revised Job Description for Traffic Control Special Events (As-Needed)

Proposed February, 2015

CITY OF SANTA CLARA, CALIFORNIA
TRAFFIC CONTROL
SPECIAL EVENTS
(As Needed)

EDUCATION AND EXPERIENCE

Minimum Requirements:

- Minimum age 18 at time of application; and
- One (1) year of full-time paid or volunteer work experience involving considerable contact with the general public

Desirable Qualifications:

- Paid or volunteer work experience within a law enforcement agency, the U.S. Armed Forces, or a related agency

LICENSES AND/OR CERTIFICATES

- Possession of a valid Class C California driver's license is required at time of appointment.

DISTINGUISHING CHARACTERISTICS

Under direction, the Traffic Control Special Events position directs motorists and controls traffic conditions at special events held in the City of Santa Clara.

TYPICAL DUTIES

Duties include but are not limited to the following:

- Direct traffic;
- Observe, monitor, and control routine and unusual traffic conditions; assist and advise motorists;
- Establish and preserve good relationships with the general public and answer questions;
- Attend meetings and trainings;
- Perform other duties as assigned

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

- Basic principles of traffic control
- Principles and practices of customer service

Ability to:

- Understand and execute oral and written instructions
- Relate to supervisors, maintain objectivity, take criticism, and control temper
- Be courteous, but firm, in maintaining effective communications with the general public in normal and stressful situations
- Deal effectively with irate or uncooperative individuals
- Communicate in a clear, concise, and effective manner, both orally and in writing

TRAFFIC CONTROL SPECIAL EVENTS (AS NEEDED) (continued)

- Read and understand laws, ordinances, departmental policies, rules, and instructions
- Establish and maintain effective working relationships with those contacted in the course of work, including the general public and co-workers
- Work in a team-based environment and achieve common goals
- Walk or stand for extended periods of time and bend, stoop, reach, carry, crawl, climb, and lift as necessary to perform assigned duties
- Perform work in various environments, including outdoors in inclement weather

SUPERVISION RECEIVED

Works under the general supervision of a Santa Clara Police Officer or other classification as assigned.

OTHER REQUIREMENTS

- Will be required to work special events
- Will be required to work odd and unusual hours, including evenings, weekends, and holidays
- Will be required to purchase Department Uniforms (reimbursement will occur after working ten regular events)
- Will be required to purchase a flashlight and whistle
- Will be required to pass a City background investigation, which will include fingerprinting
- Must be able to perform all of the essential functions of the job assignment



City of Santa Clara, California



Date: February 10, 2015

To: City Manager for Council Action

From: Chief of Police

Subject: Adopt a Resolution Increasing Parking Penalty Base Fines in Compliance with the California Vehicle Code and to Deter Unlawful Parking Near Levi's Stadium on Event Days

EXECUTIVE SUMMARY:

The Police Department is in the process of reviewing our parking enforcement operation. Along with contracting with a new parking citation management company and upgrading our handheld parking citation devices, we also reviewed our current parking citation fine schedule. The last time we compared our fine amounts to our neighboring cities was in 2009.

Based on our review, the City's parking penalty base fines need to be adjusted, as they are in most cases lower than those of surrounding jurisdictions. California Vehicle Code 40203.5 requires that to the extent possible, issuing agencies within the same county should standardize parking penalties. Increasing the City's parking penalty base fines will bring the City's penalties in line with those of surrounding jurisdictions, complying with California Vehicle Code 40203.5. The last time the City raised parking fines was in June, 2009. See attached Exhibit A for current parking fines from several cities within our county.

Furthermore, the City of Santa Clara and the San Francisco 49ers jointly developed the Transportation Management Operations Plan (T.M.O.P) to provide for the safe and efficient access, and parking to Levi's Stadium. The potential for intrusion of traffic and pedestrians into residential areas was examined to prohibit Stadium patrons from intruding on residential areas such as the Agnews and the Rivermark neighborhoods. An illustration of the event day restrictions of roadways providing access to residential neighborhoods is provided in T.M.O.P Figure 2-1.

Staff has studied the potential impact of Stadium event visitor parking in these areas. Due to the proximity of these available spaces and the Stadium, unregulated parking will interfere with the spaces currently available to Santa Clara residents and their guests. The Traffic Engineer has posted "No Parking" signs on specific event days to discourage Stadium visitor parking. The appropriate Santa Clara Municipal Code violation is 10.05.460(b). The corresponding penalty for parking in a prohibited area is currently \$43.00. The current penalty is too low to properly deter people visiting the Stadium from parking in nearby No Parking zones and a penalty increase is necessary for the safety of residents and visitors and to ensure compliance with the City's T.M.O.P.

Given our Stadium event parking fees and the neighboring cities parking penalties, the Police Department recommends raising the penalties for parking violations in these areas and any others added in the future due to traffic pattern changes during Stadium events to \$95.00. The current Stadium parking fee near Levi's Stadium is \$50.00. Even though the recommended \$95.00 parking penalty is higher than our neighboring

City Manager for Council Action

Subject: Adopt a Resolution Increasing Parking Penalty Base Fines in Compliance with the California Vehicle Code and to Deter Unlawful Parking Near Levi's Stadium on Event Days

February 10, 2015

Page 2

jurisdictions, the ratio between Stadium event parking fees and the parking penalties is less. This proposed penalty is to discourage fans from parking in our neighborhoods during Stadium events.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Increasing the parking penalties will allow the City to comply with California Vehicle Code recommendations as well as the T.M.O.P. goals and objectives. Stadium event patrons will be discouraged from parking in the designated no parking zones due to the substantial penalty. Raising the parking penalty for violations of this municipal code will encourage event patrons to seek and use parking areas designed for Stadium functions.

These parking restrictions do apply to our community and could have a negative impact during Stadium events. General Fund monies will not be negatively affected.

ECONOMIC/FISCAL IMPACT:

Increasing parking penalties as noted in Exhibit A will assist the City in complying with California Vehicle Code recommendations, will prevent a negative impact to the neighboring community and local businesses, and will enhance the mission of the T.M.O.P.

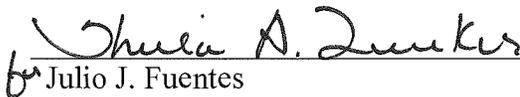
RECOMMENDATION:

That the Council adopt the attached resolution increasing the City's parking penalty base fines in compliance with the California Vehicle Code and to deter unlawful parking near Levi's Stadium on event days.



Michael J. Sellers
Chief of Police

APPROVED:



for Julio J. Fuentes
City Manager



Gary Ameling
Director of Finance/
Assistant City Manager

Documents Related to this Report:

- 1) ***Resolution: Increasing Parking Penalty Base Fines in Compliance with the California Vehicle Code and to Deter Unlawful Parking Near Levi's Stadium on Event Days***
- 2) ***Exhibit A: Parking Citation Fine Survey***
- 3) ***Transportation Management Operations Plan (T.M.O.P.) Figure 2-1***

City Manager for Council Action

Subject: Adopt a Resolution Increasing Parking Penalty Base Fines in Compliance with the California Vehicle Code and to Deter Unlawful Parking Near Levi's Stadium on Event Days

February 10, 2015

Page 3

DISCUSSION:

Exhibit A shows the current parking fines from several cities within our county. Staff is recommending that we increase our fines for certain violations where we are lower than our surrounding cities. More specifically, staff has selected our neighboring and like-sized city in the comparison, the City of Sunnyvale, as the primary basis for our recommended fine amounts. For violations where our current fine amount is higher or equal to the City of Sunnyvale, we're recommending no change. For violations where our current fine amount is lower than the City of Sunnyvale, we're recommending an increase to match their fine.

The City of Santa Clara and the San Francisco 49ers jointly developed the Transportation Management Operations Plan (T.M.O.P) to provide for the safe and efficient access, and parking to Levi's Stadium. The T.M.O.P. includes numerous goals and objectives that reduce noise, improve air quality, and reduce the traffic impact to the surrounding residential neighborhoods. The potential for intrusion of traffic and pedestrians into residential areas was examined to prohibit Stadium patrons from intruding on residential areas such as the Agnews and the Rivermark neighborhoods. Stadium access as well as Stadium parking in those neighborhoods has been restricted on the following roadways:

Hope Drive	Lick Mill Boulevard	Lafayette Street
Freedom Circle	Mission College Blvd.	Hichborn Drive
Our Lady's Way	Patrick Henry Drive	Old Ironsides Drive
Old Glory Lane	Betsy Ross Drive	Bunker Hill Lane
Stars and Stripes Drive	Democracy Way	Calle Del Sol
Calle De Luna	Calle Del Mundo	

An illustration of the event day restrictions of roadways providing access to residential neighborhoods is provided in Figure 2-1 (T.M.O.P.) which is attached for review. Intrusion into residential areas is to be measured through an examination of on-street parking conditions beyond these roadways.

Given our Stadium event parking fees, staff researched parking penalties for neighboring agencies in Santa Clara County (Campbell, Mountain View, Sunnyvale, San Jose) as well as two Bay Area municipalities with sports, art and entertainment venues (Oakland, San Francisco), to compare citation fines for both Municipal Violations and California Vehicle Code Violations. In doing so, the Police Department recommends raising all of the penalties for parking violations, particularly the No Parking penalty on Stadium Event Days.

In researching parking penalties for neighboring jurisdictions, the City of San Jose charges \$55.00 for a no parking violation, the City of San Francisco charges \$88.00 for parking in a restricted area, and the City of Oakland charges \$73.00 for no parking any time. These parking penalties are twice the amount charged for Stadium event parking. For example, event parking in the City of San Francisco is \$35.00-\$40.00, and their parking penalty is \$88.00.

Increasing the parking penalties will allow the City to comply with California Vehicle Code recommendations as well as the T.M.O.P. goals and objectives. Stadium event patrons will be discouraged from parking in the designated no parking zones due to the substantial penalty. Raising the parking penalty for violations of this municipal code will encourage event patrons to seek and use parking areas designed for Stadium functions.

RESOLUTION NO. _____

**A RESOLUTION OF THE CITY OF SANTA CLARA,
CALIFORNIA, INCREASING THE CITY'S PARKING
PENALTY BASE FINES TO STANDARDIZE PENALTIES
IN COMPLIANCE WITH VEHICLE CODE § 40203.5 AND
TO DETER UNLAWFUL PARKING NEAR LEVI'S
STADIUM ON EVENT DAYS**

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, Santa Clara City Code § 10.25.020 provides that penalties for violation of vehicle parking, stopping or standing regulations shall be set and periodically reviewed by resolution of the City Council;

WHEREAS, California Vehicle Code § 40203.5 provides that the schedule of parking penalties for parking violations shall be established by the governing body of the jurisdiction where the notice of violation is issued and to the extent possible, issuing agencies within the same county shall standardize parking penalties;

WHEREAS, the City of Santa Clara most recently increased its parking penalties in 2010 to add a state-mandated \$3.00 fee per violation;

WHEREAS, in its efforts to periodically review its parking penalties, the City of Santa Clara has conducted a study of local jurisdictions' parking penalties, including Campbell, Los Gatos, Mountain View, Oakland, San Francisco, San Jose, and Sunnyvale;

WHEREAS, this study is summarized in the spreadsheet labeled as Exhibit A accompanying the Agenda Report, and it determined that the City's parking penalty base fines need to be adjusted, as they are in most cases lower than those of surrounding jurisdictions;

WHEREAS, currently, the City of Santa Clara's parking penalties in most No Parking zones are \$43.00;

WHEREAS, further, this current penalty is too low to properly deter people visiting Levi's Stadium from parking in nearby No Parking zones and a penalty increase is necessary for the safety of residents and visitors and to ensure compliance with the City's Transportation Management Operations Plan; and

WHEREAS, the City of Santa Clara desires to increase its parking penalties to the fine amounts listed on the attached Exhibit 1, under "recommended amount," to ensure that the City's parking penalties are standardized to neighboring jurisdictions, in compliance with California Vehicle Code § 40203.5.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. That the City Council hereby increases the parking penalties for parking violations in the City of Santa Clara to the rates reflected on Exhibit 1, attached.
2. That the City Council hereby increases the parking penalties for parking violations in zones marked with "Tow Away No Parking Stadium Event Days" signs from \$43.00 to \$95.00, and this amount be added to or incorporated in any relevant parking violation table or penalty schedule for the City.
3. That the City Council hereby approves and adopts late payment penalties triggered by the failure to pay or appeal the citation, and to be determined by the Chief of Police.
4. Constitutionality, severability. If any section, subsection, sentence, clause, phrase, or word of this resolution is for any reason held by a court of competent jurisdiction to be unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of the resolution. The City of Santa Clara hereby declares that it would have passed this resolution and each section, subsection, sentence, clause, phrase, and word thereof,

irrespective of the fact that any one or more section(s), subsection(s), sentence(s), clause(s), phrase(s), or word(s) be declared invalid.

5. Effective Date. This Resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE ____ DAY OF _____, 2015, BY THE FOLLOWING VOTE:

AYES: COUNCILORS:
NOES: COUNCILORS:
ABSENT: COUNCILORS:
ABSTAINED: COUNCILORS:

ATTEST: _____
 ROD DIRIDON, JR.
 CITY CLERK
 CITY OF SANTA CLARA

Attachments Incorporated by Reference:
1. Exhibit 1, Updated Parking Citation Penalties 2015
I:\RESOLUTIONS\Increase in Parking Citation Penalties 1-8-15.doc

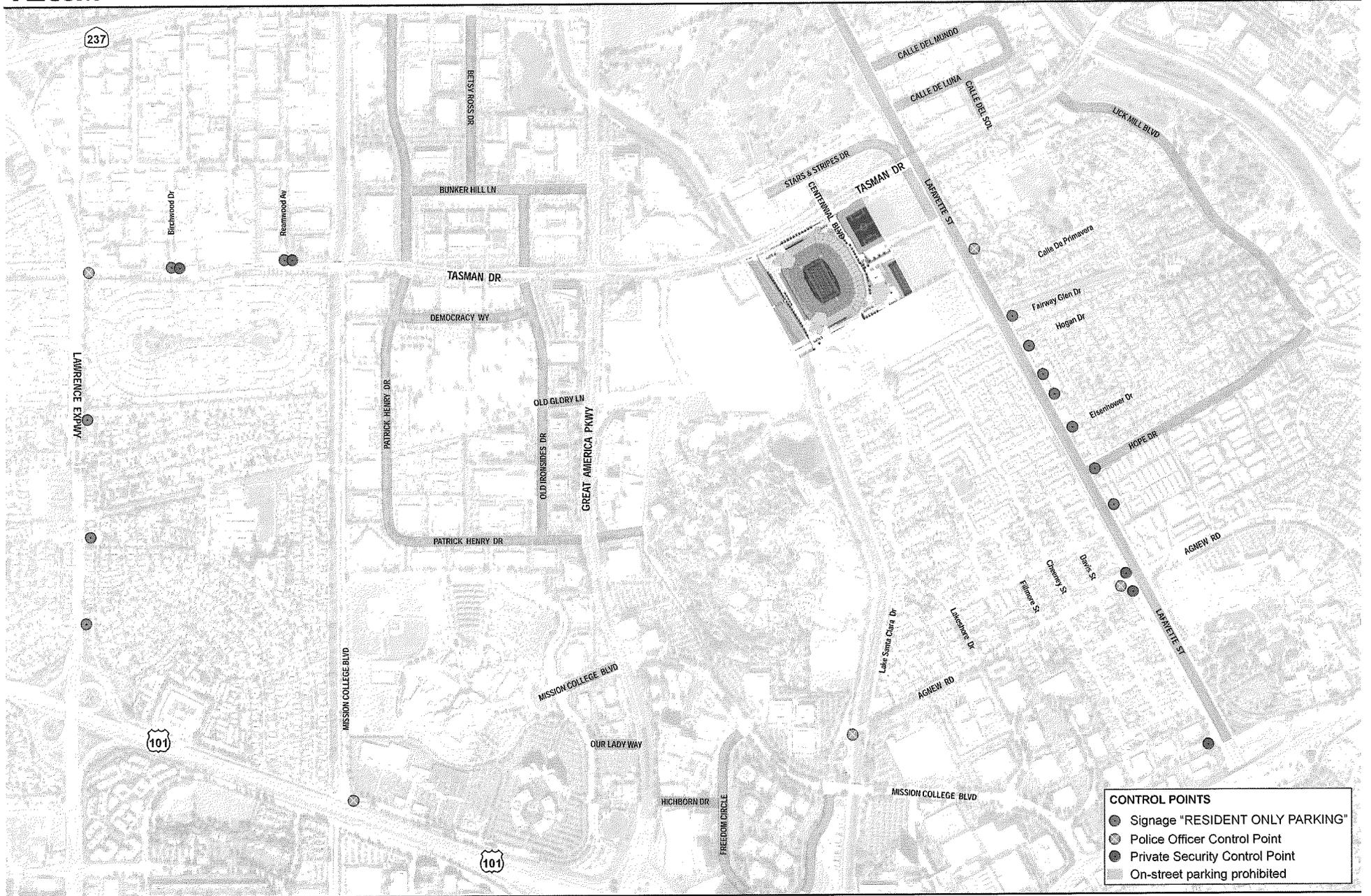
Exhibit 1: Updated Parking Citation Penalties 2015				
Municipal Code		Santa Clara	Recommendation	Recommended Amount
<i>Section</i>	<i>Violation</i>			
10.05.460 (a) (f) (g) (h)	Prohibited Parking Areas	\$43	Increase \$10	\$53
10.05.460 (i)	Posted Fire Lane - Public or Private	\$48	No Change	\$48
10.05.470	Parked over 72 Consecutive Hours	\$63	No Change	\$63
10.05.500	Repairing or Greasing Vehicle on Street	\$63	Increase \$7	\$70
10.05.560	Overtime Parking - Signs Posted	\$53	No Change	\$53
10.05.570	Failure to Obey Signs	\$43	Increase \$10	\$53
10.05.600	Not Parking within T-Space Markings	\$43	Increase \$10	\$53
10.05.630	Commercial Vehicle- 2 Hours within 300ft Resid. Zone	\$63	Increase \$7	\$70
10.05.640	Failure to Obey Signs - Markings on City Property	\$43	No Change	\$43
10.05.650	Parked on Lawn or Dirt Surfaces	\$43	No Change	\$43
10.05.680	Painted Curbs	\$43	Increase \$10	\$53
10.05.720	Standing in any Alley	\$43	Increase \$10	\$53
18.82.020	Commercial Vehicle in a Residential Zone	\$63	Increase \$7	\$70
California Vehicle Code (CVC)				
<i>Section</i>	<i>Violation</i>			
4000 (a)(1)	Expired Registration (correctable per CVC40610)	\$93	No Change	\$93
5200 (a)	Two License Plates Required (correctable per CVC40610)	\$93	No Change	\$93
5204 (a)	Expired Registration Tabs (correctable per CVC40610)	\$93	No Change	\$93
21113 (a)	Parking Regulations on School Grounds	\$43	No Change	\$43
22500 (a)	Parking within Intersection	\$43	Increase \$10	\$53
22500 (b)	Parking in Crosswalk	\$43	Increase \$10	\$53
22500 (d)	Parking within 15 feet of a Fire Station	\$43	Increase \$10	\$53
22500 (f)	Parking on Sidewalk	\$43	Increase \$10	\$53
22500 (g)	Parking at Street Excavation	\$43	Increase \$10	\$53
22500 (h)	Double Parked	\$43	Increase \$10	\$53
22500 (i)	Parking in Bus Zone - Red Curb	\$273	No Change	\$273
22502 (2)	Parking over 18 inches from Curb; Parked Wrong Direction	\$43	Increase \$10	\$53
22507.8 (a)	Disabled Parking Space	\$303	Increase \$14	\$317
22507.8 (b)	Obstructing Disable Parking Space	\$303	Increase \$14	\$317
22507.8 (c)	Disabled Crosshatch Lines / Markings	\$303	No Change	\$303
22514	Parked within 15 feet of a Fire Hydrant	\$48	Increase \$13	\$61
22515	Vehicle Unattended - Motor Running	\$43	Increase \$10	\$53
22521	Parking near Railroad Track	\$43	Increase \$10	\$53
22522	Parked within 3 feet of Handicapped Access	\$293	Increase \$24	\$317
22523 (a)	Abandoned Vehicle on a City Street	\$123	No Change	\$123
22526 (a)	Blocking Intersection; Anti-Gridlock	\$123	No Change	\$123

Exhibit A: Parking Citation Fine Survey									
Municipal Code		Santa Clara	Campbell	Los Gatos	Mountain View	San Jose	Sunnyvale	Recommendation	Recommended Amount
Section	Violation								
10.05.460 (a) (f) (g) (h)	Prohibited Parking Areas	\$43		\$52	\$36	\$55	\$53	Increase \$10	\$53
10.05.460 (i)	Posted Fire Lane - Public or Private	\$48		\$50				No Change	\$48
10.05.470	Parked over 72 Consecutive Hours	\$63	\$70	\$67	\$80	\$85	\$53	No Change	\$63
10.05.500	Repairing or Greasing Vehicle on Street	\$63						Increase \$7	\$70
10.05.560	Overtime Parking - Signs Posted	\$53		\$42	\$38	\$40	\$53	No Change	\$53
10.05.570	Failure to Obey Signs	\$43			\$36	\$45	\$53	Increase \$10	\$53
10.05.600	Not Parking within T-Space Markings	\$43	\$40	\$42	\$36	\$40	\$53	Increase \$10	\$53
10.05.630	Commercial Vehicle- 2 Hours within 300ft Resid. Zone	\$63	\$70	\$67				Increase \$7	\$70
10.05.640	Failure to Obey Signs - Markings on City Property	\$43			\$36			No Change	\$43
10.05.650	Parked on Lawn or Dirt Surfaces	\$43						No Change	\$43
10.05.680	Painted Curbs	\$43	\$40	\$42	\$33	\$40	\$53	Increase \$10	\$53
10.05.720	Standing in any Alley	\$43			\$36		\$53	Increase \$10	\$53
18.82.020	Commercial Vehicle in a Residential Zone	\$63		\$67	\$80		\$70	Increase \$7	\$70
California Vehicle Code (CVC)									
Section	Violation								
4000 (a)(1)	Expired Registration (correctable per CVC40610)	\$93		\$276	\$50		\$53	No Change	\$93
5200 (a)	Two License Plates Required (correctable per CVC40610)	\$93		\$190	\$25			No Change	\$93
5204 (a)	Expired Registration Tabs (correctable per CVC40610)	\$93		\$190	\$25		\$53	No Change	\$93
21113 (a)	Parking Regulations on School Grounds	\$43		\$42	\$41			No Change	\$43
22500 (a)	Parking within Intersection	\$43	\$40		\$31	\$55	\$53	Increase \$10	\$53
22500 (b)	Parking in Crosswalk	\$43		\$42	\$31	\$55	\$53	Increase \$10	\$53
22500 (d)	Parking within 15 feet of a Fire Station	\$43			\$31		\$53	Increase \$10	\$53
22500 (f)	Parking on Sidewalk	\$43	\$40	\$42	\$31	\$55	\$53	Increase \$10	\$53
22500 (g)	Parking at Street Excavation	\$43			\$31		\$53	Increase \$10	\$53
22500 (h)	Double Parked	\$43		\$42	\$31		\$53	Increase \$10	\$53
22500 (i)	Parking in Bus Zone - Red Curb	\$273		\$272	\$261	\$285	\$271	No Change	\$273
22502 (2)	Parking over 18 inches from Curb; Parked Wrong Direction	\$43	\$40	\$42	\$21	\$40	\$53	Increase \$10	\$53
22507.8 (a)	Disabled Parking Space	\$303	\$300	\$292	\$286	\$310	\$317	Increase \$14	\$317
22507.8 (b)	Obstructing Disable Parking Space	\$303	\$300	\$292	\$286		\$317	Increase \$14	\$317
22507.8 (c)	Disabled Crosshatch Lines / Markings	\$303	\$300	\$292	\$286	\$310		No Change	\$303
22514	Parked within 15 feet of a Fire Hydrant	\$48	\$300	\$42	\$36	\$65	\$61	Increase \$13	\$61
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City of Santa Clara	Rates as of:	6/1/2009
City of Campbell		8/4/2009
City of Los Gatos		7/1/2011
City of Mountain View		7/1/2012
City of San Jose		Not Stated
City of Sunnyvale		Fiscal 14/15

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Event Day Roadway Restrictions.ai

San Francisco 49ers Transportation Management and Operations Plan for a New Stadium in Santa Clara

Figure 2-1
Event Day Neighborhood Roadway Restrictions

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7A.18



City of Santa Clara, California



Date: January 27, 2015
To: Mayor for Council Action
From: City Manager
Subject: Departmental Activity Report for November 2014

EXECUTIVE SUMMARY:

A copy of the Departmental Activity Report for the month of November 2014 can be viewed on the City's website or is available in the City Clerk's Office for review during business hours.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The Departmental Activity Report includes activity reports for all City Departments. There is no disadvantage.

ECONOMIC/FISCAL IMPACT:

There is no additional cost to the City other than administrative staff time and expense.

RECOMMENDATION:

That the Council note and file the Departmental Activity Report for the month of November 2014.

APPROVED:



Julio J. Fuentes
City Manager

Documents Related to this Report:
1) *Departmental Activity Report*

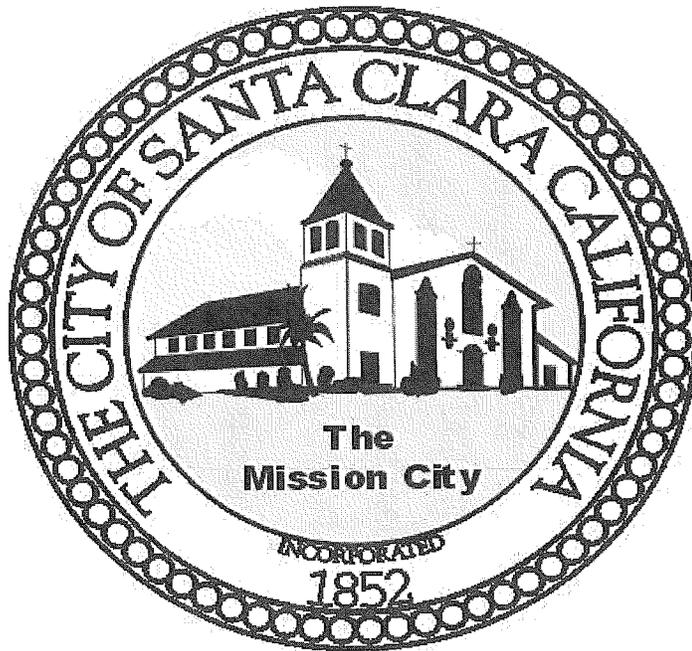
I/CITYCLERK/DEPARTMENTALACTIVITYREPORT/Agenda Report
02/19/13
Office Records Specialist

CITY OF SANTA CLARA

DEPARTMENTAL ACTIVITY REPORT

MONTH OF

NOVEMBER 2014



CITY OF SANTA CLARA

DEPARTMENTAL ACTIVITY REPORT

LIST OF DEPARTMENTS

City Manager

City Clerk/City Auditor
Performance Measures

Electric Department
Monthly Outage Report

Finance & Purchasing
Performance Measures
Municipal Services/License

Fire Department
Emergency Services/Disaster Preparedness

Human Resources
Employee Activity
Performance Measures
Training/Safety Program Status
Workers Adjustment & Retraining

Library Department
Performance Measures

Parks and Recreation Department
Cemetery Division/Mission City Memorial Park

Planning & Inspection Department
Planning Division
Building Inspection Division
Housing & Community Services Division

Police Department

Public Works Department
Automotive Services
Engineering & Building Maintenance
Street

Water and Sewer Utilities Department
Sewer Utility
Water Utility

**Monthly Activity Report
CITY MANAGER'S OFFICE**

November 2014			
Performance Measures/Activities	Current Month	Year to Date	Budget
Number of citizen contacts responded to by City Manager's Office	37	163	450
Number of contacts assigned out within 5 business days	34	172	---
% contacts assigned out within 5 business days	92%	106%	90%
Number of EOC training meetings	0	0	5
Number of hours of EOC activation	0	0	---
Assist families in purchasing a home through the First Time Homebuyers Program	0	0	25
Prepare and distribute the Annual Report/Calendar	0	0	1
Prepare and distribute monthly utility bill inserts to utility customers	1	11	12
Prepare City Employee newsletter and distribute to all employees, six times per year	1	2	6
Prepare City newspaper (Inside Santa Clara) and distribute three times per year	1	2	3
Prepare and distribute newsreleases as needed	6	15	---
Number of website updates processed	8	88	---
Number of website page views	1,562,341	3,973,182	---
Develop and review City publications	2	14	---
Number of weekly cable channel updates processed	25	162	---
Number of press contacts	16	199	---
Number of video newsbriefs produced	2	7	44
Percent of Council meetings taped and broadcast	100%	100%	100%
Respond to legislative inquiries within 4 working days	100%	98%	90%
Number of special events, recognition, and dedications held	5	26	---
Number of business outreach contacts	37	120	---
Provide staff support to Council Committees/ Commissions (number of meetings attended)	2	20	---
Update and administer agreements with organizations and intergovernmental agencies	3	17	10

Performance Measures Reporting
Department: City Clerk's Office
November 2014

Division/Program/Measure	2014-15			2013-14		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
Council/Administration Support						
1. Percent of Council minutes approved within 4 weeks	100%	100%	90%	100%	100%	90%
Number of Council minutes approved	3	11		1	15	
Number of Council minutes approved within 4 weeks	3	11		1	15	
2. Percent of Council minutes approved without amendment	100%	100%	100%	100%	100%	100%
Number of Council minutes approved without amendment	3	11		1	15	
Public Information/Legislative Records Management						
1. Percent of records declared eligible for destruction are destroyed within 30 days	100%	100%	100%	100%	100%	100%
Number of records destruction requests processed	0	9		0	13	
Number of records declared eligible for destruction are destroyed within 30 days	0	9		0	13	
2. Percent of requests for records/information completed within one business day	100%	100%	100%	100%	100%	100%
Number of requests for records/information from citizens (includes telephone inquiries)	1,289	7,137		1,132	6,386	
Number of requests for records/information from staff	639	3,380		509	3,156	
3. Number of documents processed	80	364	1,200	64	382	1,820
Elections/Political Reform Act						
1. Percent of Campaign Disclosure Reports distributed	100%	100%	100%	100%	100%	100%
2. Number of Campaign Disclosure Reports processed	104	120	30	0	0	30
3. Number of Conflict of Interest forms processed	29	29	200	0	0	200
4. Number of elections held	1	1	1	0	0	0

Performance Measures Reporting
Department: City Clerk's Office
November 2014

Division/Program/Measure	2014-15			2013-14		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
City Auditor						
1. Number of vendor warrants audited	1,105	5,594	20,000	1,080	6,074	20,000
2. Number of travel reports audited	43	122	750	43	109	750
3. Number of payroll checks processed	2,515	12,882	35,000	2,350	12,997	35,000
Miscellaneous Tasks (not a program)						
UPS deliveries processed	33	123		12	141	
Number of Notary transactions completed	14	73		16	61	
Number of deeds and real property interests accepted and recorded	2	14		1	22	
 <hr/> Rod Diridon, Jr., City Clerk						

ELECTRIC DEPARTMENT ACTIVITY REPORT

The following report covers the principal activities of the Electric Department during the month of **November 2014**

DESCRIPTION	CURRENT MONTH	YEAR TO DATE
Poles Replaced	0.0	15.0
Transformers Installed	0.0	11.0
Transformers Replaced	0.0	33.0
Distribution Patrol (circuit maps) Total 70 Maps	18.0	18.0
Distribution Inspection O/H (circuit maps) Total 16 Maps	0.0	16.0
Distribution Inspection U/G (circuit maps) Total 16 Maps	3.0	6.0
Switches Replaced/Installed	2.0	15.0
Underground Cable Installed (ft)	1800.0	66735.0
Underground Cable Replaced (ft)	230.0	11345.0
Metering New Services (Residential/Comm/Indust)	35.0	466.0
Total Meter Removals (Residential/Comm/Indus)	2.0	63.0
Street Lights Installed or Replaced (Knock Down & New Installations)	2.0	12.0
Street Lights Repaired/Replaced	45.0	739.0
Traffic Signal Lamps Replaced	2.0	16.0
Unlocks Electric	0.0	4.0
Service & Trouble Calls	134.0	1536.0
Trees Trimmed Contractor	584.0	6942.0
Underground Locates	426.0	4257.0
Underground Inspections	90.0	720.0
Peak Demands	November 2014 November 2013	409.80
Energy Requirements	November 2014 November 2013	262,064.32

Average Service Availability Index (ASAI)	99.98481	99.97824
System Average Interruption Frequency Index (SAIFI)	0.02590	0.06138
Customer Average Interruption Duration Index (CAIDI) (Number of hours per customer)	253.38020	158.21397

Outages (see attached sheet)

Total Customers this Month	51,088	Days of Month
Total Customer Minutes this Month	2,207,001,600	30

Outage Totals			
		This Month	This Month Last Year
Unscheduled Outages			
Long	# Outages	7	3
	# Customers Out	1,323	113
	# Minutes Out	2,400	721
	# Customer Minutes Out	335,222	11851
	# Within City System	7	3
	# Supply to City Minutes	22,605	988
Short	# Outages (Blinks)	8	1
	# Customers Affected	2,568	2234
	# Within City System	8	1
	# Supply to City Minutes	0	0
Scheduled Outages			
Long	# Outages	0	0
	# Customers Out	0	0
	# Minutes Out	0	0
	# Customer Minutes Out	0	0
	# Within City System	0	0
	# Supply to City Minutes	0	0
Short	# Outages (Blinks)	0	0
	# Customers Affected	0	0
	# Within City System	0	0
	# Supply to City Minutes	0	0
Totals			
	Total Long Outages	7	3
	Total Short Outages (Blinks)	8	1
	Total Customers Out (Long)	1,323	113
	Total Customers Affected (Short- Blinks)	2,568	2234
	Total Customer Minutes Out	335,222	11851
	Total Outages Within City System	7	3
	Total Outages in Supply to City	0	0

Number of Outages (by Cause)					
Cause	Description	Total This Month	This Month Last Year	Rolling AT	% AT
0	Supply to City	0	0	0	0%
1	Overhead Equipment Failure	6	1	23	33%
2	Underground Equipment Failure	0	0	6	9%
3	Weather	0	0	0	0%
4	Birds, Animals, Snakes, etc.	0	2	11	16%
5	Trees	0	0	4	6%
6	Foreign Interference	0	0	6	9%
7	Human	0	0	1	1%
8	Other	0	0	3	4%
9	Unknown	2	1	15	22%
10	Vehicle	0	0	0	0%
	Total	8	4	69	

12 Month Outage Statistics			
Index	As of This Month	As of This Month Last Year	Current Month
ASAI (%)	99.9892	99.9910	99.98481
CAIDI (Long) (min)	113.13	96.59	253.38020
SAIDI (Long) (min)	57.00	47.43	6.56166
SAIFI (Long) (ints/tot cust)	0.50	0.49	0.02590
SAIFI (Short) (ints/tot cust)	0.19	0.12	0.05027

- ASAI - Average Service Availability Index
(customer minutes available/total customer minutes, as a %)
- CAIDI - Customer Average Interruption Duration Index
(average minutes interrupted per interrupted customer)
- SAIDI - System Average Interruption Duration Index
(average minutes interrupted per customer for all customers)
- SAIFI (Long) - System Average Interruption Frequency Index
(# of long interruptions per customer for all customers)
- SAIFI (Short) - System Average Interruption Frequency Index
(# of short interruptions per customer for all customers)

S/U - Scheduled or Unscheduled
 Ints - # of Interruptions
 Long - >1 min; Short - <1 min
 Cause # - see table on page 3

Jeff Ipsaro 12/16/14
 Jeff Ipsaro
 Division Manager - Operations

#	Date	S/U	General Information Address/Location	Cause Description	#	Time & Duration				Customers	
						Ints	T off	T on	Mins	# Out	Cust Min
1	11/7/2014	U	202-H IRO 356 Pineview, Pole# 16A45	Forced outage. Replace rotting X-arms	1	1	11/7/14 10:04 AM	11/7/14 12:59 PM	175	123	21525
2	11/10/2014	U	102-S IRO 227 Cornin	Forced outage. Replace rotting X-arms	1	1	11/10/14 2:14 PM	11/10/14 4:38 PM	144	82	11808
3	11/16/2014	U	201-B Curcuit tripped.	Possible contact at AS1373 (Pole BCC23)	1	8	11/16/14 2:56 PM	11/16/14 2:56 PM	0	321	0
4	11/20/2014	U	203-H Forbes pole 12B49,12B21B,13A09	Forced outage. Replace rotting X-arms	1	1	11/20/14 8:44 AM	11/20/14 2:58 PM	374	430	160820
5	11/21/2014	U	204-H IRO 643 Scott Blvd poles 25D64	Forced outage. Replace broken Sec X-arms	1	1	11/21/14 12:04 PM	11/21/14 2:07 PM	123	15	1845
6	11/25/2014	U	205-H 2602 Estella	Replaced leaking xfmr T7824 50kVA w/75kVA	1	1	11/25/14 12:43 PM	11/25/14 4:06 PM	203	9	1827
7	11/28/2014	U	103-A Circuit tripped. Agnew & STAC	No cause found.	9	1	11/28/14 7:02 AM	11/28/14 10:14 AM	192	587	112704
8	11/28/2014	U	103-A Circuit tripped. Agnew & STAC	No cause found.			11/28/14 7:02 AM	11/28/14 11:30 AM	268	15	4020
9	11/28/2014	U	103-A Circuit tripped. Agnew & STAC	No cause found.			11/28/14 7:02 AM	11/28/14 12:53 PM	351	27	9477
10	11/28/2014	U	103-A Circuit tripped. Agnew & STAC	No cause found.			11/28/14 7:02 AM	11/28/14 1:38 PM	396	23	9108
11	11/30/2014	U	105-U 2848 Bruce Ct.	Refused T3186 (25kVA) No cause found.	9	1	11/30/14 8:38 PM	11/30/14 11:32 PM	174	12	2088

S/U - Scheduled or Unscheduled
 Ints - # of Interruptions
 Long - >1 min; Short - <1 min
 Cause # - see table on page 3

 12/16/14
 Jeff Ipsaro
 Division Manager - Operations

Performance Measures Reporting
Department: Finance
November-14

Division/Program/Measure	2014-2015			2013-2014		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
Administrative Services/City-Wide Fiscal Planning & Administration						
1. Prepare Operating Budget, Capital Improvement Plan and CAFR documents.	N/A	2	3	N/A	2	3
2. Meet with staff at least quarterly to review work plans.	N/A	1	4	N/A	1	4
Administrative Services/Special Projects						
1. Percent of legislative analysis completed within negotiated time frame.	100%	100%	100%	100%	100%	100%
2. Percent of special requests completed within negotiated time frame.	100%	100%	100%	100%	100%	100%
Budget and Treasury/Cash Management						
1. Average weighted yield on unrestricted funds will be at least 100% of the twelve month average yield on two-year US Government Agency securities.	160%	171%	100%	258%	266%	100%
Budget and Treasury/Contract Management						
1. All actions required in contracts will be met by agreed upon due dates.	100%	100%	100%	100%	100%	100%
2. Ensure that quarterly lease payments for the Great America Theme Park site are made when due.	100%	100%	100%	100%	100%	100%
Budget and Treasury/Debt Management						
1. Submit debt schedules to Council no later than January 31 and July 31 of each year.	N/A	100%	100%	N/A	100%	100%
Budget and Treasury/Financial Analysis						
1. Complete special projects by agreed upon due dates.	100%	100%	100%	100%	100%	100%

Performance Measures Reporting
Department: Finance
November-14

Division/Program/Measure	2014-2015			2013-2014		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
Budget and Treasury/Budget Development & Analysis						
1. Receive California Society of Municipal Finance Officers (CSMFO) budget awards.	N/A	N/A	2	N/A	N/A	2
Accounting/General Accounting						
1. Complete the external audit process and preparation of City's Comprehensive Annual Financial Report with an unqualified audit by December 31.	N/A	N/A	100%	N/A	N/A	100%
2. Receive Government Financial Officers Association of the United States and Canada (GFOA) excellence in financial reporting award.	N/A	1	1	N/A	1	1
3. Complete the preparation and submission of various State, Local, and Federal Agency reports by due dates.	100%	100%	100%	100%	100%	100%
4. Complete the month-end accounting close process and distribution of department budget status reports by the 15th working day of the following month.	100%	80%	83%	100%	60%	83%
Accounting/Payroll						
1. Process bi-weekly payroll and issuance of employee checks by the due date and time.	100%	100%	100%	100%	100%	100%
2. Complete and file the required monthly/quarterly State and federal tax returns before due date.	100%	100%	100%	100%	100%	100%
3. Issue employee W-2 forms by January 31.	N/A	N/A	100%	N/A	N/A	100%
4. Transmit the electronic version of W-2 to Social Security Administration by March 31.	N/A	N/A	100%	N/A	N/A	100%

Performance Measures Reporting
Department: Finance
November-14

Division/Program/Measure	2014-2015			2013-2014		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
Accounting/Accounts Payable						
1. Number of invoices processed.	3,639	16,756	40,000	3,184	16,009	40,000
2. Number of vendor warrants issued.	1,095	5,590	14,000	1,154	5,888	15,000
3. Percent of vendor invoices paid within 7 days of receipt.	99%	89%	95%	94%	92%	95%
4. Number of quick invoice vouchers processed.	1,109	5,796	15,000	1,188	5,580	15,000
5. Number of Payables process improvements.	0	0	1	0	0	2
Accounting/Business License/Receivables/Fixed Assets						
1. Percent of time that invoices are mailed within 10 working days of receipt of documentation from City Departments.	100%	100%	100%	100%	100%	100%
Municipal Services/Utility Billing Services						
1. Percent of closed delinquent accounts collected in-house.	83%	84%	80%	78%	78%	80%
2. Amount of late fees assessed.	\$55,182	\$293,548	\$825,000	\$54,995	\$321,878	\$825,000
Municipal Services/Revenue Receipting-Cashiering						
1. Average monthly number of utility accounts paying by automated methods.	30,962	33,170	31,000	29,211	31,051	29,000
2. Average monthly utility payments processed.	49,050	52,218	51,000	48,140	52,138	50,000
3. Percent of cash drawers reconciled.	100%	100%	100%	100%	100%	100%

**Performance Measures Reporting
Department: Finance
November-14**

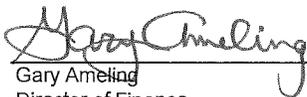
Division/Program/Measure	2014-2015			2013-2014		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
Municipal Services/Business Certificate						
1. Number of business tax certificates processed annually.	946	5,590	13,000	846	4,933	12,000
2. Percent of delinquent tax certificates at fiscal year end.	0.9%	2.8%	5.0%	3.2%	3.9%	5.0%
Municipal Services/Field Service						
1. Percent of monthly utility meters accurately read.	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2. Number of service requests processed yearly.	2,282	14,741	40,000	2,279	16,118	42,000
3. Average number of meters read monthly.	80,515	80,280	80,000	80,027	79,970	80,000
4. Number of months where all 200 routes are read and billed.	1	5	12	1	5	12
Municipal Services/Administration						
1. Percent of Accounts Receivables written off as bad debt annually.	0.04%	0.02%	0.40%	0.01%	0.02%	0.40%
2. Number of major UMIS initiatives successfully implemented during the year.	0	0	4	0	0	5
Municipal Services/Call Center/Communication						
1. Percent of customer calls answered within 90 seconds.	37%	45%	40%	41%	36%	40%
2. Average hold time of sequenced calls (m:s).	4:11	3:36	4:00	3:35	3:58	4:00
3. Number of dropped calls to total calls.	14%	12%	15%	12%	13%	15%
4. Average hold time of sequenced calls before drop (m:s).	3:21	3:14	4:00	3:08	3:11	4:00
5. Average number of customer telephone calls taken monthly.	4,729	5,934	6,000	4,819	5,811	6,000
6. Average number of IVR calls received monthly.	9,792	11,094	12,000	9,376	10,906	12,000
7. Average number of outbound calls made by CSR's.	1,244	1,583	1,500	1,192	1,406	1,500

Performance Measures Reporting
Department: Finance
November-14

Division/Program/Measure	2014-2015			2013-2014		
	Current Month	Year to Date	Budget	Current Month	Year to Date	Budget
Purchasing/Warehouse						
1. Number of material requisitions.	274	1,803	3,200	256	1,586	3,200
2. Number of inventory items cycle counted.	197	1,061	1,200	106	691	1,200
Purchasing/Purchasing						
1. Number of purchase orders.	83	527	1,250	77	562	1,250
2. Number of cost reductions/avoidance.	0	0	5	0	0	5
Purchasing/Mail Services						
1. Number of mail pieces processed.	12,888	65,512	147,000	10,388	63,778	147,000

CITY OF SANTA CLARA
DEPARTMENT OF FINANCE - BUSINESS TAX & BUSINESS LICENSE
MONTHLY ACTIVITY REPORT
For the month ending November 30, 2014
 With Comparative Amounts for the month ended November 30, 2013

	CURRENT FY 2014-2015		PRIOR FY 2013-2014	
	This Month	Fiscal Year To Date	This Month	Fiscal Year To Date
CASH RECEIVED FROM:				
Business License (Tax Certificate)	\$ 75,868	\$ 418,925	\$ 68,196	\$ 386,760
Fire Permits	\$ 190,866	\$ 1,073,972	\$ 159,517	\$ 790,052
Rubbish Hauler (3%-16%)	\$ 11,239	\$ 598,557	\$ 7,958	\$ 573,231
Community Facilities District Tax (2%)	\$ 118,186	\$ 118,186	\$ -	\$ -
Transient Occupancy Tax (9.5%)	\$ 962,447	\$ 7,746,765	\$ 1,152,156	\$ 6,998,209
FISCAL YEAR STATISTICS FOR BUSINESS LICENSES:				
NEW BUSINESS INFORMATION:				
No. of Rental Businesses	14	35	1	15
No. of Santa Clara Businesses	109	530	152	627
No. of Out-of-Town Businesses	63	358	55	280
Total New Businesses	186	923	208	922
RENEWALS	760	4,667	638	4,011
LICENSES/PERMITS DELETED:	154	1,557	308	872
FIELD ENFORCEMENTS/DELINQUENCIES:				
Total No. of Delinquent Accounts	114	* n/a	407	* n/a
Total No. of Accounts in Collection	405	* n/a	426	* n/a
No. Delinquent Accounts Paid	50	448	47	269
No. Delinquent Accounts Deleted	93	1,086	210	473
Total Delinquents as a % of Total Certificates	0.9%	* n/a	3.2%	* n/a
BREAKDOWN OF CURRENT BUSINESS LICENSES:**				
(Tax Certificates)				
Number of Hotels/Motels	30		29	
Rental Owners	1,457		1,444	
Fixed Location in City (Inc Home Bus)	7,766		8,306	
Out of City (Includes Contractors)	3,231		3,114	
Number of Active Business Tax Accounts	12,484		12,893	


 Gary Ameling
 Director of Finance

cc: City Clerk

* Fiscal Year To Date amounts in these categories are labeled not applicable (n/a), as the number listed under "This Month" reflects a revolving count.

** As of report run date on 12/10/14

**Santa Clara Fire Department
Monthly Activity Report
Nov 2014**

	<u>This Month</u>	<u>FY 14/15 To Date</u>
Division: Protection		
Program: Administration		
1 Number of hours contributed by the Volunteer/Reserve Division	922	4580
2 Number of Fire responses	8	63
3 Number of emergency Medical responses	392	1765
4 Number of non-emergency Medical responses	125	640
5 Number of Hazardous Materials responses	2	9
Division: Protection		
Program: Emergency Response		
1 Response time in 90% of all high level emergency medical calls.	7:05	6:32
2 Rseponse time in 90% of all high level emergency fire calls.	6:27	5:28
3 Number of emergency responses	477	2307
4 Number of non-emergency responses	219	1025
5 Percent of total alarms catagorized as false	8.19%	9.7%
Division: Prevention		
Program: Code Enforcement/Public Education		
1 Number of inspections performed by the Fire Prevention Bureau	269	1599
2 Number of inspections performed by the Fire Protection Division	231	1319
3 Number of citizen complaints	0	0
4 Number of community participants in fire and safety training and education programs	0	1025
5 Number of public education meetings	0	5
6 Number of permit inspections	158	905
7 Number of new business license inspections	9	77
8 Number of plans reviewed	105	643
9 Percent of multi-family (R-1) occupancies inspected	1.22%	19.67%

**FY 13/14
To Date**

**Division: Prevention
Program: Investigations**

1	Number of fires investigated	1	5
2	Number of hazardous materials incidents investigated	0	2

**Division: Training
Program: Training**

1	Number of fire prevention training hours	26.00	236.35
2	Number of hazardous materials training hours	12.25	247.39
3	Number of Emergency Medical Services training hours	161.67	671.88
4	Number of rescue training hours	173.97	632.31
5	All other training hours	357.98	2216.97

**Division: Hazardous Materials
Program: Hazardous Materials Code Enforcement**

1	Number of hazardous materials emergency responses	3	8
2	Number of business inspections	41	189

**Division: Incremental EMS Costs
Program: Paramedic Services**

1	Response time in 90% of all high level emergency medical calls.	7:05	6:32
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William G. Kelly
Fire Chief



Interoffice Memorandum

Date: December 29, 2014
To: Julio Fuentes, City Manager
From: William Kelly, Fire Chief
Subject: November 2014 Monthly OES Report

- 11/2: Super Bowl response analysis – 2 hours
- 11/5: Santa Clara County Fire Chiefs Association meeting – Regional response to infectious diseases - 2 hours
- 11/10: Regional EMS System for the County Operational Area – 1 hour
- 11/12: Review of the recent Napa earthquake, with the California Emergency Services Association – 3 hours
- 11/17: Regional Emergency Communications – 2 hours
- 11/17: EMS Stakeholder meeting regarding Ebola and infectious disease preparedness and response – 2 hours
- 11/24: Super Bowl Public Safety Planning – 2 hours

City of Santa Clara
Employee Activity Report - November 2014
October 26, 2014 - November 22, 2014

	Classified	Unclassified	As-Needed	Total
Budgeted Positions	**901.50	128.00		**1029.50
Filled Positions	751.50	104.00		855.50
Available Positions	150.00	24.00		174.00
Regular Appointments	5.00			5.00
As-Needed Appointments (includes Additional Classes)			10.00	10.00
Filled As-Needed Positions			499.00	499.00
Separations - Failed Probation				0.00
Separations - Resignation				0.00
Separations - Dismissal				0.00
Separations - As-Needed			10.00	10.00
Rehire/Reinstatement	2.00			2.00
Retirements - Industrial Disability				0.00
Retirements - Service	1.00			1.00
Retirements - Service Pending Industrial Disability				0.00
Promotions	4.00	1.00		5.00
Death				0.00
Transfer				0.00
Voluntary Demotion	1.00			1.00
Step/Merit Increases Granted	1.00	7.00	16.00	24.00
Step Increases Denied				0.00
Unemployment Insurance Claims	0.00	0.00	0.00	0.00
Long Term Disability Claims				0.00
State Disability Claims				0.00
Industrial Injury/Illness - Supervisor's Report	5.00			5.00
Industrial Injury/Illness - Medical Only	2.00			2.00
Industrial Injury/Illness - Indemnity (Lost Time)	4.00			4.00

** Total includes 1 City Manager Temporary Overfill position.

Hunt

Francine Hunt
Human Resources Supervisor

**PERFORMANCE MEASURES REPORTING
HUMAN RESOURCES - RECORDS BENEFITS
NOVEMBER 2014**

Records and Benefits		2014-2015		2013-2014	
		Year to Date	Budget Goal	Budget Actual	Budget Goal
Benefits, Records and Payroll					
1.	Percent of employee benefits & compensation transactions processed accurately and timely.	100%	100%	100%	100%
2.	Percent separation and retirement payoff calculations completed according to policy and within the final pay period.	100%	100%	100%	100%
3.	Percent of new hires processed for pay and benefits in time for their first paycheck	100%	100%	100%	100%
Records and Benefits		2014-2015		2013-2014	
		Year to Date	Budget Goal	Budget Actual	Budget Goal
Workers' Compensation					
1.	Percent of Workers' Compensation claims processed within five business days of receipt in Human Resources Department.	100%	100%	100%	100%
2.	Percent of work hours lost as a result of industrial injuries and illnesses.	0.92%	2.0%	1.15%	2.0%
3.	Percent of workforce that is accident free.	89%	85%	86.6%	83%
4.	Percent of City-sponsored training classes rated very good or above by attendees.	95%	95%	95%	95%
5.	Percent of City employees attending City sponsored training classes.	52.1%	40%	64.3%	40%

Notes:

* ANNUALIZED TO DATE

HUMAN RESOURCES DEPARTMENT

TRAINING AND SAFETY ACTIVITIES

Monthly Report

November 2014

TRAINING

1. Topic: Harassment Prevention – Employee (Video)

Date: November 4, 7, 10, 13, 17 - 20, 2014

Participants: 21

Duration: 1 hr.

2. Topic: Excel Basics – Part 1

Date: November 18, 2014

Participants: 4

Duration: 3 hrs.

3. Topic: Excel Intermediate – Part 1

Date: November 18, 2014

Participants: 5

Duration: 3 hrs.

4. Topic: Excel Basics – Part 2

Date: November 19, 2014

Participants: 4

Duration: 3 hrs.

5. Topic: Excel Intermediate – Part 2

Date: November 19, 2014

Participants: 5

Duration: 3 hrs.

6. Topic: WEB CMS 6 Basics

Date: November 20, 24, 2014

Participants: 12

Duration: 1.5 hrs.

SAFETY

No significant activities for the month on a City-wide basis.

ADDITIONAL DEPARTMENTAL TRAINING

FIRE

1. Topic: House Deployment Drill

Date: November 1, 2, 8, 2014

Participants: 55
Duration: 2 hrs.

2. Topic: US&R Training
Date: November 1, 2014
Participants: 1
Duration: 2 hrs.

3. Topic: RIC Drill
Date: November 2, 4, 10, 11, 13, 18, 21, 2014
Participants: 123
Duration: 3.5 hrs.

4. Topic: County Haz-Mat Training
Date: November 4, 2014
Participants: 2
Duration: 3 hrs.

5. Topic: 4th Quarter EMT Refresher
Date: November 7, 12 – 14, 17, 20, 26, 29, 2014
Participants: 90
Duration: 7 hrs.

6. Topic: Fall Haz-Mat Refresher
Date: November 7, 2014
Participants: 2
Duration: 1 hr.

7. Topic: CPR Refresher
Date: November 10, 2014
Participants: 1
Duration: 4 hrs.

8. Topic: Haz-Waste Operator Refresher
Date: November 11, 2014
Participants: 1
Duration: 8 hrs.

9. Topic: Fire Investigation – Live Fire Training
Date: November 19, 2014
Participants: 4
Duration: 7 hrs.

10. Topic: SCBA Annual Certification & Fit Testing
Date: November 19, 20, 28, 29, 2014
Participants: 47
Duration: 4 hrs.

Attached is the current statistics regarding the Worker Adjustment and Retraining Notification (WARN) Act.



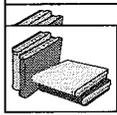
Greg Harris
Human Resources Division Manager/
Training and Safety Officer

cc: Director of Human Resources

City of Santa Clara
Library Department Monthly Report
November 2014

Items Borrowed	<u>November-2014</u>	<u>November-2013</u>	<u>Fiscal YTD 2014/15</u>	<u>Fiscal YTD 2013/14</u>
Central Library	209,099	186,163	1,041,992	985,081
Mission Branch	2,005	1,710	9,444	10,063
Northside Branch	30,778	0	101,017	0
TOTAL	241,882	187,873	1,152,453	995,144
Patron Visits				
Central Library	51,364	64,980	289,063	347,090
Mission Branch	3,520	3,330	18,478	19,268
Northside Branch	21,109	0	91,482	0
TOTAL	75,993	68,310	399,023	366,358
Patron Electronic Resources Use				
Public Internet Users	10,200	9,206	57,362	54,528
Reference Inquiries				
Central Library	10,489	11,129	59,584	62,376
Mission Branch	503	363	1,831	2,368
Northside Branch	1,001	0	4,340	0
TOTAL	11,993	11,492	65,755	64,744
Program Attendance	<i>Number</i>			
Children: Central Library	19	2,055	2,117	9,656
Mission Branch	3	92	20	389
Northside Branch	10	1,262	0	3,773
Adults: Central Library	13	372	477	2,161
Mission Branch	5	85	17	242
Northside Branch	2	19	0	144
Senior Booktalks	1	13	12	63
TOTAL	53	3,898	2,643	16,428
Patron Registration				
Santa Clara	814	518	6,182	3,600
SVLS Libraries	536	320	3,593	1,959
Other Libraries	76	38	496	241
TOTAL	1,426	876	10,271	5,800
Collection				
Items Added	3,612	2,720	63,842	14,581
Holds				
Placed	7,583	5,770	39,787	32,019
Filled	5,884	4,699	30,078	25,481
Volunteer Hours				
Genealogy	159.00	106.25	930.20	823.25
READ Santa Clara	333.00	467.50	1569.50	2344.00
Volunteer Program	213.26	202.99	1294.53	1313.72
Foundation and Friends	501.00	501.00	2457.00	2457.00
TOTAL	1,206.26	1,277.74	6,251.23	6,937.97


Hilary Keith
City Librarian



**Performance Measures Reporting
 Department: Library
 2014-2015
 Month Ending November 2014**

Division/Program/Measure	2014-2015		2013-2014	
	Year to Date	Budget	Year to Date	Budget
Division: Administration				
Program: Administration				
1. Number of hours Library facilities are open to the public annually.	2,094.00	4,000	1,692.00	4,000
2. Number of patron visits to all Library facilities annually.	399,023	850,000	366,358	1,400,000
Division: Youth & Extension Services				
Program: Youth Services				
1. Number of programs for children and parents offered.	76	250	85	250
2. Number of reference and reader's advisory questions annually.	17,680	35,000	17,783	35,000
3. Number of participants registered annually in Summer Reading Club.	353	2,800	422	2,800
4. Number of children and adults attending programs*.	9,656	30,000	10,783	30,000
*Performance Measure changed effective July 1, 2012				

Division/Program/Measure	2014-2015		2013-2014	
	Year to Date	Budget	Year to Date	Budget
Division: Youth & Extension Services				
Program: Young Adult				
1. Number of Young Adult programs offered.	26	20	24	20
2. Number of Young Adult items circulated.	28,975	75,000	31,776	75,000
3. Number of participants annually in the Teen Summer Reading Program.	109	800	141	800
Division: Youth & Extension Services				
Program: Mission Library				
1. Number of items circulated.	9,444	26,000	10,063	26,000
2. Number of programs for children and parents.	11	11	6	11
3. Number of participants registered annually in the Summer Reading Club.	40	200	0	200
4. Number of matched literacy pairs.	60	75	66	75
5. Number of children and adults attending programs.	389	400	257	400
Division: Youth & Extension Services				
Program: Extension Services				
1. Number of homebound patrons served each month.	18	18	17	20
2. Number of programs for adults.	5	11	5	11
3. Number of volunteer hours.	6,269.23	15,000	6,954.97	15,000

Division/Program/Measure	2014-2015		2013-2014		
	Year to Date	Budget	Year to Date	Budget	
Division: Youth & Extension Services					
Program: Northside Branch Library (Northside Branch opened in August 2014)					
1	Number of items circulated.	101,017	250,000	n/a	n/a
2	Number of programs for children and/or adults programs	26	120	n/a	n/a
3	Number of children and /or adults attending programs	3,787	2,700	n/a	n/a
4	Number of participants registered in Summer Reading Program	0	500	n/a	n/a
Division: Adult Services					
Program: Reference					
1.	Number of reference and reader's advisory questions answered annually.	41,904	75,000	48,485	75,000
2.	Number of programs offered to adults.	71	90	90	90
3.	Total attendance at programs offered to adults.	2,173	4,000	2,812	4,000
Division: Adult Services					
Program: Periodicals					
1	Number of periodicals checked in and processed monthly.	833	2,000	767	7000
2	Number of requests for Service resolved by Periodicals staff monthly *	706	1,400	692	6,000
*Performance Measure added effective July 1, 2012					

Division/Program/Measure	2014-2015		2013-2014	
	Year to Date	Budget	Year to Date	Budget
Division: Adult Services				
Program: Local History				
1 Number of programs presented/sponsored annually	9	20	15	20
2 Number of displays developed annually.	0	5	1	5
3 Research inquiries answered annually.	965	3,000	1,443	3,000
Division: Adult Services				
Program: Circulation				
1 Number of items circulated annually*	1,041,992	2,400,000	985,081	2,400,000
2 Number of patrons registered annually	8,876	14,000	5,800	14,000
*Performance Measure changed effective July 1, 2012				
Division: Collection Services				
Program: Technical Services				
1. Number of items added to the collection each month.*	3,612	2,500	2,720	2,000
*Reflects opening collection for new Northside Library.				

Division/Program/Measure	2014-2015		2013-2014	
	Year to Date	Budget	Year to Date	Budget
Division: Collection Services				
Program: Collection Management				
1. Books held per capita.	3.30	3.00	2.91	3.00
2. Total items held per capita.	3.72	3.40	3.32	3.40
3. Library materials expenditure per capita.	3.80	3.80	4.15 \$	3.80
Division: Support Services				
Program: Facilities				
1 # of safety inspections made annually	5	12	5	12
2 % of safety issues resolved within 48 hours of report	98%	99%	98%	99%
Division: Support Services				
Program: Technology				
1 Percent of problem reports responded to within 24 hours of receipt.	100%	100%	100%	100%
2 Number of tickets/requests for services resolved by Technology Staff	1613	1,000	895	600
3 Number of tickets/requests for services resolved by Technology Aides	8,918	12,000	6,943	10,000
4 Number of Library public computer users*	57,362	108,000	54,528	108,000
5 Number of Public laptop users	79,846	70,000	60,017	10,000
* Performance Measure changed effective July 1, 2012				

Month: November Year: 2014
PARKS AND RECREATION DEPARTMENT
MONTHLY ACTIVITY REPORT



1 **Participant Attendance Total** **58,808** with breakdown as follows:

A. By Program

Senior Citizens	20,468	Sports Classes & Leagues	7,588
Pre School	1,208	Teen Activities	1,803
Culture/Performing Arts	4,916	Therapeutics	72
Special Events	2,723	Instructional Swim	4,800
Camps	0	Recreational Swim	9,025
Total	58,808	Youth Activities	6,205

B. By Location (consider special events for each location)

Community Recreation Center	7,287	Parks	7,956
Senior Center	21,229	Pools	13,825
Parks Buildings	2,540	School Facilities (add special events)	0
Youth Activities Center	3,810	Teen Center	1,803
Total	58,808	Off-Site	358

2 **Non-Directed. Permit or Contract groups attendance total** **76,211** with breakdown as follows:

A. By Activity

	Groups	Attendance
Community Recreation Center Reservation		312
Senior Center		503
Teen Center/YAC		1,439
Parks- Buildings Reservation		2,995
Parks- Picnic Reservation		116
Field Reserv., Adult & Youth Groups		11,166
Swim Pool Reservations		59,680
	Total	76,211

B. By Location

Senior Center	503	T.C./YAC	1,439
Community Recreation Center	312	Fields	11,166
Park Buildings	2,995	Pools	59,680
Parks Picnics	116		
	Total	76,211	

3 **Monthly Participation totaled** **135,019** (Program attendance & non-directed or permit groups)

4 **Revenue Collected for the Month:**

	Year to Date Fiscal			Fiscal Year
	11/1/2014	2014/15	11/1/2014	2013/14
6 Swim Pool Admission	1,492.00	19,168.25	\$ 1,527.00	\$ 20,599.00
7 Rec. Classes/Swim Lessons	77,495.79	786,803.16	\$ 97,843.05	\$ 875,022.56
8 Rentals & Commissions	11,535.00	81,869.00	\$ 15,738.00	\$ 99,708.47
	\$90,522.79	\$887,840.41	\$ 115,108.05	\$ 995,330.03

November-14
MONTHLY PROJECT ACTIVITY REPORT
PARKS AND RECREATION DEPARTMENT
PARKS DIVISION, CEMETERY DIVISION, SCG&TC OPERATOR

Fund 532 Parks & Recreation:

	Activity
3001 Miscellaneous Park Improvements	<u>Bracher Park</u> - RFPs for playground improvement, fitness apparatus, and basketball court replacement were sent out in November.
3002 Community Recreation Center	
3003 Tennis & Sport Courts	The RFP for tennis court resurfacing at multiple locations was successfully conducted in November.
3004 Youth Activity Center	<u>YAC</u> roof replacement is complete.
3005 Senior Center	
3006 Teen Center	Projects in the planning stages.
3007 Mission City Cntr for Performing Arts	Maintenance continued by S.C.U.S.D., City pays 33%.
3008 Townsend, Johnson, Washington Sports Field	Continuing field repairs & maintenance. <u>Washington Field</u> - Renovations have been completed.
3009 Tree Inventor & Habitat Restoration	
3010 Park Building Roof, Structure Rehabilitation & Replacement	<u>Earl Carmichael Park</u> - Gym roof replacement to begin in December during scheduled holiday closure. Replacement of interior lights at Earl Carmichael Gym was completed in November.
3140 Ulistac Natural Area	Plans for extending the recycled water line have been sent to the South Bay Water Recycling for approval.
3170 Central Park Pond Refurbishment	<u>Central Park Pond</u> Improvement Project is nearing completion. Ribbon cutting for the project is scheduled for July 4, 2014 at 12:30pm.
3172 International Swim Center Pool	No projects funded 2013-14.
3176 Miscellaneous Swim Pool Improvements Phase VI	<u>International Swim Center</u> - Replacement of defective return valve to racing & training pools. <u>M.Gomez</u> - Additional deck light installation on hold waiting for arrival of light poles.
Other	

Fund 562-CDBG Projects:

	Activity
5556 Senior Center ADA Improvements	All projects completed, fund depleted (ADA). No additional funding for FY 2013-14
5558 Senior Center Emergency Generator	Project Completed. No additional funding for FY 2013-14.

Fund 840 SOSA

	Activity
9532 Golf Course Drainage Restoration	No projects funded for FY 2013-14.

Fund 593 Cemetery

3625 Burial Improvements	No projects funded for 2013-14.
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THE CITY OF SANTA CLARA
 ACTIVITY REPORT FOR THE MONTH OF NOVEMBER, 2014
 MISSION CITY MEMORIAL PARK

	<u>TOTAL INCOME FROM ALL SOURCES:</u>		<u>FISCAL YEAR COMPARISON</u> <u>SUMMARY TOTALS TO DATE:</u>	
	<u>NOVEMBER, 2014</u>	<u>NOVEMBER, 2013</u>	<u>2014-2015</u>	<u>2013-2014</u>
FACILITIES				
093/1162/5730				
093/1163/5730	<u>\$6,056.00</u>	<u>\$0.00</u>	<u>\$65,867.00</u>	<u>\$12,922.00</u>
LABOR				
093/1162/5740				
093/1163/5740	<u>\$3,661.00</u>	<u>\$10,757.00</u>	<u>\$71,714.00</u>	<u>\$110,106.00</u>
MATERIALS				
093/1162/5760				
093/1163/5760	<u>\$1,242.00</u>	<u>\$4,988.00</u>	<u>\$41,022.00</u>	<u>\$41,320.00</u>
BSR				
TOTALS	<u>\$10,959.00</u>	<u>\$15,745.00</u>	<u>\$178,603.00</u>	<u>\$194,348.00</u>
SALES TAX	<u>\$108.69</u>	<u>\$436.47</u>	<u>\$3,589.52</u>	<u>\$3,460.52</u>
ENDOWMENT CARE				
077/0131/57500				
077/0131/0361	<u>\$3,392.00</u>	<u>\$0.00</u>	<u>\$22,859.00</u>	<u>\$17,886.00</u>
TOTAL INCOME	<u>\$14,459.69</u>	<u>\$16,181.47</u>	<u>\$205,051.52</u>	<u>\$215,694.52</u>

MONTHLY PURCHASES AND BURIAL SUMMARY

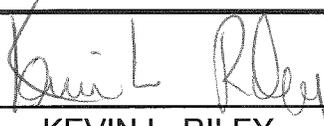
<u>NOVEMBER FISCAL YEAR 2014-2015</u>		<u>NOVEMBER FISCAL YEAR 2013-2014</u>	
<u>INVOICES</u>	<u>32852-32855</u>	<u>INVOICES</u>	<u>32719-32725</u>
NICHES PURCHASED	<u>0</u>	NICHES PURCHASED	<u>0</u>
CREMATION PLOTS PURCHASED	<u>1</u>	CREMATION PLOTS PURCHASED	<u>0</u>
CREMATION BURIAL RIGHTS	<u>3</u>	CREMATION BURIAL RIGHTS	<u>0</u>
FULL BODY PLOTS PURCHASED	<u>0</u>	FULL BODY PLOTS PURCHASED	<u>0</u>
CREMATION BURIAL (GROUND OR NICHE)	<u>3</u>	CREMATION BURIAL (GROUND OR NICHE)	<u>3</u>
FULL BODY BURIALS	<u>0</u>	FULL BODY BURIALS	<u>3</u>
TOTAL BURIALS FOR THE MONTH OF NOVEMBER 2014	<u>3</u>	TOTAL BURIALS FOR THE MONTH NOVEMBER 2013	<u>6</u>

Kathy L. Gordon 11/26/2014

MONTHLY ACTIVITY REPORT

Planning Department
November 1 - 30, 2014

Division/Program/Measure	2014- 2015		2013 - 2014	
	Current Month	Fiscal Year To Date	This Month Last Year	Fiscal Year To Date
Planning Commission Agenda Items				
Variances & Modifications	2	2	0	3
Use Permits (includes Conditional and Special)	2	10	1	4
Zoning & Rezoning	1	8	2	6
Tent. Map, Ten. Parcel Map & Lot Line Adj.	0	4	1	2
ARC Referrals & Review	0	0	0	0
General Plan Amendment	0	4	3	4
CEQA Determination - EIR, Mitigated Neg Dec.	1	9	3	5
Others including Appeals	1	7	1	2
Total	7	44	11	26
Historical & Landmark Commission Agenda Items				
Projects reviewed	5	20	4	12
Applications Filed				
Variances	0	0	0	1
Permits - Special & Use	3	19	5	24
Zoning - Regular	2	22	3	5
Zoning Administrator Action (Including Modification)	23	82	7	58
Lot Line Adjustment	0	1	1	2
Tentative Map, Tentative Parcel Map, Subdivision	0	2	4	7
Historical & Landmarks including Mills Act	4	18	1	3
General Plan Amendments	0	2	2	4
Residential Additions (story) - No Fee	0	0	0	0
Residential Addition (story) - With Fee	0	6	1	5
Residential Regular Projects- No Fee	7	28	4	34
Residential Regular Projects - With Fee	11	54	3	7
Non-Residential - No Fee	1	5	0	9
Non-Residential - With Fee	7	22	9	17
Mixed Use & New Building	2	11	7	15
Landscape - Non Residential	4	16	4	13
Signs	13	77	8	100
Temporary Signs	8	30	0	6
Others including Appeals	5	23	9	21
Total	90	418	68	331
Code Enforcement				
New Complaints	130	581	18	132
Complaints Resolved	98	446	13	91
Fees Collected				
Unadjusted Fees Collected	\$ 84,220.00	\$ 275,072.00	\$ 89,565.00	\$ 150,704.50
Add/Deduct: Adjustments & Refunds				
Refund - PLN2014-10213	\$ (6,290.00)			
Net Fees Collected	\$ 77,930.00	\$ 353,002.00	\$ 89,565.00	\$ 240,269.50

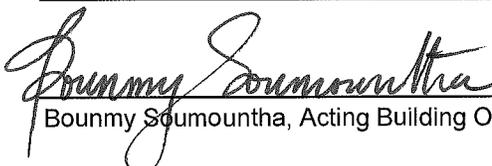


KEVIN L. RILEY
Director of Planning and Inspection

City of Santa Clara
 Monthly Activity Report
 Department of Planning and Inspection
 Building Inspection Division

November, 2014

DESCRIPTION	THIS MONTH	FY YR TO DATE	LAST YEAR			
1. PERMITS ISSUED:						
Building	152	877	113			
Electrical	141	863	106			
Plumbing	99	621	83			
Mechanical	82	506	89			
Total Number of Permits	474	2867	391			
2. NUMBER OF INSPECTIONS:						
Building	942	5338	1262			
Electrical	479	3016	583			
Plumbing/Mechanical	655	3684	691			
Housing	0	0	0			
Total Number of Inspections	2076	12038	2536			
Total Daily Average	122	118	141			
3 SERVICE REQUESTS, COMPLAINTS, CN'S						
Service Requests/Complaints	10	97	9			
Correction Notices Issued	14	105	20			
Correction Notices Resolved	13	83	21			
Correction Notices Unresolved	236	N/A	167			
Citations Issued	19	86	13			
4. REVENUE GENERATED FEES:						
Building Permits	\$ 922,426.46	\$ 2,252,801.64	\$ 110,677.65			
Plan Check	\$ 210,463.82	\$ 801,683.04	\$ 145,635.12			
Electrical Permits	\$ 143,475.30	\$ 331,126.36	\$ 19,202.60			
Plumbing Permits	\$ 135,698.72	\$ 295,120.97	\$ 16,956.20			
Mechanical Permits	\$ 126,117.43	\$ 269,441.99	\$ 18,040.25			
Miscellaneous	\$ 30,958.82	\$ 173,697.98	\$ 30,965.93			
Total Fees	\$1,569,140.55	\$ 4,123,871.98	\$ 341,477.75			
Total last year to date		\$ 2,172,828.98				
5. NATURE OF BLDG PERMITS ISSUED:						
	NO	VALUATION	UNITS	SQFT	PLAN CHECK	PERMIT FEES
Single Family						
Multi-Family						
Duplex						
Apartments/Condos	8	\$158,569,747.00	855		\$ 558,109.62	\$ 594,553.38
Commercial	3	\$68,153,254.00		844,877	\$ 203,884.83	\$ 254,672.68
Industrial						
Public						
Alteration & Additions						
Residential	58	\$2,579,742.00		6,919	\$ 22,229.45	\$ 29,174.32
Commercial/Industrial	30	\$14,699,176.00			\$ 59,915.26	\$ 77,907.11
Miscellaneous	51	\$1,574,603.00		221	\$ 11,805.38	\$ 18,642.88
Public						
Total		\$245,576,522.00				
Total F/Y to Date		\$523,925,072.13				


 Bounmy Soumountha, Acting Building Official

**PERFORMANCE MEASURES
BUILDING INSPECTION DIVISION
November, 2014 - FY 2014/15**

Permit Services	Adopted	Actual	% Actual/Adopted
1. Percent of express plan checks performed within two working days.	95%	100.0%	105.3%
2. Percent of short cycle plan checks performed within ten business days.	90%	100.0%	111.1%
3. Percent of regular cycle plan checks performed within 30 calendar days.	85%	90.6%	106.5%
4. Percentage of service provided to all Permit Center customers within 20 minutes of their arrival.	90%	79.40%	88.2%
Inspection			
1. Percent of code complaints responded to within two working days.	90%	83%	92.6%
2. Percent of inspections completed within next working day.	95%	95%	99.9%
Housing Inspection			
1. Percent of multi-family rental housing complexes inspected per month.	1.67%	0.0%	0.0%
2. Percent of housing code complaints responded to within two business days.	90%	n/a	N/A

HOUSING & COMMUNITY SERVICES DIVISION
ACTIVITY REPORT FOR NOVEMBER 2014

Program: Federal & State Grant Administration

Mission: Meet the expectations of city residents in delivering needed community services while meeting program administration requirements stipulated by the U.S. Department of Housing and Urban Development.

Measures:	<u>Budgeted</u>	<u>Current Month</u>	<u>FYTD</u>
1. Obtain approval by HUD of the City's annual Consolidated Plan.	100%	100%	100%
2. Obtain approval by HUD of the City's Consolidated Annual Performance and Evaluation Report.	100%	0%	0%

Program: Neighborhood Conservation & Improvement Program

Mission: Improve the local housing stock for the protection of residents and the enhancement of the City.

Measures:	<u>Budgeted</u>	<u>Current Month</u>	<u>FYTD</u>
1. Complete minor and substantial rehabilitation of up to 50 owner-occupied houses.	50	0	1

Program: Housing & Community Development Projects

Mission: Implement in a timely manner budgeted projects and programs that are identified as meeting particular community needs, primarily for low and moderate income people.

Measures:	<u>Budgeted</u>	<u>Current Month</u>	<u>FYTD</u>
1. Monitor the performance of all Public Service Agencies contracting with the City and Agency for compliance to contractual obligations.	10	5	5
2. Annually monitor for compliance all affordable housing contracts.	44	2	36

Approval:


Eloiza Murillo-Garcia
Housing Development Officer


Tamera Haas
Deputy City Manager

SANTA CLARA POLICE DEPARTMENT
MONTHLY ACTIVITY REPORT

November 2014 (by Calendar Year)	Current Month	Previous Month	This Year to Date	Prev. Year to Date
Homicide	0	0	0	0
Rape	0	2	22	11
Robbery	7	12	85	51
Felony Assaults	4	14	43	100
Burglary	42	33	516	435
Larceny - Thefts	186	186	2,053	1,962
(Of above that were from vehicle)	<108>	<106>	<1087>	<835>
Auto Theft	27	33	377	343
Local Recovered	27	25	448	247
Recovered for Others	13	17	170	196
Traffic Collisions				
Fatalities	0	0	3	0
Injuries	4	5	137	252
Prop. Damage	11	54	623	767
Total	15	59	763	1,019
Traffic Violations				
Moving	646	673	4,839	8,910
Parking	430	621	6,500	7,935
Miscellaneous	0	0	0	0
Total	1,076	1,294	10,773	16,845
Arrests				
Adult	443	470	4,692	4,018
Juvenile	19	27	198	271
Total	462	497	4,890	4,289
Warrants				
Received	199	170	2,005	1,593
Cleared	144	124	1,493	1,241
Reserve Police Hours	1,081	1,148	11,184	10,453
November 2014 (by Fiscal Year)	Current Month	Previous Month	This Fiscal Year to Date	Prev. Fiscal Year to Date
Financial Report				
Alarm Permits (4820)	\$ 835.50	\$ 1,078.00	\$ 4,787.00	\$ 4,683.00
Vehicle Release Fee (7396)	\$ 1,872.50	\$ 2,964.00	\$ 13,030.50	\$ 11,339.00
CA Vehicle Code (7461)	\$ 12,300.92	\$ 13,203.65	\$ 73,075.08	\$ 78,766.89
Misdemeanor Fines (7463)	\$ 296.65	\$ 552.11	\$ 1,922.01	\$ 2,691.92
City Traffic School Fines (7470)	\$ 7,295.99	\$ 6,459.58	\$ 35,143.76	\$ 52,784.96
Parking Enforcement (7472)	\$ 8,088.91	\$ 0.00	\$ 69,466.91	\$ 124,664.22
DUI Billing (7475)	\$ 722.19	\$ 4,017.67	\$ 8,882.31	\$ 6,278.77
Total Monies Received	\$ 31,412.66	\$ 28,275.01	\$ 206,307.57	\$ 281,208.76

7472 No deposit during the month of October

Prepared by Caroline Aquino & Jennifer Silveira

**Automotive Services
Monthly Activity Report
Fiscal Year 2014-15**

November 2014

ACQUISITIONS

	Nov-14	Fiscal Year-to-Date
# of Units Purchased as Replacement	5	27
# of Unites Purchased as Addition to Fleet	0	0

FUEL USAGE

	Nov-14	Fiscal Year-to-Date
Unleaded Fuel Quantity Consumed (Gallons)	15,535	87,325
Diesel Fuel Quantity Consumed (Gallons)	6,745	36,708

SHOP ACTIVITY

	Nov-14	Fiscal Year-to-Date
Total Work Days for July	17	102
Quantity of Scheduled Repairs	82	522
Quantity Unscheduled Repairs	512	2,615
Average Quantity of Work Orders / Day	17	15
Total Technician Labor Hours	743	4,589
Total Quantity of Work Orders	293	1,522

of REPAIR LINES by REPAIR TYPE

	Nov-14	Fiscal Year-to-Date
General Repair	321	1,691
Road Call	19	98
Transport	0	4
PM Service	204	1,063
Recalls	7	26
Sublet	35	217
Warranty	8	38
TOTAL Repair Lines	594	3,137

ALTERNATIVE FUEL / CALIFORNIA "CERTIFIED CLEAN IDLE" DIESEL

	Nov-14
Quantity of Hybrid Vehicles	60
Quantity of California "Certified Clean Idle" Diesel Vehicles	23



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Support Services Program: Division Administration				Number: 001/4411
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. Percentage of Agenda Reports completed on time.	75%	65%	95%	
2. Percentage of Agenda Reports completed satisfactorily.	100%	90%	95%	
3. Percent of City Manager assignment requests responded within time requested.	N/A	N/A	95%	
4. Percentage of customers surveyed that are very satisfied.	N/A	N/A	95%	

Division: Support Services Program: Development Support				Number: 001/4412
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. This Program has no reportable performance measures.	N/A	N/A	N/A	

Division: Support Services Program: Capital Improvement Projects				Number: 001/4413
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. This Program has no reportable performance measures.	N/A	N/A	N/A	



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Building Maintenance			Number: 001/2222
Program: Maintenance / Repair			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Percent of all requests for service responded to within four business days.	100%	100%	100%

Division: Building Maintenance			Number: 001/2223
Program: Janitorial			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Respond to all service requests within two hours.	100%	100%	100%
2. Clean all restrooms in all major buildings daily.	100%	100%	100%



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Design Program: Division Administration		Number: 001/4441	
<u>Performance Measures</u>	November Actuals	YTD Actuals	2014-2015 Budget
1. This Program has no reportable performance measures.	N/A	N/A	N/A

Division: Design Program: Development Support		Number: 001/4442	
<u>Performance Measures</u>	November Actuals	YTD Actuals	2014-2015 Budget
1. This Program has no reportable performance measures.	N/A	N/A	N/A

Division: Design Program: Capital Improvement Projects		Number: 001/4443	
<u>Performance Measures</u>	November Actuals	YTD Actuals	2014-2015 Budget
1. Percent of Capital Improvement Projects designed within budget.	-	100%	80%
2. Percent of Capital Improvement Projects designed within approved schedule.	-	100%	80%



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Field Services				Number: 001/4461
Program: Division Administration				
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. Percentage of complaints responded to within one business day.	50%	75%	90%	
2. Number of construction activity complaints.	10	34	25	

Division: Field Services				Number: 001/4462
Program: Development Support				
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. Percent of inspection requests responded to within one business day.	100%	100%	90%	

Division: Field Services				Number: 001/4463
Program: Capital Improvement Projects Inspection				
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. Percent of Capital Improvement Projects that reached substantial completion within the construction contract time.	-	100%	75%	
2. Percentage of Capital Improvement Projects completed within approved budget.	-	N/A	100%	
3. Percentage of customers rating services as satisfactory.	-	100%	100%	
4. Percentage of Capital Improvement Projects completed with Change Orders under 5% of construction cost.	-	N/A	90%	



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Land & Property Development			Number: 001/4451
Program: Division Administration			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. This Program has no reportable performance measures.	N/A	N/A	N/A

Division: Land & Property Development			Number: 001/4452
Program: Development Support & Review			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Percent of subdivision maps first submittals reviewed within 15 business days.	-	100%	95%
2. Percent of subdivision maps subsequent submittals reviewed within 10 business days.	67%	63%	95%
3. Percent of Title documents drafted within 10 business days.	100%	78%	95%
4. Percent of private development plans reviewed on first review within 20 business days.	100%	64%	95%
5. Percent of private development plans reviewed on subsequent reviews within 15 business days.	75%	72%	95%



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Traffic			Number: 001/4431
Program: Division Administration			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Number of grants applied for or being processed.	0	0	12
2. Number of special transportation permits issued.	43	318	350
3. Number of citizen/customer requested studies completed.	5	31	30

Division: Traffic			Number: 001/4432
Program: Development Support			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Number of preliminary site and development plans for Project Clearance and Subdivision Committee reviewed.	4	58	200
2. Number of encroachment permits, Capital Improvement Projects, and traffic control plans reviewed within agreed time frame.	16	135	145

Division: Traffic			Number: 001/4433
Program: Capital Improvement Projects			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Number of traffic projects under design.	0	0	12
2. Number of projects under construction requiring Traffic division support.	0	0	12

Division: Traffic			Number: 001/4434
Program: Traffic Signal Management			
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget
1. Number of timing, coordination, detection, equipment, or other signal management requests responded to.	21	107	150



PERFORMANCE MEASURES REPORTING

ENGINEERING, BUILDING MAINTENANCE, & TRAFFIC

November 2014

Division: Traffic				Number: 001/4435
Program: Traffic Striping and Signing				
Performance Measures	November Actuals	YTD Actuals	2014-2015 Budget	
1. Number of work orders created for Street Department action.	5	22	150	

STREET AND AUTOMOTIVE SERVICES DEPARTMENT
MONTHLY ACTIVITY REPORT - NOV 2014

			THIS MONTH	THIS FY TO DATE	LAST FY TO DATE
A. STREET MAINTENANCE					
1.	Deeplift AC R&R (In-House)	(ton)	0	121	1,904
2.	AC Restorations (Permits) (In-House)	(ton)	42	1,096	290
3.	Miscellaneous AC Repair (In-House)	(ton)	95	360	104
3.1.	Total AC Placed (In-House)	(ton)	137	1,577	2,298
4.	Crack Sealing (In-House)	(lf)	0	12,836	41,160
5.	Area of Streets Prepared for Slurry (In-House)*	(sy)	0	0	0
6.	Area of Streets Prepared for Fog Seal (In-House)*	(sy)	0	0	0
7.	Deeplift AC R&R (Contract)	(ton)	0	0	291
8.	AC Restorations (Permits) (Contract)	(ton)	0	0	0
9.	AC Overlay (Contract)	(ton)	0	0	0
10.	Slurry/Cape Seal (Contract)*	(sy)	0	0	0
11.	Miscellaneous AC Repair (Contract)	(ton)	0	0	0
11.1.	Total AC Placed (Contract)	(ton)	0	0	0
12.	Miscellaneous Activities	(hr)	682	4,243	4,879
SIDEWALK MAINTENANCE					
13.	Sidewalk R&R (In-House)	(sf)	0	0	0
14.	Curb & Gutter R&R (In-House)	(lf)	0	0	0
15.	Sidewalk Grinding	(hr)	40	187	92
16.	Sidewalk R&R (Contract)	(sf)	770	8,255	8,356
17.	Curb & Gutter R&R (Contract)	(lf)	158	1,430	765
18.	Valley Gutter (Contract)	(sf)	0	342	0
19.	Wheelchair Ramp (Contract)	(ea)	0	0	0
20.	Median Curbs (Contract)	(lf)	0	0	0
21.	Miscellaneous Activities	(hr)	0	0	0
22.	Illegally Dumped Materials	(gal)	1,750	21,225	11,990
B. STORM DRAIN SYSTEM MAINTENANCE					
1.	Catch Basins Cleaned	(ea)	205	1,551	1,488
2.	Main & Lateral Flushing	(ft)	2,205	14,840	6,274
2.1.	Main & Lateral Flushing	(cy)	1	7	10
3.	Illicit/Illegal Discharge Incidents	(ea)	4	57	38
4.	Illicit/Illegal Discharge Incidents	(hr)	29	181	172
5.	Other Non-Point Source Activities	(hr)	21	110	58
6.	Pump Stn. Mtce./Wet Well/Trash Rack Cleaning	(hr)	36	300	426
6.1.	Pump Stn. Mtce./Wet Well/Trash Rack Cleaning	(cy)	6	38	59
7.	Pump Station/Outfall Monitoring	(hr)	0	578	843
8.	Creek Clean-Up/Trash Abatement	(hr)	0	43	34
9.	Construction Site Inspections	(ea)	17	46	41
10.	Construction Site Inspections	(hr)	27	105	74
11.	Ind/Com Facility Inspections	(ea)	138	825	458
12.	Ind/Com Facility Inspections	(hr)	99	633	338
13.	Public Information Participation	(hr)	0	0	15
14.	Miscellaneous Activities	(hr)	355	1,792	857
C. TRAFFIC STRIPING & SIGNAGE MAINTENANCE					
1.	Striping Installed	(mi)	0.0	9.0	65.3
2.	Curbs Painted	(lf)	490	8,490	12,591
3.	Vandalism	(hr)	0	355	37
4.	Services for Other Departments	(hr)	53	1,002	245
5.	Pavement Marking (messages & crosswalks)	(sf)	2,160	12,136	4,344
6.	Sign Fabrication	(ea)	40	285	380
7.	Sign Maintenance	(hr)	43	763	642
8.	Signs Installed, Upgraded or Repaired	(ea)	93	1,481	795
9.	Metal Beam Guardrails	(lf)	0	10	297
10.	Miscellaneous Activities	(hr)	407	1,412	987
11.	Striping Installed (Contract)	(mi)	0.0	0.0	0.0
12.	Pavement Marking (Contract)	(sf)	0	0	0
13.	Pavement Markers (Contract)	(ea)	0	0	0
14.	Inertial Barriers	(ea)	0	10	0

D. SPECIAL DEPARTMENTAL ACTIVITIES					
1.	Clean-Up Campaign - Hours	(hr)	0	3	0
2.	Clean-Up Campaign - Debris Collected	(cy)	0	0	0
3.	Crack Sealing (Contract)	(lf)	0	0	0
4.	Fog Sealing (Contract)	(sy)	0	0	0
5.	Leaf Vac Program - Debris Collected	(cy)	273	273	802
6.	Christmas Tree Collection Program	(hr)	0	0	0
E. PARKWAYS & BOULEVARDS MAINTENANCE					
1.	Trees Planted	(ea)	15	50	79
2.	Trees Sprayed/Trees Injected	(ea)	0	0	3
3.	Root Pruning	(ea)	2	6	11
4.	Bracing & Cabling	(ea)	3	17	27
4.1.	Immediate Calls for H/B and B/D	(ea)	9	101	118
5.	Trees & Stumps Removed	(ea)	9	83	72
6.	Citizen Generated Tree Trim Requests	(ea)	88	504	459
6.1.	Miscellaneous Generated Service Requests	(ea)	53	402	289
7.	Trees Trimmed - City Crews	(ea)	64	182	308
7.1.	Trees Trimmed - Contract	(ea)	176	406	390
7.2.	Total Trees Trimmed	(ea)	240	590	698
8.	Backlog of Citizen Trim Requests - In-House				
8.1.	Current Month	(ea)	146		354
8.2.	More than 30 days	(ea)	21		326
8.3.	More than 60 days	(ea)	93		1,152
8.4.	Total Backlog	(ea)	260		1,832
9.	Backlog of Citizen Trim Requests - Contracted				
9.1.	Current Month	(ea)	32		137
9.2.	More than 30 days	(ea)	53		77
9.3.	More than 60 days	(ea)	51		493
9.4.	Total Backlog	(ea)	136		707
10.	Miscellaneous Trash Pickup	(gal)	525	2600	1,645
10.1	VTA Trash Pickup	(gal)	420	2030	1,775
F. SOLID WASTE					
1.	Clean Green Collection				
1.1.	Cubic Yards	(cy)	3,681	20,315	23,420
1.2.	Tons	(ton)	736	4,064	4,684
2.	Complaints Responded To:				
2.1.	Clean Green	(ea)	1	2	1
2.2.	Garbage	(ea)	1	10	1
3.	Street Sweeping				
3.1.	Miles Cleaned	(mi)	1,332	11,949	11,638
3.2.	Man-Hrs per Curb-Mile	(hr/mi)	0.12	0.60	0.61
4.	Illegal Sign/Graffiti Abatement				
4.1.	Illegal Signs Removed	(ea)	267	1,974	2,229
4.2.	Graffiti Loc. (Pri/Pub/Gar Bins) Reported	(ea)	1,025	3,534	4,816
4.3.	Private Property Graffiti Letters Sent	(ea)	1	10	29
4.4.	Private Property Graffiti City Clean Up	(ea)	9	40	1,573
5.	No. of Violations				
5.1.	For Containers Stored on Street	(ea)	14	94	69
5.2.	For Containers with Lids Open	(ea)	2	4	3
5.3.	For Overfilled Containers	(ea)	0	0	4
5.4.	For Accumulation of Refuse	(ea)	3	25	6

* Partial street area not included.

Prepared by:

Kami Huey

Approved by:

[Signature]

Current FY Start	2014	Division/Program/Measure	2014-2015			2013-2014		
			Nov-14	Year To Date	Budget	This Month Last Year	Year To Date	Budget
		Sewer System Administration	094/1511					
1.		Prepare annual Sewer Revenue Program (as required for Federal program and WPCP cost distribution) by due dates each year.	0	1	2	0	1	2
2.		Prepare monthly status reports and TPAC agenda reports.	1	5	12	1	5	12
		Sewer System Maintenance	094/1512					
1.		Number of feet of mainline jetted.	6,000	30,000	350,000	6,000	107,693	350,000
2.		Percentage of sanitary sewer overflows reported to the State CIQWS database within the time frame required by regulations	100%	100%	100%	1	100%	100%
3.		Number of reportable sewer spills	0	2	<3	0	3	<3
		Sewer Operations	094/1514					
1.		Number of pump and metering stations inspected.	33	165	396	33	165	396
2.		Provide all preventative and routine maintenance as specified in operations and maintenance manuals.	100%	100%	100%	100%	100%	100%
		San Jose/Santa Clara WPCP	094/1515					
1.		Support Treatment Plant Advisory Committee (TPAC) members to represent the City in matters relating to the WPCP at monthly meetings.	1	5	12	1	5	12
2.		Provide sufficient funding for all WPCP approved projects.	NA	75%	100%	25%	75%	100%
		Sewer/Storm Pump Maintenance	094/1516					
1.		Number of storm pump stations inspected.	34	170	408	34	170	408
2.		Provide all preventative and routine maintenance as specified in operations and maintenance manuals.	100%	100%	100%	100%	100%	100%
3.		Coordinate annual load test for generators.	0	0	10	0	2	10



Christopher L. de Groot
 Director of Water & Sewer Utilities

CITY OF SANTA CLARA WATER DEPARTMENT MONTHLY REPORT
Installed Water System Components:

November - 2014

Mains				
SIZE (in)	MT'L	BY	TYP	FT
8	DIP	WD	DW	560
10	DIP	WD	DW	8
12	DIP	WD	DW	416
TOTAL				984

Services				
SIZE (in)	BY	TYP	QTY	
1	CT	DW	1	
2	CT	DW	1	
3	CT	DW	2	
TOTAL			4	

Meters				
SIZE (in)	BY	TYP	QTY	
1	CT	DW	1	
2	CT	DW	5	
TOTAL			6	

Backflows				
SIZE (in)	BY	TYP	QTY	
6	CT	DW	2	
8	CT	DW	2	
1	CT	DW	1	
2	CT	DW	5	
TOTAL			10	

Fire Services				
SIZE (in)	BY	TYP	QTY	
TOTAL			0	

WD = Water Dept - CT=Contractor - DW= Drinking Water (Potable) - RW = Recycled Water

TASK	QTY
WATER WASTE WARNINGS ISSUED	15
LOW FLOW SHOWER HEAD/CONSERVATION KITS DISTRIBUTED	61
COMPLAINTS & SERVICE REQUESTS RESOLVED	125
SOLAR POOL SYSTEM COMPLAINTS & SERVICES	0
SOLAR DOMESTIC HOT WATER COMPLAINTS & SERVICES	0
WATER QUALITY SAMPLES TAKEN	280
PLANS CHECKED	30
FIRE HYDRANTS REPAIRED	7
DAMAGED FIRE HYDRANTS REPAIRED	1
FIRE HYDRANTS PAINTED	1
FIRE HYDRANTS FLUSHED	5
MAIN BREAKS REPAIRED	5
MAINLINE VALVES TESTED AND EXERCISED	21
BROKEN VALVES REPLACED	1
AIR RELIEF VALVES TESTED AND REPAIRED	0
WELL SITE FACILITIES PAINTED	0
REGULATOR (ZONE) VALVES CHECKED/ADJUSTED	3
SOLAR POOL HEATERS INSTALLED	0
SOLAR DOMESTIC HOT WATER SYSTEMS INSTALLED	0

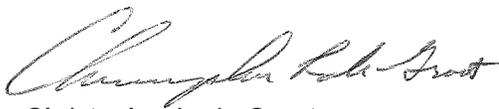
TASK	QTY
METERS CHANGED FOR REPAIR & TESTING, ROUTINE - POT & RCW	268
METERS TESTED IN SHOP - POT & RCW	36
METERS REPAIRED - POT & RCW	0
LARGE METERS TESTED & REPAIRED IN FIELD	0
LARGE WATER METERS/SERVICES PAINTED - > 2"	0
FIRE DETECTOR CHECK VALVES REPAIRED	0
FIRE DETECTOR CHECK VALVES READ	6
FIRE DETECTOR CHECK VALVES TESTED	0
BACKFLOW PREVENTERS TESTED	201
BACKFLOW PREVENTERS REPAIRED	14
SERVICE TAGS PROCESSED (SO1)	357
FIRE HYDRANTS INSTALLED	3
USA WATER LOCATES PERFORMED	275
Unused	

WORK IN PROGRESS:
INSTALLATION OF SOLAR SYSTEMS AT VARIOUS LOCATIONS.
INSTALLATION OF FIRE SERVICES AT VARIOUS LOCATIONS.
INSTALLATION OF RP DEVICES AT VARIOUS LOCATIONS.
INSTALLATION OF FIRE HYDRANTS AT VARIOUS LOCATIONS.
Install water main on the El Camino Homes project
Install water main on the Walsh tank project
Change meters for the AMI project

WORK COMPLETED:
Install 1" water service on emig ct

WATER SUPPLY DATA	QTY
Ground Water Pumped - MG	MG 326.3
Scvwd Treated Water Purchased - MG	MG 91.9
Hetch-Hetchy Water Purchased - MG	MG 46.3
Total Drinking Water Production This Month - MG	MG 464.5
Avg. Daily Drinking Water Production This Month - MGD	MGD 15.50

MISCELLANEOUS:
MAINTENANCE OF MAINS, HYDRANTS, SERVICES, WELLS, TANKS AND SOLAR SYSTEMS.


 Christopher L. de Groot
 Director of Water & Sewer Utilities

Current FY Start	2014	2014-2015			2013-2014			
		Division/Program/Measure	Nov-14	Year To Date	Budget	This Month Last Year	Year To Date	Budget
Water Engineering/Design Engineering		092/1411						
1.	Number of plans reviewed.		30	193	220	26	158	220
2.	Complete review of plans by the required due dates.		70%	86%	90%	100%	85%	90%
Water Engineering/ Water Quality		092/1412						
1.	Create and publish the annual Consumer Confidence Report in accordance with the California Safe Drinking Water Act requirement.		0	0	1	0	0	1
2.	Number of water quality samples processed.		280	1,663	3,000	191	1,720	3,000
Water Engineering/Water Resources		092/1413						
1.	Promote water conservation at public events.		0	1	4	0	1	5
Water System Maintenance		092/1422						
1.	Maintain an industrial standard for unaccounted water of 5% or less.		<5%	< 5%	< 5%	<5%	< 5%	< 5%
2.	Number of responses to customer service requests.		125	782	1,600	118	661	1,600
3.	Respond to customer service requests within 30 minutes of receipt of calls (excluding scheduled appointments and after hours call back requests).		90%	91%	80%	90%	90%	80%
4.	Number of backflow prevention devices tested.		201	1,184	2,000	258	1,284	2,000
5.	Number of meters changed for routine, repair and testing.		268	1,151	800	99	467	800
6.	Number of main break repairs/broken valve replacements performed.		6	37	95	8	47	95

Current FY Start	2014	Division/Program/Measure	2014-2015			2013-2014		
			Nov-14	Year To Date	Budget	This Month Last Year	Year To Date	Budget
		Water System Construction	092/1423					
1.		Number of lineal feet of water mains installed.	984	3,005	7,500	675	1,885	5,000
2.		Number of new service installations.	10	24	50	12	68	50
3.		Number of underground utility locates performed.	275	1,896	2,000	275	1,504	2,000
		Water System Operations	092/1424					
1.		Perform routine maintenance on City fire hydrants.	7	102	750	55	265	750
2.		Number of production meters read and recorded.	64	320	800	64	320	800
3.		Number of mainline water valves tested and exercised.	21	221	800	168	709	800
		Solar System Maintenance	092/1532					
1.		Number of responses to customer service requests.	0	97	300	7	92	300
2.		Number of systems provided with semi-annual winterization service. twice each year.	0	58	110	0	63	50
3.		Number of removal and reinstallation requests.	0	22	12	2	16	12
4.		Percent of service requests responded to within one business day.	100%	95%	75%	90%	91%	75%
		Recycled Water System Maintenance, City	097/1522					
1.		Number of recycled water meters greater than 2" tested annually.	0	0	18	0	0	18
		South Bay Water Recycling System Maintenance	097/1525					
1.		Provide all O & M services as required in Agreement for Services.	100%	100%	100%	100%	100%	100%

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7B.1

City of Santa Clara, California



Date: January 27, 2015
To: City Manager for Council Action
From: Director of Electric Utility
Subject: Approval of an Agreement for the Performance of Services with Hill Brothers Chemical Company to Provide Bulk Ammonia Hydroxide 19% for the Donald Von Raesfeld Power Plant

EXECUTIVE SUMMARY:

In order to operate the Donald Von Raesfeld Power Plant (DVR), it is necessary to use bulk chemicals to maintain compliance with the air permits. This Agreement for the Performance of Services with Hill Brothers Chemical Company will provide Ammonia Hydroxide 19% chemical for DVR. Staff prepared a Request for Proposal (RFP) and received one bid. Staff recommends entering into an Agreement for the Performance of Services with Hill Brothers Chemical Company to perform this work. A copy of the Agreement for Professional Services with Hill Brothers Chemical Company can be viewed on the City's website or is available in the City Clerk's Office for review during normal business hours..

ADVANTAGES AND DISADVANTAGES OF ISSUE:

This agreement for ammonia hydroxide 19% provides Silicon Valley Power with a quality bulk chemical to help the plant stay within necessary air compliance limits. Without this chemical it is not possible to operate DVR in compliance with the operating permits.

ECONOMIC/FISCAL IMPACT:

The total cost of the Agreement for the Performance of Service with Hill Brothers Chemical Company will not exceed \$220,880.00 for the first year, subject to future appropriations, or a total of \$1,025,104.08 over the four year term. Sufficient funds are available in the Electric Department Operating Budget, Generation and Pumping Expense, account 091-1377-87960-[I]9240-[F]54800.

RECOMMENDATION:

That Council approve, and authorize the City Manager to execute, the Agreement for the Performance of Services with Hill Brothers Chemical Company, in an amount not to exceed \$220,880.00 for the first year of the Agreement, or a total of \$1,025,104.08 for the term of the Agreement, for bulk Ammonia Hydroxide 19% for the Donald Von Raesfeld Power Plant.



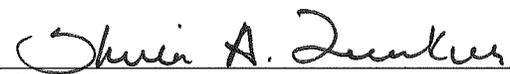
 John C. Roukema
 Director of Electric Utility

JMW
 Certified as to Availability of Funds:
 091-1377-87960 \$220,880.00



 Gary Ameling
 Director of Finance/Assistant City Manager

APPROVED:



 Julio J. Fuentes
 City Manager

MAJORITY VOTE OF COUNCIL

Documents Related to this Report:

- 1) *Agreement for the Performance of Services with Hill Brothers Chemical Company*

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS CHEMICAL COMPANY**

PREAMBLE

This agreement for the performance of services (“Agreement”) is made and entered into on this _____ day of _____, 2015, (“Effective Date”) by and between Hill Brothers Chemical Company, a California Corporation, with its principal place of business located at 1675 N. Main Street, Orange, CA 92867 (“Contractor”), and the City of Santa Clara, California, a chartered California municipal corporation with its primary business address at 1500 Warburton Avenue, Santa Clara, California 95050 (“City”). City and Contractor may be referred to individually as a “Party” or collectively as the “Parties” or the “Parties to this Agreement.”

RECITALS

- A. City desires to secure professional services more fully described in this Agreement, at Exhibit A, entitled “Scope of Services”; and
- B. Contractor represents that it, and its subcontractors, if any, have the professional qualifications, expertise, necessary licenses and desire to provide certain goods and/or required services of the quality and type which meet objectives and requirements of City; and,
- C. The Parties have specified herein the terms and conditions under which such services will be provided and paid for.

The Parties agree as follows:

AGREEMENT PROVISIONS

1. EMPLOYMENT OF CONTRACTOR.

City hereby employs Contractor to perform services set forth in this Agreement. To accomplish that end, City may assign a Project Manager to personally direct the Services to be provided by Contractor and will notify Contractor in writing of City’s choice. City shall pay for all such materials and services provided which are consistent with the terms of this Agreement.

2. SERVICES TO BE PROVIDED.

Except as specified in this Agreement, Contractor shall furnish all technical and professional services, including labor, material, equipment, transportation, supervision and expertise (collectively referred to as “Services”) to satisfactorily complete the work

required by City at his/her own risk and expense. Services to be provided to City are more fully described in Exhibit A entitled "SCOPE OF SERVICES." All of the exhibits referenced in this Agreement are attached and are incorporated by this reference.

3. COMMENCEMENT AND COMPLETION OF SERVICES.

- A. Contractor shall begin providing the services under the requirements of this Agreement upon receipt of written Notice to Proceed from City. Such notice shall be deemed to have occurred three (3) calendar days after it has been deposited in the regular United States mail. Contractor shall complete the Services within the time limits set forth in the Scope of Services or as mutually determined in writing by the Parties.
- B. When City determines that Contractor has satisfactorily completed the Services, City shall give Contractor written Notice of Final Acceptance. Upon receipt of such notice, Contractor shall not incur any further costs under this Agreement. Contractor may request this determination of completion be made when, in its opinion, the Services have been satisfactorily completed. If so requested by the contractor, City shall make this determination within fourteen (14) days of its receipt of such request.

4. QUALIFICATIONS OF CONTRACTOR - STANDARD OF WORKMANSHIP.

Contractor represents and maintains that it has the necessary expertise in the professional calling necessary to perform services, and its duties and obligations, expressed and implied, contained herein, and City expressly relies upon Contractor's representations regarding its skills and knowledge. Contractor shall perform such services and duties in conformance to and consistent with the professional standards of a specialist in the same discipline in the State of California.

The plans, designs, specifications, estimates, calculations, reports and other documents furnished under Exhibit A shall be of a quality acceptable to City. The criteria for acceptance of the work provided under this Agreement shall be a product of neat appearance, well organized, that is technically and grammatically correct, checked and having the maker and checker identified. The minimum standard of appearance, organization and content of the drawings shall be that used by City for similar projects.

5. TERM OF AGREEMENT.

Unless otherwise set forth in this Agreement or unless this paragraph is subsequently modified by a written amendment to this Agreement, the term of this Agreement shall begin on the Effective Date of this Agreement and terminate at the end of day, four (4) years from the Effective Date.

6. MONITORING OF SERVICES.

City may monitor the Services performed under this Agreement to determine whether Contractor's operation conforms to City policy and to the terms of this Agreement. City may also monitor the Services to be performed to determine whether financial operations

are conducted in accord with applicable City, county, state, and federal requirements. If any action of Contractor constitutes a breach, City may terminate this Agreement pursuant to the provisions described herein.

7. WARRANTY.

Contractor expressly warrants that all materials and services covered by this Agreement shall be fit for the purpose intended, shall be free from defect, and shall conform to the specifications, requirements, and instructions upon which this Agreement is based. Contractor agrees to promptly replace or correct any incomplete, inaccurate, or defective Services at no further cost to City when defects are due to the negligence, errors or omissions of Contractor. If Contractor fails to promptly correct or replace materials or services, City may make corrections or replace materials or services and charge Contractor for the cost incurred by City.

8. PERFORMANCE OF SERVICES.

Contractor shall perform all requested services in an efficient and expeditious manner and shall work closely with and be guided by City. Contractor shall be as fully responsible to City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons directly employed by it. Contractor will perform all Services in a safe manner and in accordance with all federal, state and local operation and safety regulations.

9. BUSINESS TAX LICENSE REQUIRED

Contractor must comply with Santa Clara City Code section 3.40.060, as that section may be amended from time to time or renumbered, which requires that any person who transacts or carries on any business in the City of Santa Clara pay business license tax to the City. A business tax certificate may be obtained by completing the Business Tax Affidavit Form and paying the applicable fee at the Santa Clara City Hall Municipal Services Division.

10. RESPONSIBILITY OF CONTRACTOR.

Contractor shall be responsible for the professional quality, technical accuracy and coordination of the Services furnished by it under this Agreement. Neither City's review, acceptance, nor payments for any of the Services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement and Contractor shall be and remain liable to City in accordance with applicable law for all damages to City caused by Contractor negligent performance of any of the Services furnished under this Agreement.

Any acceptance by City of plans, specifications, construction contract documents, reports, diagrams, maps and other material prepared by Contractor shall not in any respect absolve Contractor from the responsibility Contractor has in accordance with customary standards of good professional practice in compliance with applicable federal, state, county, and/or municipal laws, ordinances, regulations, rules and orders.

11. COMPENSATION AND PAYMENT.

In consideration for Contractor's complete performance of Services, City shall pay Contractor for all materials provided and services rendered by Contractor at the rate per hour for labor and cost per unit for materials as outlined in Exhibit B, entitled "SCHEDULE OF FEES."

Contractor will bill City on a monthly basis for Services provided by Contractor during the preceding month, subject to verification by City. City will pay Contractor within thirty (30) days of City's receipt of invoice.

12. TERMINATION OF AGREEMENT.

Either Party may terminate this Agreement without cause by giving the other Party written notice ("Notice of Termination") which clearly expresses that Party's intent to terminate the Agreement. Notice of Termination shall become effective no less than thirty (30) calendar days after a Party receives such notice. After either Party terminates the Agreement, Contractor shall discontinue further services as of the effective date of termination, and City shall pay Contractor for all Services satisfactorily performed up to such date.

13. NO ASSIGNMENT OR SUBCONTRACTING OF AGREEMENT.

City and Contractor bind themselves, their successors and assigns to all covenants of this Agreement. This Agreement shall not be assigned or transferred without the prior written approval of City. Contractor shall not hire subcontractors without express written permission from City.

14. NO THIRD PARTY BENEFICIARY.

This Agreement shall not be construed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

15. INDEPENDENT CONTRACTOR.

Contractor and all person(s) employed by or contracted with Contractor to furnish labor and/or materials under this Agreement are independent contractors and do not act as agent(s) or employee(s) of City. Contractor has full rights, however, to manage its employees in their performance of Services under this Agreement. Contractor is not authorized to bind City to any contracts or other obligations.

16. NO PLEDGING OF CITY'S CREDIT.

Under no circumstances shall Contractor have the authority or power to pledge the credit of City or incur any obligation in the name of City. Contractor shall save and hold harmless the City, its City Council, its officers, employees, boards and commissions for expenses arising out of any unauthorized pledges of City's credit by Contractor under this Agreement.

17. CONFIDENTIALITY OF MATERIAL.

All ideas, memoranda, specifications, plans, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for Contractor and all other written information submitted to Contractor in connection with the performance of this Agreement shall be held confidential by Contractor and shall not, without the prior written consent of City, be used for any purposes other than the performance of the Services nor be disclosed to an entity not connected with performance of the Services. Nothing furnished to Contractor which is otherwise known to Contractor or becomes generally known to the related industry shall be deemed confidential.

18. USE OF CITY NAME OR EMBLEM.

Contractor shall not use City's name, insignia, or emblem, or distribute any information related to services under this Agreement in any magazine, trade paper, newspaper or other medium without express written consent of City.

19. OWNERSHIP OF MATERIAL.

All material, including information developed on computer(s), which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports and other material developed, collected, prepared or caused to be prepared under this Agreement shall be the property of City but Contractor may retain and use copies thereof. City shall not be limited in any way or at any time in its use of said material. However, Contractor shall not be responsible for damages resulting from the use of said material for work other than Project, including, but not limited to, the release of this material to third parties.

20. RIGHT OF CITY TO INSPECT RECORDS OF CONTRACTOR.

City, through its authorized employees, representatives or agents shall have the right during the term of this Agreement and for three (3) years from the date of final payment for goods or services provided under this Agreement, to audit the books and records of Contractor for the purpose of verifying any and all charges made by Contractor in connection with Contractor compensation under this Agreement, including termination of Contractor. Contractor agrees to maintain sufficient books and records in accordance with generally accepted accounting principles to establish the correctness of all charges submitted to City. Any expenses not so recorded shall be disallowed by City.

Contractor shall submit to City any and all reports concerning its performance under this Agreement that may be requested by City in writing. Contractor agrees to assist City in meeting City's reporting requirements to the State and other agencies with respect to Contractor's Services hereunder.

21. CORRECTION OF SERVICES.

Contractor agrees to correct any incomplete, inaccurate or defective Services at no further costs to City, when such defects are due to the negligence, errors or omissions of Contractor.

22. FAIR EMPLOYMENT.

Contractor shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, gender, sexual orientation, age, disability, religion, ethnic background, or marital status, in violation of state or federal law.

23. HOLD HARMLESS/INDEMNIFICATION.

To the extent permitted by law, Contractor agrees to protect, defend, hold harmless and indemnify City, its City Council, commissions, officers, employees, volunteers and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, including all costs and reasonable attorney's fees in providing a defense to any claim arising therefrom, for which City shall become liable arising from Contractor's negligent, reckless or wrongful acts, errors, or omissions with respect to or in any way connected with the Services performed by Contractor pursuant to this Agreement.

24. INSURANCE REQUIREMENTS.

During the term of this Agreement, and for any time period set forth in Exhibit C, Contractor shall purchase and maintain in full force and effect, at no cost to City insurance policies with respect to employees and vehicles assigned to the Performance of Services under this Agreement with coverage amounts, required endorsements, certificates of insurance, and coverage verifications as defined in Exhibit C.

25. AMENDMENTS.

This Agreement may be amended only with the written consent of both Parties.

26. INTEGRATED DOCUMENT.

This Agreement represents the entire agreement between City and Contractor. No other understanding, agreements, conversations, or otherwise, with any representative of City prior to execution of this Agreement shall affect or modify any of the terms or obligations of this Agreement. Any verbal agreement shall be considered unofficial information and is not binding upon City.

27. SEVERABILITY CLAUSE.

In case any one or more of the provisions in this Agreement shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions, which shall remain in full force and effect.

28. WAIVER.

Contractor agrees that waiver by City of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement.

29. NOTICES.

All notices to the Parties shall, unless otherwise requested in writing, be sent to City addressed as follows:

City of Santa Clara
Attention: Electric Department
1500 Warburton Avenue
Santa Clara, California 95050
or by facsimile at (408) 261-3012

And to Contractor addressed as follows:
Hill Brothers Chemical Company
1675 N. Main Street
Orange, California 92867
or by facsimile at (714) 998-8800

If notice is sent via facsimile, a signed, hard copy of the material shall also be mailed. The workday the facsimile was sent shall control the date notice was deemed given if there is a facsimile machine generated document on the date of transmission. A facsimile transmitted after 1:00 p.m. on a Friday shall be deemed to have been transmitted on the following Monday.

30. CAPTIONS.

The captions of the various sections, paragraphs and subparagraphs of this Agreement are for convenience only and shall not be considered or referred to in resolving questions of interpretation.

31. LAW GOVERNING CONTRACT AND VENUE.

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California. The venue of any suit filed by either Party shall be vested in the state courts of the County of Santa Clara, or if appropriate, in the United States District Court, Northern District of California, San Jose, California.

32. DISPUTE RESOLUTION.

A. Unless otherwise mutually agreed to by the Parties, any controversies between Contractor and City regarding the construction or application of this Agreement, and claims arising out of this Agreement or its breach, shall be submitted to mediation within thirty (30) days of the written request of one Party after the service of that request on the other Party.

- B. The Parties may agree on one mediator. If they cannot agree on one mediator, the Party demanding mediation shall request the Superior Court of Santa Clara County to appoint a mediator. The mediation meeting shall not exceed one day (eight (8) hours). The Parties may agree to extend the time allowed for mediation under this Agreement.
- C. The costs of mediation shall be borne by the Parties equally.
- D. For any contract dispute, mediation under this section is a condition precedent to filing an action in any court. In the event of mediation which arises out of any dispute related to this Agreement, the Parties shall each pay their respective attorney's fees, expert witness costs and cost of suit through mediation only. In the event of litigation, the prevailing Party shall recover its reasonable costs of suit, expert's fees, and attorney's fees. If mediation does not resolve the dispute, the Parties agree that the matter shall be litigated in a court of law, and not subject to the arbitration provisions of the Public Contracts Code.

33. COMPLIANCE WITH ETHICAL STANDARDS.

Contractor shall:

- A. Read Exhibit D, entitled "ETHICAL STANDARDS FOR CONTRACTORS SEEKING TO ENTER INTO AN AGREEMENT WITH THE CITY OF SANTA CLARA, CALIFORNIA"; and,
- B. Execute Exhibit E, entitled "AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS."

34. CONFLICT OF INTERESTS.

This Agreement does not prevent either Party from entering into similar agreements with other parties. To prevent a conflict of interest, Contractor certifies that to the best of its knowledge, no City officer, employee or authorized representative has any financial interest in the business of Contractor and that no person associated with Contractor has any interest, direct or indirect, which could conflict with the faithful performance of this Agreement. Contractor is familiar with the provisions of California Government Code Section 87100 and following, and certifies that it does not know of any facts which would violate these code provisions. Contractor will advise City if a conflict arises.

(Continued on Page 9 of 9)

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36. PROGRESS SCHEDULE.

The Progress Schedule will be as set forth in the attached Exhibit F, entitled "MILESTONE SCHEDULE" if applicable.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but both of which shall constitute one and the same instrument; and, the Parties agree that signatures on this Agreement, including those transmitted by facsimile, shall be sufficient to bind the Parties.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

APPROVED AS TO FORM:

RICHARD E. NOSKY, JR.
City Attorney

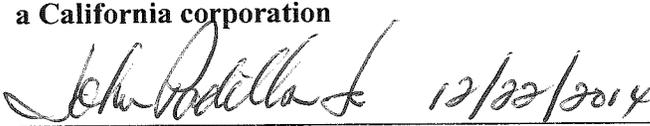
ATTEST:

ROD DIRIDON, JR.
City Clerk

JULIO J. FUENTES
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-6771

"CITY"

HILL BROTHERS CHEMICAL COMPANY
a California corporation

By: 
Name: JOHN PADILLA Jr..
Title: Regional Sales Manager
Local Address: 3000 E. Birch Street #108
Brea, California 92821
Email Address: johnpadillajr@hillbrothers.com
Telephone: (714) 579-3333
Fax: (714) 579-3399

"CONTRACTOR"

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS CHEMICAL COMPANY**

EXHIBIT A

SCOPE OF SERVICES

The Services to be performed for the City by the Contractor under this Agreement are more fully described in the Contractor's proposal entitled, "transportation of bulk aqua ammonia" dated November 6, 2013, which is attached to this Exhibit A.

7. Aqua Ammonia must meet all specifications at time of delivery. City may perform random tests (spot checks) of delivered product to assure quality level.
8. Supplier shall provide the most recent consecutive three (3) months of analysis along with QA/QC methodology describing standard quality checks of Aqua Ammonia.
9. Upon request the awarded supplier shall identify the source of any delivered batch/load. For quality control purposes, supplier shall conduct sample tests for each production batch

Transportation and Delivery:

1. Transportation and delivery of Aqueous Ammonia shall be performed in accordance with all applicable laws, regulations, and comply with site-specific ammonia delivery safety plans and procedures.
2. Upon placement of each order, Ammonia shall be delivered to the DVR Power Plant within three (3) calendar days.
3. The City estimates approximately forty (40) deliveries per year with an estimated delivery quantity of four (4) Dry Short Tons Aqueous Ammonia per delivery.

ATTACHMENTC
Product Pricing

	DESCRIPTION	ESTIMATED QUANTITY DRY TON PER YEAR	UNIT PRICE PER DRY TON	EXTENDED PRICE (ESTIMATED QUANTITY MULTIPLIED BY UNIT PRICE)
1	AQUEOUS AMMONIA (NH3 IN H2O)	160	\$1380.00	\$220,800.00
2			_____ %	<\$ _____ >
3	TOTAL PRICE (LINE 1 & 2):			\$220,800.00

The Product Pricing Total (line 3) is indicated in words:
Two Hundred Tewnty Thousand and Eight Hundred
Dollars and Cents. (\$ _____).

Company Hill Brothers Chemical Company

Signature *John Padilla Jr*

Date 10/31/2014

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS**

EXHIBIT B

FEE SCHEDULE

In no event shall the amount billed to City by Contractor for services under this Agreement exceed one million, twenty-five thousand, one hundred four dollars and eight cents. (\$1,025,104.08), subject to budget appropriations.

Delivery of aqueous ammonia estimated at 160 dry tons per year at a rate of \$1,380.00* per dry ton for an extended price of \$220,880.00 per year

*Pricing will not exceed 10% per year if necessary for years two (2) through four (4).

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS CHEMICAL COMPANY**

EXHIBIT C

INSURANCE REQUIREMENTS

Without limiting the Contractor's indemnification of the City, and prior to commencing any of the Services required under this Agreement, the Contractor shall purchase and maintain in full force and effect, at its sole cost and expense, the following insurance policies with at least the indicated coverages, provisions and endorsements:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

1. Commercial General Liability Insurance policy which provides coverage at least as broad as Insurance Services Office form CG 00 01. Policy limits are subject to review, but shall in no event be less than, the following:

\$1,000,000 Each Occurrence
\$2,000,000 General Aggregate
\$2,000,000 Products/Completed Operations Aggregate
\$1,000,000 Personal Injury

2. Exact structure and layering of the coverage shall be left to the discretion of Contractor; however, any excess or umbrella policies used to meet the required limits shall be at least as broad as the underlying coverage and shall otherwise follow form.
3. The following provisions shall apply to the Commercial Liability policy as well as any umbrella policy maintained by the Contractor to comply with the insurance requirements of this Agreement:
 - a. Coverage shall be on a "pay on behalf" basis with defense costs payable in addition to policy limits;
 - b. There shall be no cross liability exclusion which precludes coverage for claims or suits by one insured against another; and
 - c. Coverage shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of liability.

B. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business automobile liability insurance policy which provides coverage at least as broad as ISO form CA 00 01 with policy limits a minimum limit of not less than one million dollars (\$1,000,000) each accident using, or providing coverage at least as broad as, Insurance Services Office form CA 00 01. Liability coverage shall apply to all owned, non-owned and hired autos.

In the event that the Work being performed under this Agreement involves transporting of hazardous or regulated substances, hazardous or regulated wastes and/or hazardous or regulated materials, Contractor and/or its subcontractors involved in such activities shall provide coverage with a limit of two million dollars (\$2,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage Policy of Environmental Impairment Endorsement MCS90 or Insurance Services Office endorsement form CA 99 48, which amends the pollution exclusion in the standard Business Automobile Policy to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto.

C. WORKERS' COMPENSATION

1. Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars (\$1,000,000) policy limit Bodily Injury by disease, one million dollars (\$1,000,000) each accident/Bodily Injury and one million dollars (\$1,000,000) each employee Bodily Injury by disease.
2. The indemnification and hold harmless obligations of Contractor included in this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any subcontractor under any Workers' Compensation Act(s), Disability Benefits Act(s) or other employee benefits act(s).
3. This policy must include a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

D. COMPLIANCE WITH REQUIREMENTS

All of the following clauses and/or endorsements, or similar provisions, must be part of each commercial general liability policy, and each umbrella or excess policy.

1. Additional Insureds. City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents are hereby added as additional insureds in respect to liability arising out of Contractor's work for City, using Insurance Services Office (ISO) Endorsement CG 20 10 11 85 or the combination of CG 20 10 03 97 and CG 20 37 10 01, or its equivalent.
2. Primary and non-contributing. Each insurance policy provided by Contractor shall contain language or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance which the

Indemnities may possess, including any self-insurance or self-insured retention they may have. Any other insurance Indemnities may possess shall be considered excess insurance only and shall not be called upon to contribute with Contractor's insurance.

3. Cancellation.

- a. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided due to non-payment of premiums shall be effective until written notice has been given to City at least ten (10) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least ten (10) days prior to the effective date of non-renewal.
- b. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided for any cause save and except non-payment of premiums shall be effective until written notice has been given to City at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.

4. Other Endorsements. Other endorsements may be required for policies other than the commercial general liability policy if specified in the description of required insurance set forth in Sections A through D of this Exhibit C, above.

E. ADDITIONAL INSURANCE RELATED PROVISIONS

Contractor and City agree as follows:

1. Contractor agrees to ensure that subcontractors, and any other party involved with the Services who is brought onto or involved in the performance of the Services by Contractor, provide the same minimum insurance coverage required of Contractor, except as with respect to limits. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this Agreement. Contractor agrees that upon request by City, all agreements with, and insurance compliance documents provided by, such subcontractors and others engaged in the project will be submitted to City for review.
2. Contractor agrees to be responsible for ensuring that no contract used by any party involved in any way with the project reserves the right to charge City or Contractor for the cost of additional insurance coverage required by this Agreement. Any such provisions are to be deleted with reference to City. It is not the intent of City to reimburse any third party for the cost of complying with these requirements. There shall be no recourse against City for payment of premiums or other amounts with respect thereto.

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS CHEMICAL COMPANY**

EXHIBIT D

**ETHICAL STANDARDS FOR CONTRACTORS SEEKING TO ENTER INTO AN
AGREEMENT WITH THE CITY OF SANTA CLARA, CALIFORNIA**

Termination of Agreement for Certain Acts.

- A. The City may, at its sole discretion, terminate this Agreement in the event any one or more of the following occurs:
1. If a Contractor¹ does any of the following:
 - a. Is convicted² of operating a business in violation of any Federal, State or local law or regulation;
 - b. Is convicted of a crime punishable as a felony involving dishonesty³;
 - c. Is convicted of an offense involving dishonesty or is convicted of fraud or a criminal offense in connection with: (1) obtaining; (2) attempting to obtain; or, (3) performing a public contract or subcontract;
 - d. Is convicted of any offense which indicates a lack of business integrity or business honesty which seriously and directly affects the present responsibility of a City contractor or subcontractor; and/or,
 - e. Made (or makes) any false statement(s) or representation(s) with respect to this Agreement.

¹ For purposes of this Agreement, the word "Consultant" (whether a person or a legal entity) also refers to "Contractor" and means any of the following: an owner or co-owner of a sole proprietorship; a person who controls or who has the power to control a business entity; a general partner of a partnership; a principal in a joint venture; or a primary corporate stockholder [i.e., a person who owns more than ten percent (10%) of the outstanding stock of a corporation] and who is active in the day to day operations of that corporation.

² For purposes of this Agreement, the words "convicted" or "conviction" mean a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere within the past five (5) years.

³ As used herein, "dishonesty" includes, but is not limited to, embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, failure to pay tax obligations, receiving stolen property, collusion or conspiracy.

2. If fraudulent, criminal or other seriously improper conduct of any officer, director, shareholder, partner, employee or other individual associated with the Contractor can be imputed to the Contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of the Contractor, with the Contractor's knowledge, approval or acquiescence, the Contractor's acceptance of the benefits derived from the conduct shall be evidence of such knowledge, approval or acquiescence.

B. The City may also terminate this Agreement in the event any one or more of the following occurs:

1. The City determines that Contractor no longer has the financial capability⁴ or business experience⁵ to perform the terms of, or operate under, this Agreement; or,
2. If City determines that the Contractor fails to submit information, or submits false information, which is required to perform or be awarded a contract with City, including, but not limited to, Contractor's failure to maintain a required State issued license, failure to obtain a City business license (if applicable) or failure to purchase and maintain bonds and/or insurance policies required under this Agreement.

C. In the event a prospective Contractor (or bidder) is ruled ineligible (debarred) to participate in a contract award process or a contract is terminated pursuant to these provisions, Contractor may appeal the City's action to the City Council by filing a written request with the City Clerk within ten (10) days of the notice given by City to have the matter heard. The matter will be heard within thirty (30) days of the filing of the appeal request with the City Clerk. The Contractor will have the burden of proof on the appeal. The Contractor shall have the opportunity to present evidence, both oral and documentary, and argument.

⁴ Contractor becomes insolvent, transfers assets in fraud of creditors, makes an assignment for the benefit of creditors, files a petition under any section or chapter of the federal Bankruptcy Code (11 U.S.C.), as amended, or under any similar law or statute of the United States or any state thereof, is adjudged bankrupt or insolvent in proceedings under such laws, or a receiver or trustee is appointed for all or substantially all of the assets of Contractor.

⁵ Loss of personnel deemed essential by the City for the successful performance of the obligations of the Contractor to the City.

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS CHEMICAL COMPANY**

EXHIBIT E

AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS

I hereby state that I have read and understand the language, entitled "Ethical Standards" set forth in Exhibit D. I have the authority to make these representations on my own behalf or on behalf of the legal entity identified herein. I have examined appropriate business records, and I have made appropriate inquiry of those individuals potentially included within the definition of "Contractor" contained in Ethical Standards at footnote 1.

Based on my review of the appropriate documents and my good-faith review of the necessary inquiry responses, I hereby state that neither the business entity nor any individual(s) belonging to said "Contractor" category [i.e., owner or co-owner of a sole proprietorship, general partner, person who controls or has power to control a business entity, etc.] has been convicted of any one or more of the crimes identified in the Ethical Standards within the past five (5) years.

The above assertions are true and correct and are made under penalty of perjury under the laws of the State of California.

HILL BROTHERS CHEMICAL COMPANY
a California corporation

By: John Padilla Jr 12/22/2014

Name: JOHN PADILLA JR.

Title: Regional Sales Manager

NOTARY'S ACKNOWLEDGMENT TO BE ATTACHED

Please execute the affidavit and attach a notary public's acknowledgment of execution of the affidavit by the signatory. If the affidavit is on behalf of a corporation, partnership, or other legal entity, the entity's complete legal name and the title of the person signing on behalf of the legal entity shall appear above. Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

**AGREEMENT FOR THE PERFORMANCE OF SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA,
AND
HILL BROTHERS CHEMICAL COMPANY**

EXHIBIT F

MILESTONE SCHEDULE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Orange

On December 23, 2014 before me, Patricia Christina Santana, Notary Public
Date Here Insert Name and Title of the Officer

personally appeared John Padilla, Jr
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Patricia Christina Santana
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Agreement for the Performance of Services

Document Date: December 23, 2014 Number of Pages: 19

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: John Padilla, Jr

Individual

Corporate Officer — Title(s): _____

Partner — Limited General

Attorney in Fact

Trustee

Guardian or Conservator

Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Signer's Name: _____

Individual

Corporate Officer — Title(s): _____

Partner — Limited General

Attorney in Fact

Trustee

Guardian or Conservator

Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7B.2

City of Santa Clara, California



Date: January 26, 2015

To: City Manager for Council Action

From: Director of Parks & Recreation

Subject: Approval of Agreement for Youth Soccer Field and Athletic Facility Design & Engineering Services in the Amount of \$765,500.00
Contractor: LPA, Inc.

EXECUTIVE SUMMARY:

On September 24, 2013, Council adopted a strategic goals to “Enhance Community Sports and Recreational Assets” to address the immediate demand and the future need for additional community soccer and athletic facilities. On November 12, 2013 Council approved a Youth Sports Complex Needs Assessment and Feasibility Study that was completed by Verde Design, Inc. On March 25, 2014 Council approved a Capital Improvement Project (CIP) and appropriated funding for community outreach, planning, design, engineering, for additional youth soccer fields and other needed facilities and park amenities (such as community building, playground, parking, lighting, landscaping, BBQ area, etc.), with construction funding to be reviewed and approved at a later date based on actual projected costs.

In April 2014, the City Parks & Recreation Department issued a Request for Proposal (RFP). Five proposals were received from qualified firms by the May 7, 2014 deadline. Bidders included: Abey & Arnold Associates; Beals Alliance, Inc.; BFS Landscape Architects; LPA, Inc.; and, Verde Design, Inc. The Parks & Recreation Department and the Public Works Department staff evaluated the proposals based on criteria including: overall qualifications; key staff’s recent experience, sub-consultants’ capabilities; a demonstrated understanding of the project requirements, budget constraints, and potential challenges; approach to the project and quality assurance; project schedule; responsiveness, quality and completeness of the submittal; conformance with RFP guidelines and format. Two preferred firms were selected for further review, interview and clarification of proposal inclusions/exceptions, pricing, and reference checks. Based on all factors evaluated, staff recommends award of a contract to LPA, Inc. for a “not to exceed” amount of \$765,500. The contract will provide complete neighborhood and community outreach, planning, design, engineering, and site survey services for youth soccer, athletic facilities and other needed amenities for initially one site, Montague Park and conceptual and cost estimating services for up to two (2) additional, yet to be determined sites. Funding for this project was approved and allocated in Parks & Recreation Department Capital Improvement Project (CIP) #3177.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The City currently needs additional soccer and athletic facilities and has an aging park infrastructure and inadequate facilities in need of renovation. The contract with LPA, Inc. provides for a robust neighborhood outreach and community planning process with key stakeholders to address park site issues and neighborhood impacts as well as provide construction bid documents and project oversight at the site or sites selected. On June 10, 2014 Council initially selected two sites, Montague Park for a community outreach

City Manager for Council Action

Subject: Approval of Agreement for Youth Soccer Field and Athletic Facility Design & Engineering Services in the Amount of \$765,500

Contractor: LPA, Inc.

January 26, 2015

Page 2

and planning process, and Jenny Strand Solar R&D Park (JSR&D) contingent upon access through adjacent properties. The two adjacent property owners to JSR&D were contacted but did not provide permission for access. Therefore, JSR&D is no longer under consideration as a site for additional soccer fields. Over the past several months, new opportunities have opened to initiate dialogue with the Santa Clara Unified School District (SCUSD) for potential community use of fields in exchange for field improvements and/or conversion to synthetic turf. City and SCUSD are currently exploring options. In addition, staff continues to explore other potential sites, including acquisition of new parkland for additional soccer and athletic fields.

The expedited Project schedule provides for completion of design and construction at one site within one year, with additional sites to follow. The contract provides enough flexibility to address the potential complexity of the site and selection of additional, as yet unknown sites for inclusion in the community outreach, planning, design and engineering processes. There are no known disadvantages.

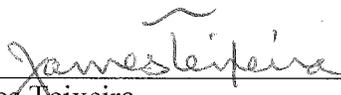
ECONOMIC/FISCAL IMPACT:

The total, "not to exceed" contract amount is \$765,500.00 and includes the neighborhood outreach and community planning processes, design, engineering and site survey, construction cost estimating, and bid documents. Additional funding is included for initial work on up to two (2) additional sites and Project contingency. Funding for this project is allocated in Parks & Recreation Department CIP project #3177 (532-1132-80300-3177) Youth Soccer Field and Athletic Facilities. Funding for construction will be requested once a final design and engineer's estimates are prepared and have been reviewed and approved.

RECOMMENDATION:

That Council:

- 1) Approve an agreement with LPA, Inc. for Youth Soccer Field and Athletic Facility Design & Engineering Services in an amount not to exceed \$765,500.00; and
- 2) Authorize the City Manager to execute all necessary documents and to make minor, non-substantive modifications, as necessary.



James Teixeira
Director of Parks & Recreation

APPROVED:



Julio J. Fuentes
City Manager

Certified as to Availability of Funds: OK JAH
532-1132-80300-3177 \$765,500.00



Gary Ameling
Director of Finance/
Assistant City Manager

MAJORITY VOTE OF COUNCIL

Documents Related to this Report:

- 1) *Agreement for Services with LPA, Inc.*

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

PREAMBLE

This agreement for the performance of services (“Agreement”) is made and entered into on this _____ day of _____, 2015, (“Effective Date”) by and between LPA, Inc., a California corporation, with its principal place of business located at 60 South Market Street, Suite 150, San Jose, CA 95113 (“Consultant”), and the City of Santa Clara, California, a chartered California municipal corporation with its primary business address at 1500 Warburton Avenue, Santa Clara, California 95050 (“City”). City and Consultant may be referred to individually as a “Party” or collectively as the “Parties” or the “Parties to this Agreement.”

RECITALS

- A. City desires to secure design professional services more fully described in this Agreement, at Exhibit A, entitled “Scope of Services”; and,
- B. “Design professional” includes licensed architects, licensed landscape architects, registered professional engineers, and licensed professional land surveyors; and,
- C. Consultant represents that it, and its subcontractors, if any, have the professional qualifications, expertise, necessary licenses and desire to provide certain goods and/or required services of the quality and type which meet objectives and requirements of City; and,
- D. The Parties have specified herein the terms and conditions under which such services will be provided and paid for.

The Parties agree as follows:

AGREEMENT PROVISIONS

1. SERVICES TO BE PROVIDED.

Except as specified in this Agreement, Consultant shall furnish all technical and design professional services, including labor, material, equipment, transportation, supervision and expertise (collectively referred to as “Services”) to satisfactorily complete the work required by City at his/her own risk and expense. Services to be provided to City are more fully described in Exhibit A entitled “SCOPE OF SERVICES.” All of the exhibits referenced in this Agreement are attached and are incorporated by this reference. Consultant acknowledges that the execution of this Agreement by City is predicated upon representations made by Consultant in that certain document entitled Youth Soccer Field and Athletic Facility Design and Engineering” dated May 7, 2014 and written

clarifications (“Proposal”) set forth in Exhibit A, which constitutes the basis for this Agreement.

2. TERM OF AGREEMENT.

Unless otherwise set forth in this Agreement or unless this paragraph is subsequently modified by a written amendment to this Agreement, the term of this Agreement shall begin on the Effective Date of this Agreement and terminate on December 31, 2016.

3. CONSULTANT’S SERVICES TO BE APPROVED BY A LICENSED DESIGN PROFESSIONAL.

- A. All reports, costs estimates, plans and other documentation which may be submitted or furnished by Consultant shall be approved and signed by an appropriate qualified licensed professional in the State of California.
- B. The title sheet for specifications and reports, and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of certificate and signature of the design professional responsible for their preparation.

4. QUALIFICATIONS OF CONSULTANT - STANDARD OF WORKMANSHIP.

Consultant represents and maintains that it has the necessary expertise in the professional calling necessary to perform services, and its duties and obligations, expressed and implied, contained herein, and City expressly relies upon Consultant’s representations regarding its skills and knowledge. Consultant shall perform such services and duties in conformance to and consistent with the professional standards in the same discipline in the State of California.

The plans, designs, specifications, estimates, calculations, reports and other documents furnished under Exhibit A shall be of a quality acceptable to City. The criteria for acceptance of the work provided under this Agreement shall be a product of neat appearance, well organized, that is technically and grammatically correct, checked and having the maker and checker identified. The minimum standard of appearance, organization and content of the drawings shall be that used by City for similar projects.

5. MONITORING OF SERVICES.

City may monitor the Services performed under this Agreement to determine whether Consultant’s operation conforms to City policy and to the terms of this Agreement. City may also monitor the Services to be performed to determine whether financial operations are conducted in accord with applicable City, county, state, and federal requirements. If any action of Consultant constitutes a breach, City may terminate this Agreement pursuant to the provisions described herein.

6. WARRANTY.

Consultant expressly warrants that all materials and services covered by this Agreement shall be fit for the purpose intended, shall conform to the specifications, requirements, and instructions upon which this Agreement is based. Consultant agrees to promptly replace or correct any incomplete, inaccurate, or defective Services at no further cost to City when defects are due to the negligence, errors or omissions of Consultant. If Consultant fails to promptly correct or replace materials or services, City may make corrections or replace materials or services and charge Consultant for the cost incurred by City.

7. PERFORMANCE OF SERVICES.

Consultant shall perform all requested services in an efficient and expeditious manner and shall work closely with and be guided by City. Consultant shall be as fully responsible to City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Consultant is for the acts and omissions of persons directly employed by it. Consultant will perform all Services in a safe manner and in accordance with all federal, state and local operation and safety regulations.

8. RESPONSIBILITY OF CONSULTANT.

Consultant shall be responsible for the professional quality, technical accuracy and coordination of the Services furnished by it under this Agreement. Neither City's review, acceptance, nor payments for any of the Services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement and Consultant shall be and remain liable to City in accordance with applicable law for all damages to City caused by Consultant's negligent performance of any of the Services furnished under this Agreement.

Any acceptance by City of plans, specifications, construction contract documents, reports, diagrams, maps and other material prepared by Consultant shall not in any respect absolve Consultant from the responsibility Consultant has in accordance with customary standards of good professional practice in compliance with applicable federal, state, county, and/or municipal laws, ordinances, regulations, rules and orders.

9. COMPENSATION AND PAYMENT.

In consideration for Consultant's complete performance of Services, City shall pay Consultant for all materials provided and services rendered by Consultant at the rate per hour for labor and cost per unit for materials as outlined in Exhibit B, entitled "SCHEDULE OF FEES."

Consultant will bill City on a monthly basis for Services provided by Consultant during the preceding month, subject to verification by City. City will pay Consultant within thirty (30) days of City's receipt of invoice.

10. PROGRESS SCHEDULE.

The Progress Schedule will be as set forth in the attached Exhibit F, entitled "MILESTONE SCHEDULE" if applicable.

11. TERMINATION OF AGREEMENT.

Either Party may terminate this Agreement without cause by giving the other Party written notice ("Notice of Termination") which clearly expresses that Party's intent to terminate the Agreement. Notice of Termination shall become effective no less than thirty (30) calendar days after a Party receives such notice. After either Party terminates the Agreement, Consultant shall discontinue further services as of the effective date of termination, and City shall pay Consultant for all Services satisfactorily performed up to such date.

12. NO ASSIGNMENT OR SUBCONTRACTING OF AGREEMENT.

City and Consultant bind themselves, their successors and assigns to all covenants of this Agreement. This Agreement shall not be assigned or transferred without the prior written approval of City. Consultant shall not hire subcontractors without express written permission from City.

13. NO THIRD PARTY BENEFICIARY.

This Agreement shall not be construed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

14. INDEPENDENT CONSULTANT.

Consultant and all person(s) employed by or contracted with Consultant to furnish labor and/or materials under this Agreement are independent contractors and do not act as agent(s) or employee(s) of City. Consultant has full rights, however, to manage its employees in their performance of Services under this Agreement. Consultant is not authorized to bind City to any contracts or other obligations.

15. NO PLEDGING OF CITY'S CREDIT.

Under no circumstances shall Consultant have the authority or power to pledge the credit of City or incur any obligation in the name of City. Consultant shall save and hold harmless the City, its City Council, its officers, employees, boards and commissions for expenses arising out of any unauthorized pledges of City's credit by Consultant under this Agreement.

16. CONFIDENTIALITY OF MATERIAL.

All ideas, memoranda, specifications, plans, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for Consultant and all other written information submitted to Consultant in connection with

the performance of this Agreement shall be held confidential by Consultant and shall not, without the prior written consent of City, be used for any purposes other than the performance of the Services, nor be disclosed to an entity not connected with performance of the Services. Nothing furnished to Consultant which is otherwise known to Consultant or becomes generally known to the related industry shall be deemed confidential.

17. USE OF CITY NAME OR EMBLEM.

Consultant shall not use City's name, insignia, or emblem, or distribute any information related to services under this Agreement in any magazine, trade paper, newspaper or other medium without express written consent of City.

18. OWNERSHIP OF MATERIAL.

All plans for an Assigned Project, including, but not limited to, record drawings, specifications, and estimates prepared pursuant thereto, shall be and remain the property of the City for the purposes of repairs, maintenance, renovations, modernization, or other purposes, only as they relate to an Assigned Project. Notwithstanding same, City may use the plans, record drawings, specifications, or estimates related to an Assigned Project for the purposes of additions, alignments, or other development on the site.

- A. The plans, designs, copyrights, drawings, studies, specifications, and estimates prepared by the Architect or its Consultants are instruments of service of the Architect. The Architect shall be deemed to be the author of these documents and the Architect shall retain all common law, statutory and other reserved rights, including the copyright thereto. Notwithstanding the foregoing, the documents including, but not limited to, plans, drawings, specifications, record drawings, models, mock-ups, renderings and other documents (including all computer file and/or AutoCAD files) prepared by the Architect or the Architect's Consultants for this PROJECT, shall be and remain the property of the CITY pursuant to California Law for the purposes of repair, maintenance, renovation, modernization or other purposes as they relate to the PROJECT. The CITY, however, shall not be precluded from using the Architect's or Architect's Consultant's documents enumerated above for the purposes of additions, alignments or other development on the PROJECT site.
- B. Notwithstanding Section 18.A above, if the CITY proposes to reuse the plans prepared by Architect within CITY, the terms and conditions for the reuse shall be set forth in an Amendment to this Agreement or other subsequent writing executed by CITY and Architect. However, under any circumstances, in the event of any reuse or modification of the Architect's drawings, specifications or other documents by any person, Architect or legal entity, the names and seals of the Architect and the Architect's Consultants, if any, shall first be removed from the Architect's drawings, specifications or other documents.

19. RIGHT OF CITY TO INSPECT RECORDS OF CONSULTANT.

City, through its authorized employees, representatives or agents shall have the right during the term of this Agreement and for three (3) years from the date of final payment for goods or services provided under this Agreement, to audit the books and records of Consultant for the purpose of verifying any and all charges made by Consultant in connection with Consultant compensation under this Agreement, including termination of Consultant. Consultant agrees to maintain sufficient books and records in accordance with generally accepted accounting principles to establish the correctness of all charges submitted to City. Any expenses not so recorded shall be disallowed by City.

Consultant shall submit to City any and all reports concerning its performance under this Agreement that may be requested by City in writing. Consultant agrees to assist City in meeting City's reporting requirements to the State and other agencies with respect to Consultant's Services hereunder.

20. CORRECTION OF SERVICES.

Consultant agrees to correct any incomplete, inaccurate or defective Services at no further costs to City, when such defects are due to the negligence, errors or omissions of Consultant.

21. FAIR EMPLOYMENT.

Consultant shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, gender, sexual orientation, age, disability, religion, ethnic background, or marital status, in violation of state or federal law.

22. HOLD HARMLESS/INDEMNIFICATION.

To the extent permitted by law, Consultant agrees to protect, defend, hold harmless and indemnify City, its City Council, commissions, officers, employees, volunteers and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, including all costs and reasonable attorney's fees in providing a defense to any claim, (all referred to herein as "Claims"), to the extent the Claims are arising out of, pertaining to, or relating to the negligence, recklessness, or willful misconduct of the Consultant, its employees, subcontractors, or agents in the performance, or non-performance, of services under this Agreement. Without limiting the obligation to indemnify, for Claims based on professional negligence, the obligation to defend may be met by payment of attorney's fees and costs incurred by the City in defending the Claims, to the extent those Claims arise out of, pertain to or relate to the negligence, recklessness, or willful misconduct of the Consultant, its employees, subcontractors, or agents in the performance, or non-performance, of services under this Agreement.

23. INSURANCE REQUIREMENTS.

During the term of this Agreement, and for any time period set forth in Exhibit C, Consultant shall purchase and maintain in full force and effect, at no cost to City insurance policies with respect to employees and vehicles assigned to the Performance of Services under this Agreement with coverage amounts, required endorsements, certificates of insurance, and coverage verifications as defined in Exhibit C.

24. AMENDMENTS.

This Agreement may be amended only with the written consent of both Parties.

25. INTEGRATED DOCUMENT.

This Agreement represents the entire agreement between City and Consultant. No other understanding, agreements, conversations, or otherwise, with any representative of City prior to execution of this Agreement shall affect or modify any of the terms or obligations of this Agreement. Any verbal agreement shall be considered unofficial information and is not binding upon City.

26. SEVERABILITY CLAUSE.

In case any one or more of the provisions in this Agreement shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions, which shall remain in full force and effect.

27. WAIVER.

Consultant agrees that waiver by City of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement.

28. NOTICES.

All notices to the Parties shall, unless otherwise requested in writing, be sent to City addressed as follows:

City of Santa Clara
Attention: Parks & Recreation Department 1500 Warburton Avenue
Santa Clara, California 95050
or by facsimile at (408) 260-9719

And to Consultant addressed as follows:

Name: Arash Izadi, Associate
Address: 60 South Market Street, Suite 150
San Jose, CA 95113
or by facsimile at (949) 625-7550

If notice is sent via facsimile, a signed, hard copy of the material shall also be mailed. The workday the facsimile was sent shall control the date notice was deemed given if there is a facsimile machine generated document on the date of transmission. A facsimile transmitted after 1:00 p.m. on a Friday shall be deemed to have been transmitted on the following Monday.

29. CAPTIONS.

The captions of the various sections, paragraphs and subparagraphs of this Agreement are for convenience only and shall not be considered or referred to in resolving questions of interpretation.

30. LAW GOVERNING CONTRACT AND VENUE.

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California. The venue of any suit filed by either Party shall be vested in the state courts of the County of Santa Clara, or if appropriate, in the United States District Court, Northern District of California, San Jose, California.

31. DISPUTE RESOLUTION.

- A. Unless otherwise mutually agreed to by the Parties, any controversies between Consultant and City regarding the construction or application of this Agreement, and claims arising out of this Agreement or its breach, shall be submitted to mediation within thirty (30) days of the written request of one Party after the service of that request on the other Party.
- B. The Parties may agree on one mediator. If they cannot agree on one mediator, the Party demanding mediation shall request the Superior Court of Santa Clara County to appoint a mediator. The mediation meeting shall not exceed one day (eight (8) hours). The Parties may agree to extend the time allowed for mediation under this Agreement.
- C. The costs of mediation shall be borne by the Parties equally.
- D. For any contract dispute, mediation under this section is a condition precedent to filing an action in any court. In the event of mediation which arises out of any dispute related to this Agreement, the Parties shall each pay their respective attorney's fees, expert witness costs and cost of suit, through mediation only. In the event of litigation, the prevailing party shall recover its reasonable costs of suit, expert's fees and attorney's fees.

32. COMPLIANCE WITH ETHICAL STANDARDS.

Consultant shall:

- A. Read Exhibit D, entitled "ETHICAL STANDARDS FOR CONSULTANTS SEEKING TO ENTER INTO AN AGREEMENT WITH THE CITY OF SANTA CLARA, CALIFORNIA"; and,
- B. Execute Exhibit E, entitled "AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS."

33. CONFLICT OF INTERESTS.

This Agreement does not prevent either Party from entering into similar agreements with other parties. To prevent a conflict of interest, Consultant certifies that to the best of its

knowledge, no City officer, employee or authorized representative has any financial interest in the business of Consultant and that no person associated with Consultant has any interest, direct or indirect, which could conflict with the faithful performance of this Agreement. Consultant is familiar with the provisions of California Government Code Section 87100 and following, and certifies that it does not know of any facts which would violate these code provisions. Consultant will advise City if a conflict arises.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but both of which shall constitute one and the same instrument; and, the Parties agree that signatures on this Agreement, including those transmitted by facsimile, shall be sufficient to bind the Parties.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

APPROVED AS TO FORM:

RICHARD E. NOSKY, JR.
City Attorney

ATTEST:

ROD DIRIDON, JR.
City Clerk

JULIO J. FUENTES
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-6771

“CITY”

LPA, INC.

a California Corporation

By: _____

(Signature of Person executing the Agreement on behalf of Contractor)

Name: James Kelly

Title: Executive Vice President

Local Address: 60 South Market Street, Suite 150

San Jose, CA 95113

Email Address: aizadi@lpainc.com

Telephone: (408) 780-7200 Fax: (408)780-7201

“CONSULTANT”

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

EXHIBIT A

SCOPE OF SERVICES

The Services to be performed for the City by the Consultant under this Agreement are more fully described in the Consultant's proposal entitled, "Youth Soccer Field and Athletic Facility Design and Engineering" dated May 7, 2014 and written clarifications (Proposal), which is attached to this Exhibit A and incorporated by this reference.

At a minimum the scope of services will include all professional services required to properly complete the project and its constituent components to the City's satisfaction:

- 1) Community Outreach and Consensus Building Process with Stakeholders, User Groups & Community (see supplemental scope clarification for additional sites);
- 2) Schematic Design & SWOT Analysis & Input Process;
- 3) 50%, and 95% Construction Documents (Plans & Specifications);
- 4) 100% Construction Plans & Specifications Documents ("Final Bid Documents");
- 5) Bidding Phase & Contractor Selection;
- 6) Construction Monitoring Phase & Project closeout;
- 7) Additional Services only as requested, reviewed and approved by City in writing, in advance.

It is understood that services required may be provided for up to three (3) separate/different sites.

SCOPE OF SERVICES

SANTA CLARA YOUTH SOCCER FACILITY
REVISED JANUARY 21, 2015
LPA, INC.



SCOPE OF SERVICES

The following is the proposed base Scope of Services for the project. This proposal is based on the development of one site with an allowance for Conceptual Design and Cost Estimating services for up to two additional sites.

1 - SCHEMATIC DESIGN & SWOT ANALYSIS & INPUT PROCESS

This will include:

- Project Start up, Document Review, and Scheduling;
- Prepare & Attend (1) Kick off Meeting with City;
- Complete of Site Assessment;
- Complete Geotech Report(s);
- Community Outreach Process. See Attached Community Outreach Services
- Refine and Finalize Design & Costs based on material developed in the Outreach Process.
- Prepare & Attend (1) PDC/Council Presentation as outlined in the Outreach Scope of Services.
- An allowance of \$80,000 has been provided for Conceptual Design and Rough Order of Magnitude Cost Estimating Services for up to two additional sites.
- Topographic Survey: Aerial and supplemental ground survey for the Montague Park Site limited to on-site areas only. Title report with applicable easements and property lines for the site is to be provided by the City. Off-site areas are not included.

Deliverables: Geotech report; scaled Draft Schematic Design and 1-2 preferred alternatives with cost estimates; Power-point presentations.

2 - 50% CONSTRUCTION DOCUMENTS (PLANS & SPECIFICATIONS)

- CAD Based and Design Team Coordination
- Final Design - Grading, Materials, Etc.
- Submittal Package Setup (including Engineer's Estimate)
- Submittal Meeting
- City Review of Submittal

Deliverables: 50% Construction Docs; Draft submittal package; 1 meeting with Public Works, Parks & Recreation.

3 - CONSTRUCTION DOCUMENTS

- 95% Submittal Setup
- Submittal Meeting
- City Review of 95% Submittal
- Review Workshop with City

Preparation of 100% Plans & Specifications ("Final Bid Documents") Deliverables: 95% Biddable Draft & 100% Construction & Specification Docs, Submittal package & Copies; 2 meeting with Public Works, Parks & Recreation, Draft Selection Criteria.

4 - BIDDING PHASE

- 100% Submittal Setup
- Pre Bid Site(s) walk(s)
- Coordinate and respond to Bidder questions/Owner Questions
- Prepare and distribute agenda as necessary
- RFP/Bid & Bid Opening
- Contract Award / Insurance/ Bonding, etc.

Deliverables: Final Submittal package; 1 meeting with Public Works, Parks & Recreation

5 - CONSTRUCTION MONITORING PHASE

- Prepare for and facilitate construction Kick off meeting & required construction meetings. The total number of meetings is based on a total construction duration of four months (84 days as outlined in the RFP) for a total of 18 meetings. The pre and Post Maintenance Walk through are in addition to the 18 meetings noted.
- Coordinate RFI, Submittals, Shop Drawings, Substitutions, Change Orders
- Begin Construction
- Mobilization
- Demolition and Rough
- Drainage and Utilities
- Edging and Paving
- Rock Finish Grade/Installation; Topsoil finish Grade/Installation
- Synthetic/Grass Turf Installation
- Landscape and Site Furnishings Installation
- Finish Work
- Substantial Completion
- Pre & Post Maintenance walk through
- Project Closeout, review record drawings, Warranty Evaluation, M&O documentation
- Electronic File, plans & construction binder

Deliverables: Preconstruction Meeting; Weekly check-in/Monitoring Meetings; Availability; Quick response RFI, submittal reviews as necessary, Punch List Meeting, Project Closeout.

6 ADDITIONAL SERVICES

May include other items as requested by the City, or anticipated additional steps, meetings, deliverables, etc proposed by Contractor and reviewed and approved by City in writing, in advance. See separate billing rate. Additional services may include:

- Food Service
- FF&E Selection and Procurement
- Environmental Services

7 - ASSUMPTIONS

This proposal assumes a Construction Budget of \$7.5 Million for the purpose of defining a basis for the required effort of design and documentation. The City has indicated the budget will be developed upon clarification or adjusted to accommodate the final program and site specific issues. Changes in schedule, scope, or construction budget may result in an additional service. This Scope of Services assumes the following:

- Construction is for a total duration of four months (84 working days)
- Safety for the basis of establishing a base scope of services, this proposal assumes development will occur on one site, in one phase, and by one contractor with an allowance for Conceptual Design and Cost Estimating Services for up to two additional sites. LPA understands phasing of the project and various improvements may be required to accommodate the City schedule. This required phasing and associated effort will be considered an additional service
- An \$80,000 allowance has been provided for Conceptual Design and Cost Estimating Services for up to two additional sites. Services for this effort will be billed based on the hourly rate schedule noted in the Schedule of Fees. Upon confirmation of scope and total number of sites, the Scope of Services and Compensation may be adjusted.
- LPA understands the site selection is still being finalized by the City. The Scope of Services and associated effort may change based on the final program, site and proposed development which could result in additional services

SCOPE OF SERVICES

SAHTA CLARA YOUTH SOCCER FACILITY
REVISED JANUARY 22, 2015
LPA, INC.



- e. The program and associated improvements for the building component of the project are pending further clarification by the City and Workshop/Outreach Process. The final program may require adjustment or extensions the schedule to meet the primary goal of providing a usable field within the schedule noted. LPA will work with the City to meet this goal. Additional phasing, increase in the related documentation and Construction Documents will be considered additional services.
- f. The geotechnical scope is limited to a total of four borings (2 for the building and two for the site related items) and one percolation test. Depending on the number of fields, soils conditions, final site selection and building program additional boring and an expanded geotechnical report may be required. And would be provided as an additional service.
- g. A reimbursable allowance of \$16,000 has been included in this Scope of Services.



COMMUNITY OUTREACH SERVICES

In the Community/Neighborhood Outreach Phase, LPA, INC. shall provide those services necessary for LPA to assist the City of Santa Clara in coordinating and conducting community workshops, establishing a program, financial and time requirements, and limitations for the park and developing a conceptual plan. The Outreach Process noted below would take the place of some of the services noted in the Schematic Design & SWOT Analysis & Input Process noted in the original RFP Response Scope of Services. The following description is a sample of services that may apply.

Outreach Process

1.01 Community Consensus Building and Outreach

A series of workshops will be planned and held in order to involve all the stakeholders in the community/neighborhood and to seek a consensus regarding the program, design direction, and facilitate interaction with the community/neighborhood. The following is a proposed outline of a sample workshop process:

- .01 **Preliminary City Staff Meeting:** Review the process for community consensus building workshops tailored to the specific needs of the community/neighborhood and this project.
- .02 **Workshop #1 – Saturday:** The first workshop will be proposed for a Saturday to allow maximum participation. A summary of materials obtained from existing as-builts, surveys, and site assessment will be presented. LPA will lead a “Site Awareness Tour” of the site and will provide a workbook to help participants get the most out of this tour and to focus attention on identified site issues that may become major constraints later in the design process.
- .03 **Lunch Break/Prioritization Process:** Upon returning from lunch, the participants will be led through a series of questions to establish a framework for the development of the park. Questions may include considerations for project success, programmatic elements, sustainability goals and design features. Following the question and answer period, the group will be led through a prioritization process to help define the overall community goals and priorities. Through creative organization, the needs of all involved will be solicited and equally visualized. The results of this workshop will be overlaid with the priorities of the City and in context with any General or Parks Master Plan to develop a project program and the basis for the conceptual design process.
- .04 **Following Workshop #1:** LPA will compile information obtained from the site awareness tours, participant work books, and community priorities and responses into a manual which will become a reference document for use throughout the process and record of community involvement.
- .05 **City Staff Meeting:** A meeting with City Staff to review the results of Workshop #1 and to confirm the priorities established in the initial workshop and to discuss additional sustainability goals. This meeting will approve the project program and will authorize the development of the initial Conceptual Plan.
- .06 **Conceptual Plan Development:** Based on the information obtained in Workshop #1, the work books, established program and confirmation in the City Staff Meeting, LPA will develop a conceptual plan identifying the various improvements, features, and relationships in a plan view illustration.
- .07 **City Staff Meeting:** In preparation for Workshop #2, LPA will meet with City Staff to review the Preliminary Concept Plan and obtain approval for presentation to the workshop participants. If appropriate, minor comments provided by the City may be incorporated into the Preliminary Conceptual Plan prior to presentation to the Community.
- .08 **Workshop #2 – Weekday Evening:** During the second workshop, LPA will review information obtained from the site awareness tours, participant work books, and community priorities and responses with the workshop participants. Feedback will be recorded and incorporated into future summaries. Following the review of the previous workshop data, LPA will present the Preliminary Conceptual Plan to obtain comments and feedback on the proposed design.
- .09 **City Staff Meeting:** The comments provided in Workshop #2 will be reviewed with City Staff and direction obtained for inclusion into the design. Additional comments and final revisions will also be discussed and evaluated.
- .10 **Final Plan Development:** Where appropriate the comments provided by the workshop participants and City Staff will be incorporated into a Final Conceptual Plan for Commission and City Council

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

EXHIBIT B

SCHEDULE OF FEES

The fees to be charged for services performed for the City by the Contractor under this Agreement are more fully described in the Contractor's proposal entitled, "Youth Soccer Field & Athletic Facility Design & Engineering" dated May 7, 2014, and clarifications to the Proposal which are included below.

Billing & Invoices. Consultant must provide City with itemized invoices on a monthly basis that request payment only for itemized work completed on the approved Contract scope of work products and services. Invoices will be subject to a 10% retention until Project completion.

- A. **Initial Work Plan:** Fixed Fee for one (1) site. The fees for all services, except for the community outreach, visioning and prioritization services, will be billed at a rate no higher than 8% of the proposed construction costs for the project. Given an estimated construction budget of \$7.5 million dollars, the initial work plan is a "not to exceed" amount of \$600,000.00.
- B. **Community Outreach:** The total costs for the community outreach, visioning and prioritization and additional services are a "not to exceed" forty thousand dollars (\$40,000.00).
- C. **Topographic Survey Work:** The fee for all site survey work is a "not to exceed" twenty nine thousand five hundred dollars (\$29,500.00).

Not all sites are identified at this time.

- D. **Additional Site(s) Conceptual Design and Cost Estimating Services:** The fee for schematic design development and rough cost estimates for each additional site approved and assigned by City, in writing, in advance, will be up to forty thousand dollars (\$40,000) per site, or for up to two (2) additional sites at a "not to exceed" eighty thousand dollars (\$80,000.00).
- E. **Reimbursable and Project Contingency:** The total for all reimbursable expenses billed under the contract and project contingencies is a "not to exceed" sixteen thousand dollars (\$16,000.00). The fees for services must be approved by the City, in writing, in advance and shall be billed at a rate no higher than the hourly schedule of rates and fees attached below for personnel, or the itemized cost agreed to in advance for materials, supplies or other expenses.

Position	Hourly Rate
Principal	\$215.00
Senior Managing Principal	\$195.00
Senior Project Director	\$180.00
Project Director	\$165.00
Senior Project Manager	\$150.00
Managing Professional	\$140.00
Senior Professional	\$125.00
Professional	\$115.00
Professional Staff	\$105.00
Intermediate Staff	\$ 95.00
Staff	\$ 85.00
Support Specialist	\$ 75.00
Clerical Staff	\$ 70.00
Intern	\$ 60.00

Total Contract “Not to Exceed” Amount. In no event shall the amount billed to City by Contractor for services under this Agreement exceed seven hundred and sixty-five thousand and five hundred dollars (\$765,500.00), subject to budget appropriations.

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

EXHIBIT C

**INSURANCE COVERAGE REQUIREMENTS
FOR PROFESSIONAL SERVICES**

Without limiting the Consultant's indemnification of the City, and prior to commencing any of the Services required under this Agreement, the Consultant shall purchase and maintain in full force and effect during the period of performance of the Agreement and for twenty-four (24) months following acceptance by the City, at its sole cost and expense, the following insurance policies from insurance companies authorized to do business in the State of California. These policies shall be primary insurance as to the City of Santa Clara so that any other coverage held by the City shall not contribute to any loss under Consultant's insurance. The minimum coverages, provisions and endorsements are as follows:

A. COMMERCIAL GENERAL LIABILITY INSURANCE

1. Commercial General Liability Insurance policy which provides coverage at least as broad as Insurance Services Office form CG 00 01. Policy limits are subject to review, but shall in no event be less than, the following:

\$1,000,000 Each Occurrence
\$2,000,000 General Aggregate
\$2,000,000 Products/Completed Operations Aggregate
\$1,000,000 Personal Injury

2. Exact structure and layering of the coverage shall be left to the discretion of Consultant; however, any excess or umbrella policies used to meet the required limits shall be at least as broad as the underlying coverage and shall otherwise follow form.
3. The following provisions shall apply to the Commercial Liability policy as well as any umbrella policy maintained by the Consultant to comply with the insurance requirements of this Agreement:
 - a. Coverage shall be on a "pay on behalf" basis with defense costs payable in addition to policy limits;
 - b. There shall be no cross liability exclusion which precludes coverage for claims or suits by one insured against another; and

- c. Coverage shall apply separately to each insured against whom a claim is made or a suit is brought, except with respect to the limits of liability.

B. BUSINESS AUTOMOBILE LIABILITY INSURANCE

Business automobile liability insurance policy which provides coverage at least as broad as ISO form CA 00 01 with policy limits a minimum limit of not less than one million dollars (\$1,000,000) each accident using, or providing coverage at least as broad as, Insurance Services Office form CA 00 01. Liability coverage shall apply to all owned (if any), non-owned and hired autos.

In the event that the Work being performed under this Agreement involves transporting of hazardous or regulated substances, hazardous or regulated wastes and/or hazardous or regulated materials, Consultant and/or its subcontractors involved in such activities shall provide coverage with a limit of one million dollars (\$1,000,000) per accident covering transportation of such materials by the addition to the Business Auto Coverage Policy of Environmental Impairment Endorsement MCS90 or Insurance Services Office endorsement form CA 99 48, which amends the pollution exclusion in the standard Business Automobile Policy to cover pollutants that are in or upon, being transported or towed by, being loaded onto, or being unloaded from a covered auto.

C. WORKERS' COMPENSATION

1. Workers' Compensation Insurance Policy as required by statute and employer's liability with limits of at least one million dollars (\$1,000,000) policy limit Bodily Injury by disease, one million dollars (\$1,000,000) each accident/Bodily Injury and one million dollars (\$1,000,000) each employee Bodily Injury by disease.
2. The indemnification and hold harmless obligations of Consultant included in this Agreement shall not be limited in any way by any limitation on the amount or type of damage, compensation or benefit payable by or for Contractor or any subcontractor under any Workers' Compensation Act(s), Disability Benefits Act(s) or other employee benefits act(s).
3. This policy must include a Waiver of Subrogation in favor of the City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents.

D. PROFESSIONAL LIABILITY

Professional Liability or Errors and Omissions Insurance as appropriate shall be written on a policy form coverage specifically designed to protect against negligent acts, errors or omissions of the Consultant. Covered services as designated in the policy must specifically include work performed under this agreement. Coverage shall be in an amount of not less than one million dollars (\$1,000,000) per occurrence or two million dollars (\$2,000,000) aggregate. Any coverage containing a deductible or self-retention must first be approved in writing by the City Attorney's Office.

E. COMPLIANCE WITH REQUIREMENTS

All of the following clauses and/or endorsements, or similar provisions, must be part of each commercial general liability policy, and each umbrella or excess policy.

1. Additional Insureds. City of Santa Clara, its City Council, commissions, officers, employees, volunteers and agents are hereby added as additional insureds in respect to liability arising out of Consultant's work for City, using Insurance Services Office (ISO) Endorsement CG 20 10 11 85, or the combination of CG 20 10 03 97 and CG 20 37 10 01, or its equivalent.
2. Primary and non-contributing. Each insurance policy provided by Consultant shall contain language or be endorsed to contain wording making it primary insurance as respects to, and not requiring contribution from, any other insurance which the indemnities may possess, including any self-insurance or self-insured retention they may have. Any other insurance indemnities may possess shall be considered excess insurance only and shall not be called upon to contribute with Consultant's insurance.
3. Cancellation.
 - a. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided due to non-payment of premiums shall be effective until written notice has been given to City at least ten (10) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least ten (10) days prior to the effective date of non-renewal.
 - b. Each insurance policy shall contain language or be endorsed to reflect that no cancellation or modification of the coverage provided for any cause save and except non-payment of premiums shall be effective until written notice has been given to City at least thirty (30) days prior to the effective date of such modification or cancellation. In the event of non-renewal, written notice shall be given at least thirty (30) days prior to the effective date of non-renewal.
4. Other Endorsements. Other endorsements may be required for policies other than the commercial general liability policy if specified in the description of required insurance set forth in Sections A through E of this Exhibit C, above.

F. ADDITIONAL INSURANCE RELATED PROVISIONS

Consultant and City agree as follows:

1. Consultant agrees to ensure that subcontractors, and any other party involved with the Services, who is brought onto or involved in the performance of the Services

Telephone number: 951-766-2280
Fax number: 770-325-0409
Email address: ctsantaclara@ebix.com

I. QUALIFYING INSURERS

All of the insurance companies providing insurance for Consultant shall have, and provide written proof of, an A. M. Best rating of at least A minus 6 (A- VI) or shall be an insurance company of equal financial stability that is approved by the City or its insurance compliance representatives.

S:\Attorney\INSURANCE\CITY\EXHIBIT C-06 Professional Service Contract.doc

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

EXHIBIT D

**ETHICAL STANDARDS FOR CONSULTANTS SEEKING TO ENTER INTO
AN AGREEMENT WITH THE CITY OF SANTA CLARA, CALIFORNIA**

Termination of Agreement for Certain Acts.

- A. The City may, at its sole discretion, terminate this Agreement in the event any one or more of the following occurs:
1. If a Consultant¹ does any of the following:
 - a. Is convicted of operating a business in violation of any Federal, State or local law or regulation;
 - b. Is convicted² of a crime punishable as a felony involving dishonesty³;
 - c. Is convicted of an offense involving dishonesty or is convicted of fraud or a criminal offense in connection with: (1) obtaining; (2) attempting to obtain; or, (3) performing a public contract or subcontract;
 - d. Is convicted of any offense which indicates a lack of business integrity or business honesty which seriously and directly affects the present responsibility of a City consultant or subcontractor; and/or,
 - e. Made (or makes) any false statement(s) or representation(s) with respect to this Agreement.

¹ For purposes of this Agreement, the word "Consultant" (whether a person or a legal entity) also refers to "Contractor" and means any of the following: an owner or co-owner of a sole proprietorship; a person who controls or who has the power to control a business entity; a general partner of a partnership; a principal in a joint venture; or a primary corporate stockholder [i.e., a person who owns more than ten percent (10%) of the outstanding stock of a corporation] and who is active in the day to day operations of that corporation.

² For purposes of this Agreement, the words "convicted" or "conviction" mean a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of nolo contendere within the past five (5) years.

³ As used herein, "dishonesty" includes, but is not limited to, embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, failure to pay tax obligations, receiving stolen property, collusion or conspiracy.

2. If fraudulent, criminal or other seriously improper conduct of any officer, director, shareholder, partner, employee or other individual associated with the Consultant can be imputed to the Consultant when the conduct occurred in connection with the individual's performance of duties for or on behalf of the Consultant, with the Consultant's knowledge, approval or acquiescence, the Consultant's acceptance of the benefits derived from the conduct shall be evidence of such knowledge, approval or acquiescence.
- B. The City may also terminate this Agreement in the event any one or more of the following occurs:
1. The City determines that Consultant no longer has the financial capability⁴ or business experience⁵ to perform the terms of, or operate under, this Agreement; or,
 2. If City determines that the Consultant fails to submit information, or submits false information, which is required to perform or be awarded a contract with City, including, but not limited to, Consultant's failure to maintain a required State issued license, failure to obtain a City business license (if applicable) or failure to purchase and maintain bonds and/or insurance policies required under this Agreement.
- C. In the event a prospective Consultant (or bidder) is ruled ineligible (debarred) to participate in a contract award process or a contract is terminated pursuant to these provisions, Consultant may appeal the City's action to the City Council by filing a written request with the City Clerk within ten (10) days of the notice given by City to have the matter heard. The matter will be heard within thirty (30) days of the filing of the appeal request with the City Clerk. The Consultant will have the burden of proof on the appeal. The Consultant shall have the opportunity to present evidence, both oral and documentary, and argument.

⁴ Consultant becomes insolvent, transfers assets in fraud of creditors, makes an assignment for the benefit of creditors, files a petition under any section or chapter of the federal Bankruptcy Code (11 U.S.C.), as amended, or under any similar law or statute of the United States or any state thereof, is adjudged bankrupt or insolvent in proceedings under such laws, or a receiver or trustee is appointed for all or substantially all of the assets of Consultant.

⁵ Loss of personnel deemed essential by the City for the successful performance of the obligations of the Contractor to the City.

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

EXHIBIT E

AFFIDAVIT OF COMPLIANCE WITH ETHICAL STANDARDS

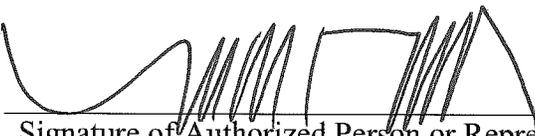
I hereby state that I have read and understand the language, entitled "Ethical Standards" set forth in Exhibit D. I have the authority to make these representations on my own behalf or on behalf of the legal entity identified herein. I have examined appropriate business records, and I have made appropriate inquiry of those individuals potentially included within the definition of "Consultant" contained in Ethical Standards at footnote 1.

Based on my review of the appropriate documents and my good-faith review of the necessary inquiry responses, I hereby state that neither the business entity nor any individual(s) belonging to said "Consultant" category [i.e., owner or co-owner of a sole proprietorship, general partner, person who controls or has power to control a business entity, etc.] has been convicted of any one or more of the crimes identified in the Ethical Standards within the past five (5) years.

The above assertions are true and correct and are made under penalty of perjury under the laws of the State of California.

LPA, Inc.

a California Corporation

By: 
Signature of Authorized Person or Representative

Name: James Kelly

Title: Executive Vice President

NOTARY'S ACKNOWLEDGMENT TO BE ATTACHED

Please execute the affidavit and attach a notary public's acknowledgment of execution of the affidavit by the signatory. If the affidavit is on behalf of a corporation, partnership, or other legal entity, the entity's complete legal name and the title of the person signing on behalf of the legal entity shall appear above. Written evidence of the authority of the person executing this affidavit on behalf of a corporation, partnership, joint venture, or any other legal entity, other than a sole proprietorship, shall be attached.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Orange

On 2/3/2015 before me, Laura Nelson
Date Here Insert Name and Title of the Officer

personally appeared James Kelly
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: Laura Nelson
Signature of Notary Public

Place Notary Seal and/or Stamp Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Affidavit of Compliance with Ethical Standards

Document Date: _____ Number of Pages: _____

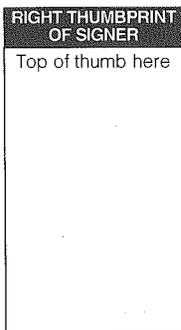
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: James Kelly Signer's Name: _____

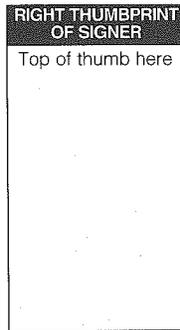
Corporate Officer — Title(s): Executive VP Corporate Officer — Title(s): _____

- Individual
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer Is Representing: AP, Inc.

- Individual
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer Is Representing: _____

**AGREEMENT FOR DESIGN PROFESSIONAL SERVICES
BY AND BETWEEN THE
CITY OF SANTA CLARA, CALIFORNIA
AND
LPA, INC.**

EXHIBIT F

MILESTONE SCHEDULE

The milestone schedule to be followed for services performed for the City by the Contractor under this Agreement are more fully described in the Contractor's proposal entitled, "Youth Soccer Field & Athletic Facility Design & Engineering" dated May 7, 2014, and written clarifications to the Proposal which are attached to this Exhibit F. The City may, at its sole discretion, agree to changes to the schedule in writing, in advance.

City of Santa Clara
 Youth Soccer Field and Athletic Facility Design and Engineering
 Revised 1/21/15

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Month											
							February	March	April	May	June	July	August	September	October	November	December	January
1		Santa Clara Youth Soccer Field and Athletic Facility	283 days	Wed 2/11/15	Fri 3/11/16		[Gantt bar spanning from 2/11/15 to 3/11/16]											
2							[Gantt bar spanning from 2/11/15 to 2/11/15]											
3		Schematic Design and SWOT Analysis & Input Process	44 days	Wed 2/11/15	Mon 4/13/15		[Gantt bar spanning from 2/11/15 to 4/13/15]											
4		Project Start-up, Documents Review and scheduling	0 days	Wed 2/11/15	Wed 2/11/15		[Gantt bar spanning from 2/11/15 to 2/11/15]											
5		Prepare and Attend (1) Kick-off Meeting with City	0 days	Wed 2/11/15	Wed 2/11/15	4	[Gantt bar spanning from 2/11/15 to 2/11/15]											
6		Complete Site Assessment	5 days	Wed 2/11/15	Tue 2/17/15	4,5	[Gantt bar spanning from 2/11/15 to 2/17/15]											
7		Topographic Survey	15 days	Wed 2/11/15	Tue 3/3/15	4,5	[Gantt bar spanning from 2/11/15 to 3/3/15]											
8		Complete Geotech Report	15 days	Wed 3/18/15	Tue 4/7/15	4,5,15	[Gantt bar spanning from 3/18/15 to 4/7/15]											
9		Outreach Process	30 days	Wed 2/11/15	Tue 3/24/15		[Gantt bar spanning from 2/11/15 to 3/24/15]											
10		Preliminary Staff Meeting	0 days	Wed 2/11/15	Wed 2/11/15	4	[Gantt bar spanning from 2/11/15 to 2/11/15]											
11		Workshop Preparation	15 days	Wed 2/11/15	Tue 3/3/15	4,5,10	[Gantt bar spanning from 2/11/15 to 3/3/15]											
12		Workshop #1	0 days	Tue 3/3/15	Tue 3/3/15	11	[Gantt bar spanning from 3/3/15 to 3/3/15]											
13		City Staff Meeting	0 days	Tue 3/3/15	Tue 3/3/15	12	[Gantt bar spanning from 3/3/15 to 3/3/15]											
14		Conceptual Plan Development	10 days	Wed 3/4/15	Tue 3/17/15	13,7	[Gantt bar spanning from 3/4/15 to 3/17/15]											
15		City Staff Meeting	0 days	Tue 3/17/15	Tue 3/17/15	14	[Gantt bar spanning from 3/17/15 to 3/17/15]											
16		Workshop #2	0 days	Tue 3/17/15	Tue 3/17/15	15	[Gantt bar spanning from 3/17/15 to 3/17/15]											
17		City Staff Meeting	0 days	Tue 3/17/15	Tue 3/17/15	16	[Gantt bar spanning from 3/17/15 to 3/17/15]											
18		Final Plan Development	5 days	Wed 3/18/15	Tue 3/24/15	17	[Gantt bar spanning from 3/18/15 to 3/24/15]											
19		Final Workshop Presentation	0 days	Tue 3/24/15	Tue 3/24/15	18	[Gantt bar spanning from 3/24/15 to 3/24/15]											
20		Cost Estimate	14 days	Wed 3/25/15	Mon 4/13/15	19	[Gantt bar spanning from 3/25/15 to 4/13/15]											
21		Prepare and attend (1) PRC/Council Presentation	0 days	Mon 4/13/15	Mon 4/13/15	20	[Gantt bar spanning from 4/13/15 to 4/13/15]											
22		Schematic Design and Budget Approval	0 days	Mon 4/13/15	Mon 4/13/15	21	[Gantt bar spanning from 4/13/15 to 4/13/15]											
23							[Gantt bar spanning from 4/13/15 to 4/13/15]											
24		50% Construction Documents (Plan and Specifications)	40 days	Tue 4/14/15	Mon 6/8/15		[Gantt bar spanning from 4/14/15 to 6/8/15]											
25		50% Documentation	30 days	Tue 4/14/15	Mon 5/25/15	21,8	[Gantt bar spanning from 4/14/15 to 5/25/15]											
26		Submittal Package Set-Up	0 days	Mon 5/25/15	Mon 5/25/15	25	[Gantt bar spanning from 5/25/15 to 5/25/15]											
27		Submittal Meeting	0 days	Mon 5/25/15	Mon 5/25/15	26	[Gantt bar spanning from 5/25/15 to 5/25/15]											
28		Cost Estimate	10 days	Tue 5/26/15	Mon 6/8/15	27	[Gantt bar spanning from 5/26/15 to 6/8/15]											
29		City Review of Submittal	10 days	Tue 5/26/15	Mon 6/8/15	27	[Gantt bar spanning from 5/26/15 to 6/8/15]											
30							[Gantt bar spanning from 6/8/15 to 6/8/15]											
31		Construction Documents	65 days	Tue 5/26/15	Mon 8/24/15		[Gantt bar spanning from 5/26/15 to 8/24/15]											
32		95% Submittal Documentation	40 days	Tue 5/26/15	Mon 7/20/15	27	[Gantt bar spanning from 5/26/15 to 7/20/15]											
33		Submittal Meeting	0 days	Mon 7/20/15	Mon 7/20/15	32	[Gantt bar spanning from 7/20/15 to 7/20/15]											
34		City Review of 95% Submittal	15 days	Tue 7/21/15	Mon 8/10/15	33	[Gantt bar spanning from 7/21/15 to 8/10/15]											
35		Review Workshop with City	0 days	Mon 8/10/15	Mon 8/10/15	34	[Gantt bar spanning from 8/10/15 to 8/10/15]											
36		Preparation of 100% Plans and Specifications ("Final bid Documents")	10 days	Tue 8/11/15	Mon 8/24/15	35	[Gantt bar spanning from 8/11/15 to 8/24/15]											
37							[Gantt bar spanning from 8/24/15 to 8/24/15]											
38		Bidding Phase	60 days	Tue 8/25/15	Mon 11/16/15		[Gantt bar spanning from 8/25/15 to 11/16/15]											
39		100% Submittal Set-Up	15 days	Tue 8/25/15	Mon 9/14/15	36	[Gantt bar spanning from 8/25/15 to 9/14/15]											
40		Pre-Bid Sit(s) Walk(s)	0 days	Mon 9/14/15	Mon 9/14/15	39	[Gantt bar spanning from 9/14/15 to 9/14/15]											
41		Coordinate and Respond to Bidder Questions/Owner Questions	30 days	Tue 9/15/15	Mon 10/26/15	40	[Gantt bar spanning from 9/15/15 to 10/26/15]											
42		Prepare and Distribute Addenda as Necessary	15 days	Tue 10/27/15	Mon 11/16/15	41	[Gantt bar spanning from 10/27/15 to 11/16/15]											
43		RFP/Bid and Bid Opening	0 days	Mon 11/16/15	Mon 11/16/15	42	[Gantt bar spanning from 11/16/15 to 11/16/15]											
44							[Gantt bar spanning from 11/16/15 to 11/16/15]											
45		Construction Monitoring Phase	84 days	Mon 11/16/15	Fri 3/11/16		[Gantt bar spanning from 11/16/15 to 3/11/16]											
46		Prepare and Facilitate Construction Kick-Off Meeting and Weekly Construction Meeting	0 days	Mon 11/16/15	Mon 11/16/15	43	[Gantt bar spanning from 11/16/15 to 11/16/15]											
47		Construction Kickoff	0 days	Mon 11/16/15	Mon 11/16/15	46	[Gantt bar spanning from 11/16/15 to 11/16/15]											
48		Construction	70 days	Tue 11/17/15	Mon 2/22/16	47	[Gantt bar spanning from 11/17/15 to 2/22/16]											
49		Substantial Completion	0 days	Mon 2/22/16	Mon 2/22/16	48	[Gantt bar spanning from 2/22/16 to 2/22/16]											
50		Pre and Post Maintenance Walk-Through	14 days	Tue 2/23/16	Fri 3/11/16	49	[Gantt bar spanning from 2/23/16 to 3/11/16]											
51		Project Closeout, Review Record Drawings, Warranty Evaluation, M&O Documentation	0 days	Fri 3/11/16	Fri 3/11/16	50	[Gantt bar spanning from 3/11/16 to 3/11/16]											
52		Project Turnover	0 days	Fri 3/11/16	Fri 3/11/16	51	[Gantt bar spanning from 3/11/16 to 3/11/16]											

Project: Santa Clara Soccer Sched
 Date: Wed 1/21/15

Task Split
 Milestone
 Project Summary
 External Milestone
 Inactive Milestone
 Manual Task
 Manual Summary Rollup
 Start-only
 Deadline
 Progress

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7B.3

City of Santa Clara, California



Date: February 5, 2015

To: City Manager for Council Action

From: Director of Electric Utility

Subject: Approval of Call No. 15-1 for Professional Services with Cooper Compliance Corp. to Provide Consulting Services for the 2014 Self-Certification of North American Electric Reliability Corporation Standards

EXECUTIVE SUMMARY:

Congress passed the Energy Policy Act of 2005, giving the Federal Energy Regulatory Commission (FERC) the responsibility and authority to ensure the reliability of the United States Bulk Electric System. The North American Electric Reliability Corporation (NERC) was named as the organization to develop and enforce Reliability Standards. Over 90 Standards are now effective and subject to enforcement penalties up to \$1 million per day per violation. Silicon Valley Power (SVP) is required to comply with most of these standards. As a result of the changing regulatory climate and changes to enforceable standards, our FERC attorney, Duncan, Weinberg, Genzer & Pembroke has recommended that SVP retain the services of a compliance consultant as a technical source to assist with keeping policies, practices, record keeping, and procedures compliant with the regulations as changes occur. Cooper Compliance was contracted in 2014 for SVP's compliance audit and they have history and knowledge required for our Self Certification, which is due March 2, 2015. Based on their experience, Cooper Compliance is the most cost-effective alternative to satisfy our self-certification needs. Staff recommends entering into Call No. 15-1 to assist with Self-Certification requirements for 2014. A copy of Call No. 15-1 can be viewed on the City's website or is available in the City Clerk's Office for review during normal business hours.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

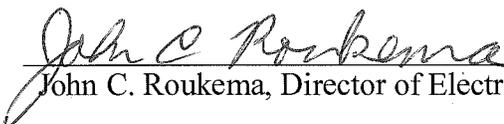
Call No. 15-1 with Cooper Compliance will provide SVP staff the required support to verify compliance with the Self-Certification requirements for 2015 with NERC Standards. Not entering into this Call may expose SVP to potential fines from FERC for failure to be in compliance with the established standards, as well as diverting SVP resources from focusing on customer service work.

ECONOMIC/FISCAL IMPACT:

The total cost of Call No. 15-1 will not exceed \$9,860.00. Sufficient funds are available in the Electric Department Contractual Services/Not Classified, account 091-1356-87870-(F)92300.

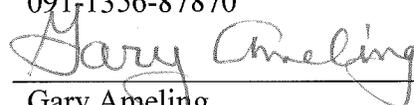
RECOMMENDATION:

That Council approve, and authorize the City Manager to execute, Call No. 15-1 for Professional Services with Cooper Compliance Corp., in an amount not to exceed \$9,860.00, to provide consulting services for the 2014 Self Certification of the North American Reliability Corporation standards.


 John C. Roukema, Director of Electric Utility

Certified as to Availability of Funds: ^{OK}
 091-1356-87870 \$9,860.00

APPROVED


 Gary Ameling
 Director of Finance/Assistant City Manager


 Julio J. Fuentes, City Manager

MAJORITY VOTE OF COUNCIL

Documents Related to this Report:

- 1) Call No. 15-1 for Professional Services with Cooper Compliance Corporation

**CALL NO. 15-1
FOR PROFESSIONAL SERVICES
TO BE PROVIDED TO THE
CITY OF SANTA CLARA, CALIFORNIA
BY COOPER COMPLIANCE CORP.**

The Parties to this Call No. 15-1 ("Call") agree that on this ____ day of _____, 2015, this Call is made pursuant to the terms of a Call Agreement between the Parties entitled, "Call Agreement by and between the City of Santa Clara, California and "Cooper Compliance Corp," dated May 13, 2014, the terms of which are incorporated by this reference. This Call describes the Services to be provided to the City of Santa Clara, California ("City") by Cooper Compliance Corp ("Contractor"), which are more fully described in Contractor's proposal to City entitled "2014 Self-Certification" dated January 14, 2015 ("Proposal"); attached to this Call as Exhibit A and incorporated by this reference. The Services to be performed under this Call shall be completed within the time period beginning on February 10, 2015 and ending on December 31, 2015. The attached Proposal contains a complete description of the Services, and performance dates for the completion of such Services, to be performed by the Contractor under this Call. In no event shall the amount paid to the Contractor for the Services provided to City by the Contractor under this Call, including all fees or pre-approved costs and/or expenses, exceed nine thousand eight hundred sixty dollars (\$9,860.00) subject to budgetary appropriations.

The Parties acknowledge and accept the terms and conditions of this Call as evidenced by the following signatures of their duly authorized representatives.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but both of which shall constitute one and the same instrument; and, the Parties agree that signatures on this Agreement, including those transmitted by facsimile, shall be sufficient to bind the Parties.

**CITY OF SANTA CLARA, CALIFORNIA,
a chartered California municipal corporation**

APPROVED AS TO FORM:

RICHARD E. NOSKY, JR.
City Attorney

JULIO J. FUENTES
City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax: (408) 241-6771

ATTEST:

ROD DIRIDON, JR.
City Clerk

"CITY"

COOPER COMPLIANCE CORP.

a California corporation

By:



MARY JO COOPER

Title:

President

Address:

2201 Francisco Drive, Suite 140-230
El Dorado Hills, CA 95762

Telephone:

(916) 933-3963

"CONTRACTOR"

**Regarding: CALL AGREEMENT BY AND BETWEEN THE CITY OF SANTA CLARA,
CALIFORNIA AND COOPER COMPLIANCE CORP. for Consulting Services**

2014 Self-Certification

January 14, 2014

The following describes Cooper Compliance Corp.'s proposal to conduct an internal audit of NERC/WECC Standards with which Silicon Valley Power (SVP) must self-certify compliance for the physical year 2014.

Cooper Compliance will conduct the audit using the Audit-Ready SharePoint applications. A report will be provided for each requirement that documents how SVP complies, the articles reviewed to demonstrate compliance, and our observations and recommendations. An example of the report can be found in Attachment 1.

Project Scope

SVP was audited in 2014, therefore the scope of Requirements for which SVP must self-certify is limited to those Requirements on the 2014 Actively Monitored List that were excluded from the 2014 audit. The list of requirements included within the scope of this project are listed in Attachment 2.

Project Cost

The cost for this project shall be \$9,000 fixed plus maximum expense estimated to be \$860 for two trips. The total budget for this project is \$9,860. All travel at the request of SVP shall be invoiced to SVP within 30 days of travel. Mileage and meals shall be invoiced at the U.S. General Services Administration (GSA) government per diem rate for the area in which the work is performed, not to exceed the per diem rate identified in the Call Agreement. Actual meal receipts will not be provided.

Attachment 1

Attachment 2

Requirement	Requirement
COM-001-1.1 R1.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information.
COM-001-1.1 R1.1.	Internally.
COM-001-1.1 R1.2.	Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.
COM-001-1.1 R1.3.	With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.
COM-001-1.1 R1.4.	Where applicable, these facilities shall be redundant and diversely routed.
COM-002-2 R1.	Each Transmission Operator, Balancing Authority, and Generator Operator shall have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition.
COM-002-2 R1.1.	Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated.
EOP-001-2.1b R2.	Each Transmission Operator and Balancing Authority shall
EOP-001-2.1b R2.1.	Develop, maintain, and implement a set of plans to mitigate operating emergencies for insufficient generating capacity.
EOP-001-2.1b R2.2.	Develop, maintain, and implement a set of plans to mitigate operating emergencies on the transmission system.
EOP-001-2.1b R2.3.	Develop, maintain, and implement a set of plans for load shedding.
EOP-001-2.1b R3.	Each Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plans shall include
EOP-001-2.1b R3.1.	Communications protocols to be used during emergencies.
EOP-001-2.1b R3.2.	A list of controlling actions to resolve the emergency. Load reduction, in sufficient quantity to resolve the emergency within NERC-established timelines, shall be one of the controlling actions.
EOP-001-2.1b R3.3.	The tasks to be coordinated with and among adjacent Transmission Operators and Balancing Authorities.
EOP-001-2.1b R3.4.	Staffing levels for the emergency.

EOP-002-3.1 R9.	When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff
EOP-002-3.1 R9.1.	The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert in accordance with Attachment 1-EOP-002 "Energy Emergency Alerts."
EOP-003-2 R1.	After taking all other remedial steps, a Transmission Operator or Balancing Authority operating with insufficient generation or transmission capacity shall shed customer load rather than risk an uncontrolled failure of components or cascading outages of the Interconnection.
EOP-003-2 R3.	Each Transmission Operator and Balancing Authority shall coordinate load shedding plans, excluding automatic under-frequency load shedding plans, among other interconnected Transmission Operators and Balancing Authorities.
EOP-003-2 R5.	A Transmission Operator or Balancing Authority shall implement load shedding, excluding automatic under-frequency load shedding, in steps established to minimize the risk of further uncontrolled separation, loss of generation, or system shutdown.
EOP-003-2 R7.	The Transmission Operator shall coordinate automatic undervoltage load shedding throughout their areas with tripping of shunt capacitors, and other automatic actions that will occur under abnormal voltage, or power flow conditions
EOP-003-2 R8.	Each Transmission Operator or Balancing Authority shall have plans for operator controlled manual load shedding to respond to real-time emergencies. The Transmission Operator or Balancing Authority shall be capable of implementing the load shedding in a timeframe adequate for responding to the emergency.
EOP-004-2 R2.	Each Responsible Entity shall report events per their Operating Plan within 24 hours of recognition of meeting an event type threshold for reporting or by the end of the next business day if the event occurs on a weekend (which is recognized to be 4 PM local time on Friday to 8 AM Monday local time).
EOP-005-2 R7.	Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected the Transmission Operator shall utilize its restoration strategies to facilitate restoration. [Violation Risk Factor = High] [Time Horizon = Real-time Operations]
EOP-005-2 R8.	Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, the Transmission Operator shall resynchronize area(s) with neighboring Transmission Operator area(s) only with the authorization of the Reliability Coordinator or in accordance with the established procedures of the Reliability Coordinator. [Violation Risk Factor = High] [Time Horizon = Real-time Operations]

EOP-005-2 R12.	Each Transmission Operator shall participate in its Reliability Coordinator's restoration drills, exercises, or simulations as requested by its Reliability Coordinator. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]
EOP-005-2 R13.	Each Transmission Operator and each Generator Operator with a Blackstart Resource shall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement. Such Agreements shall include references to the Blackstart Resource testing requirements. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]
EOP-005-2 R14.	Each Generator Operator with a Blackstart Resource shall have documented procedures for starting each Blackstart Resource and energizing a bus. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]
EOP-005-2 R16.	Each Generator Operator with a Blackstart Resource shall perform Blackstart Resource tests, and maintain records of such testing, in accordance with the testing requirements set by the Transmission Operator to verify that the Blackstart Resource can perform as specified in the restoration plan. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]
EOP-005-2 R16.1.	Testing records shall include at a minimum name of the Blackstart Resource, unit tested, date of the test, duration of the test, time required to start the unit, an indication of any testing requirements not met under Requirement R9.
EOP-005-2 R16.2.	Each Generator Operator shall provide the blackstart test results within 30 calendar days following a request from its Reliability Coordinator or Transmission Operator.
EOP-005-2 R17.	Each Generator Operator with a Blackstart Resource shall provide a minimum of two hours of training every two calendar years to each of its operating personnel responsible for the startup of its Blackstart Resource generation units and energizing a bus. The training program shall include training on the following [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]
EOP-005-2 R17.1.	System restoration plan including coordination with the Transmission Operator.
EOP-005-2 R17.2.	The procedures documented in Requirement R14.
FAC-003-3 R3.	Each applicable Transmission Owner and applicable Generator Owner shall have documented maintenance strategies or procedures or processes or specifications it uses to prevent the encroachment of vegetation into the MVCD of its applicable lines that accounts for the following:
FAC-003-3 R3.1.	Movement of applicable line conductors under their Rating and all Rated Electrical Operating Conditions;

FAC-003-3 R3.2.	Inter-relationships between vegetation growth rates, vegetation control methods, and inspection frequency.
FAC-003-3 R4.	Each applicable Transmission Owner and applicable Generator Owner, without any intentional time delay, shall notify the control center holding switching authority for the associated applicable line when the applicable Transmission Owner and applicable Generator Owner has confirmed the existence of a vegetation condition that is likely to cause a Fault at any moment
FAC-003-3 R5.	When a applicable Transmission Owner and applicable Generator Owner is constrained from performing vegetation work on an applicable line operating within its Rating and all Rated Electrical Operating Conditions, and the constraint may lead to a vegetation encroachment into the MVCD prior to the implementation of the next annual work plan, then the applicable Transmission Owner or applicable Generator Owner shall take corrective action to ensure continued vegetation management to prevent encroachments
IRO-001-1.1 R8.	Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perform the directive so that the Reliability Coordinator may implement alternate remedial actions.
IRO-004-2 R1.	Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.
PER-001-0.2 R1.	Each Transmission Operator and Balancing Authority shall provide operating personnel with the responsibility and authority to implement real-time actions to ensure the stable and reliable operation of the Bulk Electric System.

<p>PER-003-1 R2.</p>	<p>Each Transmission Operator shall staff its Real-time operating positions performing Transmission Operator reliability-related tasks with System Operators who have demonstrated minimum competency in the areas listed by obtaining and maintaining one of the following valid NERC certificates</p> <p>2.1. Areas of Competency</p> <p>2.1.1. Transmission operations</p> <p>2.1.2. Emergency preparedness and operations</p> <p>2.1.3. System operations</p> <p>2.1.4. Protection and control</p> <p>2.1.5. Voltage and reactive</p> <p>2.2. Certificates</p> <ul style="list-style-type: none"> • Reliability Operator • Balancing, Interchange and Transmission Operator • Transmission Operator
<p>PRC-001-1.1 R2.</p>	<p>Each Generator Operator and Transmission Operator shall notify reliability entities of relay or equipment failures as follows:</p>
<p>PRC-001-1.1 R2.1.</p>	<p>If a protective relay or equipment failure reduces system reliability, the Generator Operator shall notify its Transmission Operator and Host Balancing Authority. The Generator Operator shall take corrective action as soon as possible.</p>
<p>PRC-001-1.1 R2.2.</p>	<p>If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible.</p>
<p>PRC-001-1.1 R4.</p>	<p>Each Transmission Operator shall coordinate Protection Systems on major transmission lines and interconnections with neighboring Generator Operators, Transmission Operators, and Balancing Authorities.</p>
<p>PRC-001-1.1 R5.</p>	<p>A Generator Operator or Transmission Operator shall coordinate changes in generation, transmission, load or operating conditions that could require changes in the Protection Systems of others:</p>
<p>PRC-001-1.1 R5.1.</p>	<p>Each Generator Operator shall notify its Transmission Operator in advance of changes in generation or operating conditions that could require changes in the Transmission Operator's Protection Systems.</p>
<p>PRC-001-1.1 R5.2.</p>	<p>Each Transmission Operator shall notify neighboring Transmission Operators in advance of changes in generation, transmission, load, or operating conditions that could require changes in the other Transmission Operators' Protection Systems.</p>

PRC-001-1.1 R6.	Each Transmission Operator and Balancing Authority shall monitor the status of each Special Protection System in their area, and shall notify affected Transmission Operators and Balancing Authorities of each change in status.
PRC-004-2.1a R1.	The Transmission Owner and any Distribution Provider that owns a transmission Protection System shall each analyze its transmission Protection System Misoperations and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Entity's procedures.
PRC-004-2.1a R2.	The Generator Owner shall analyze its generator and generator interconnection Facility Protection System Misoperations, and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Entity's procedures.
PRC-004-2.1a R3.	The Transmission Owner, any Distribution Provider that owns a transmission Protection System, and the Generator Owner shall each provide to its Regional Entity, documentation of its Misoperations analyses and Corrective Action Plans according to the Regional Entity's procedures.
PRC-004-WECC-1 R3.	Transmission Owners and Generation Owners shall submit Misoperation incident reports to WECC within 10 business days for the following. [Time Horizon Operations Assessment]
PRC-004-WECC-1 R3.1.	Identification of a Misoperation of a Protection System and/or RAS,
PRC-004-WECC-1 R3.2.	Completion of repairs or the replacement of Protection System and/or RAS that misoperated.
PRC-006-1 R9.	Each UFLS entity shall provide automatic tripping of Load in accordance with the UFLS program design and schedule for application determined by its Planning Coordinator(s) in each Planning Coordinator area in which it owns assets
PRC-006-1 R10.	Each Transmission Owner shall provide automatic switching of its existing capacitor banks, Transmission Lines, and reactors to control over-voltage as a result of underfrequency load shedding if required by the UFLS program and schedule for application determined by the Planning Coordinator(s) in each Planning Coordinator area in which the Transmission Owner owns transmission.
PRC-017-0 R1.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have a system maintenance and testing program(s) in place. The program(s) shall include
PRC-017-0 R1.1.	SPS identification shall include but is not limited to
PRC-017-0 R1.1.1.	Relays.
PRC-017-0 R1.1.2.	Instrument transformers.
PRC-017-0 R1.1.3.	Communications systems, where appropriate.

PRC-017-0 R1.1.4.	Batteries.
PRC-017-0 R1.2.	Documentation of maintenance and testing intervals and their basis.
PRC-017-0 R1.3.	Summary of testing procedure.
PRC-017-0 R1.4.	Schedule for system testing.
PRC-017-0 R1.5.	Schedule for system maintenance.
PRC-017-0 R1.6.	Date last tested/maintained.
PRC-021-1 R1.	Each Transmission Owner and Distribution Provider that owns a UVLS program to mitigate the risk of voltage collapse or voltage instability in the BES shall annually update its UVLS data to support the Regional UVLS program database. The following data shall be provided to the Regional Reliability Organization for each installed UVLS system
PRC-021-1 R1.1.	Size and location of customer load, or percent of connected load, to be interrupted.
PRC-021-1 R1.2.	Corresponding voltage set points and overall scheme clearing times.
PRC-021-1 R1.3.	Time delay from initiation to trip signal.
PRC-021-1 R1.4.	Breaker operating times.
PRC-021-1 R1.5.	Any other schemes that are part of or impact the UVLS programs such as related generation protection, islanding schemes, automatic load restoration schemes, UFLS and Special Protection Systems.
TOP-001-1a R1.	Each Transmission Operator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability
TOP-001-1a R3.	Each Transmission Operator, Balancing Authority, and Generator Operator shall comply with reliability directives issued by the Reliability Coordinator, and each Balancing Authority and Generator Operator shall comply with reliability directives issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances the Transmission Operator, Balancing Authority or Generator Operator shall immediately inform the Reliability Coordinator or Transmission Operator of the inability to perform the directive so that the Reliability Coordinator or Transmission Operator can implement alternate remedial actions.
TOP-001-1a R4.	Each Distribution Provider and Load Serving Entity shall comply with all reliability directives issued by the Transmission Operator, including shedding firm load, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances, the Distribution Provider or Load Serving Entity shall immediately inform the Transmission Operator of the inability to perform the directive so that the Transmission Operator can implement alternate remedial actions.

TOP-001-1a R5.	Each Transmission Operator shall inform its Reliability Coordinator and any other potentially affected Transmission Operators of real time or anticipated emergency conditions, and take actions to avoid, when possible, or mitigate the emergency.
TOP-001-1a R6.	Each Transmission Operator, Balancing Authority, and Generator Operator shall render all available emergency assistance to others as requested, provided that the requesting entity has implemented its comparable emergency procedures, unless such actions would violate safety, equipment, or regulatory or statutory requirements.
TOP-001-1a R7.	Each Transmission Operator and Generator Operator shall not remove Bulk Electric System facilities from service if removing those facilities would burden neighboring systems unless
TOP-001-1a R7.1.	For a generator outage, the Generator Operator shall notify and coordinate with the Transmission Operator. The Transmission Operator shall notify the Reliability Coordinator and other affected Transmission Operators, and coordinate the impact of removing the Bulk Electric System facility.
TOP-001-1a R7.2.	For a transmission facility, the Transmission Operator shall notify and coordinate with its Reliability Coordinator. The Transmission Operator shall notify other affected Transmission Operators, and coordinate the impact of removing the Bulk Electric System facility.
TOP-001-1a R7.3.	When time does not permit such notifications and coordination, or when immediate action is required to prevent a hazard to the public, lengthy customer service interruption, or damage to facilities, the Generator Operator shall notify the Transmission Operator, and the Transmission Operator shall notify its Reliability Coordinator and adjacent Transmission Operators, at the earliest possible time.
TOP-001-1a R8.	During a system emergency, the Balancing Authority and Transmission Operator shall immediately take action to restore the Real and Reactive Power Balance. If the Balancing Authority or Transmission Operator is unable to restore Real and Reactive Power Balance it shall request emergency assistance from the Reliability Coordinator. If corrective action or emergency assistance is not adequate to mitigate the Real and Reactive Power Balance, then the Reliability Coordinator, Balancing Authority, and Transmission Operator shall implement firm load shedding.
TOP-002-2.1b R13.	At the request of the Balancing Authority or Transmission Operator, a Generator Operator shall perform generating real and reactive capability verification that shall include, among other variables, weather, ambient air and water conditions, and fuel quality and quantity, and provide the results to the Balancing Authority or Transmission Operator operating personnel as requested.
TOP-002-2.1b R14.	Generator Operators shall, without any intentional time delay, notify their Balancing Authority and Transmission Operator of changes in capabilities and characteristics including but not limited to
TOP-002-2.1b R14.1.	Changes in real output capabilities.

TOP-002-2.1b R15.	Generation Operators shall, at the request of the Balancing Authority or Transmission Operator, provide a forecast of expected real power output to assist in operations planning (e.g., a seven-day forecast of real output).
TOP-002-2.1b R16.	Subject to standards of conduct and confidentiality agreements, Transmission Operators shall, without any intentional time delay, notify their Reliability Coordinator and Balancing Authority of changes in capabilities and characteristics including but not limited to
TOP-002-2.1b R16.1.	Changes in transmission facility status.
TOP-002-2.1b R16.2.	Changes in transmission facility rating.
TOP-002-2.1b R17.	Balancing Authorities and Transmission Operators shall, without any intentional time delay, communicate the information described in the requirements R1 to R16 above to their Reliability Coordinator.
TOP-002-2.1b R18.	Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers, and Load-Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network.
TOP-002-2.1b R19.	Each Balancing Authority and Transmission Operator shall maintain accurate computer models utilized for analyzing and planning system operations.
TOP-004-2 R3.	Each Transmission Operator shall operate to protect against instability, uncontrolled separation, or cascading outages resulting from multiple outages, as specified by its Reliability Coordinator.
TOP-004-2 R4.	If a Transmission Operator enters an unknown operating state (i.e. any state for which valid operating limits have not been determined), it will be considered to be in an emergency and shall restore operations to respect proven reliable power system limits within 30 minutes.
TOP-004-2 R5.	Each Transmission Operator shall make every effort to remain connected to the Interconnection. If the Transmission Operator determines that by remaining interconnected, it is in imminent danger of violating an IROL or SOL, the Transmission Operator may take such actions, as it deems necessary, to protect its area.
TOP-006-2 R1.	Each Transmission Operator and Balancing Authority shall know the status of all generation and transmission resources available for use.
TOP-006-2 R1.1.	Each Generator Operator shall inform its Host Balancing Authority and the Transmission Operator of all generation resources available for use.
TOP-006-2 R1.2.	Each Transmission Operator and Balancing Authority shall inform the Reliability Coordinator and other affected Balancing Authorities and Transmission Operators of all generation and transmission resources available for use.
TOP-006-2 R2.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor applicable transmission line status, real and reactive power flows, voltage, load-tap-changer settings, and status of rotating and static reactive resources.

TOP-006-2 R3.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide appropriate technical information concerning protective relays to their operating personnel.
TOP-006-2 R5.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use monitoring equipment to bring to the attention of operating personnel important deviations in operating conditions and to indicate, if appropriate, the need for corrective action.
TOP-006-2 R6.	Each Balancing Authority and Transmission Operator shall use sufficient metering of suitable range, accuracy and sampling rate (if applicable) to ensure accurate and timely monitoring of operating conditions under both normal and emergency situations.
TOP-006-2 R7.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.
TOP-007-0 R2.	Following a Contingency or other event that results in an IROL violation, the Transmission Operator shall return its transmission system to within IROL as soon as possible, but not longer than 30 minutes.
TOP-007-0 R3.	A Transmission Operator shall take all appropriate actions up to and including shedding firm load, or directing the shedding of firm load, in order to comply with Requirement R 2.
TOP-008-1 R3.	The Transmission Operator shall disconnect the affected facility if the overload on a transmission facility or abnormal voltage or reactive condition persists and equipment is endangered. In doing so, the Transmission Operator shall notify its Reliability Coordinator and all neighboring Transmission Operators impacted by the disconnection prior to switching, if time permits, otherwise, immediately thereafter.
TOP-008-1 R4.	The Transmission Operator shall have sufficient information and analysis tools to determine the cause(s) of SOL violations. This analysis shall be conducted in all operating timeframes. The Transmission Operator shall use the results of these analyses to immediately mitigate the SOL violation.
VAR-001-4 R2.	Each Transmission Operator shall schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions. Transmission Operators can provide sufficient reactive resources through various means including, but not limited to, reactive generation scheduling, transmission line and reactive resource switching, and using controllable load.
VAR-001-4 R3.	Each Transmission Operator shall operate or direct the Real-time operation of devices to regulate transmission voltage and reactive flow as necessary.

VAR-002-WECC-1 R1.	<p>Generator Operators and Transmission Operators shall have AVR in service and in automatic voltage control mode 98% of all operating hours for synchronous generators or synchronous condensers. Generator Operators and Transmission Operators may exclude hours for R1.1 through R1.10 to achieve the 98% requirement.</p> <p>R1.1. The synchronous generator or synchronous condenser operates for less than five percent of all hours during any calendar quarter.</p> <p>R1.2. Performing maintenance and testing up to a maximum of seven calendar days per calendar quarter.</p> <p>R1.3. AVR exhibits instability due to abnormal system configuration.</p> <p>R1.4. Due to component failure, the AVR may be out of service up to 60 consecutive days for repair per incident.</p> <p>R1.5. Due to a component failure, the AVR may be out of service up to one year provided the Generator Operator or Transmission Operator submits documentation identifying the need for time to obtain replacement parts and if required to schedule an outage.</p> <p>R1.6. Due to a component failure, the AVR may be out of service up to 24 months provided the Generator Operator or Transmission Operator submits documentation identifying the need for time for excitation system replacement (replace the AVR, limiters, and controls but not necessarily the power source and power bridge) and to schedule an outage.</p> <p>R1.7. The synchronous generator or synchronous condenser has not achieved Commercial Operation.</p> <p>R1.8. The Transmission Operator directs the Generator Operator to operate the synchronous generator, and the AVR is unavailable for service.</p> <p>R1.9. The Reliability Coordinator directs Transmission Operator to operate the synchronous condenser, and the AVR is unavailable for service.</p> <p>R1.10. If AVR exhibits instability due to operation of a Load Tap Changer (LTC) transformer in the area, the Transmission Operator may authorize the Generator Operator to operate the excitation system in modes other than automatic voltage control until the system configuration changes.</p>
VAR-002-WECC-1 R2.	<p>Generator Operators and Transmission Operators shall have documentation identifying the number of hours excluded for each requirement R1.1 through R1.10.</p>
VAR-501-WECC-1 R1.	<p>Generator Operators shall have PSS in service 98% of all operating hours for synchronous generators equipped with PSS. Generator Operators may exclude hours for R1.1 through R1.12 to achieve the 98% requirement. [See standard pdf for R1.1 through R1.12]</p>

VAR-501-WECC-1 R1.1.	The synchronous generator operates for less than five percent of all hours during any calendar quarter.
VAR-501-WECC-1 R1.2.	Performing maintenance and testing up to a maximum of seven calendar days per calendar quarter.
VAR-501-WECC-1 R1.3.	PSS exhibits instability due to abnormal system configuration.
VAR-501-WECC-1 R1.4.	Unit is operating in the synchronous condenser mode (very near zero real power level).
VAR-501-WECC-1 R1.5.	Unit is generating less power than its design limit for effective PSS operation.
VAR-501-WECC-1 R1.6.	Unit is passing through a range of output that is a known "rough zone" (range in which a hydro unit is experiencing excessive vibration).
VAR-501-WECC-1 R1.7.	The generator AVR is not in service.
VAR-501-WECC-1 R1.8.	Due to component failure, the PSS may be out of service up to 60 consecutive days for repair per incident.
VAR-501-WECC-1 R1.9.	Due to a component failure, the PSS may be out of service up to one year provided the Generator Operator submits documentation identifying the need for time to obtain replacement parts and if required to schedule an outage.
VAR-501-WECC-1 R1.10.	Due to a component failure, the PSS may be out of service up to 24 months provided the Generator Operator submits documentation identifying the need for time for PSS replacement and to schedule an outage.
VAR-501-WECC-1 R1.11.	The synchronous generator has not achieved Commercial Operation.
VAR-501-WECC-1 R1.12.	The Transmission Operator directs the Generator Operator to operate the synchronous generator, and the PSS is unavailable for service.
VAR-501-WECC-1 R2.	Generator Operators shall have documentation identifying the number of hours excluded for each requirement in R1.1 through R1.12.

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7.D.1

City of Santa Clara, California



Date: January 12, 2015
To: City Manager for Council Information
From: Director of Planning and Inspection
Subject: Note and File: Historical and Landmarks Commission Minutes of December 4, 2014

On January 8, 2015, the Historical and Landmarks Commission approved its Minutes of December 4, 2014. These Minutes are now being brought forward to the City Council to be noted and filed. Any items on these Minutes marked for City Council Action were either brought forward already or will be brought forward under separate cover accompanied by a separate Agenda Report.

Kevin L. Riley
Director of Planning and Inspection

APPROVED:

Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) *Historical and Landmarks Commission Minutes of December 4, 2014*



**City of Santa Clara
HISTORICAL AND LANDMARKS
COMMISSION MEETING MINUTES
Thursday, December 4, 2014 – 7:00 P.M.
CITY COUNCIL CHAMBERS
1505 Warburton Avenue
Santa Clara, CA 95050**

Please refer to the Historical and Landmarks Commission Procedural Items guideline for information on all procedural matters.
An audio recording of this meeting is available in the Planning Office for review or purchase the Friday following the meeting.

ITEMS FOR COUNCIL ACTION

The following items from this Historical and Landmarks Commission agenda will be scheduled for Council review following the conclusion of hearings and recommendations by the Historical and Landmarks Commission. Due to timing of notices for Council hearings and the preparation of Council agenda reports, these items will not necessarily be heard on the date the minutes from this meeting are forwarded to the Council. Please contact the Planning Division office for information on the schedule of hearings for these items:

- None

1. CALL TO ORDER

The meeting was called to order at 7:04 p.m.

2. ROLL CALL

Commissioners Present: Chair Brian Johns, Michael Hyams, Jeannie Mahan, Jerry McKee, J.L. "Spike" Standifer, Stephen Estes and Robert Luckinbill

Staff Present: Shaun Lacey, AICP, Assistant Planner II

3. DISTRIBUTION OF AGENDA AND STAFF REPORTS

Copies of current agendas and staff reports for each of the items on the agenda are available from the Planning Division office on the Friday afternoon preceding the meeting and are available at the Commission meeting at the time of the hearing. Chair Johns reviewed this procedure.

4. DECLARATION OF COMMISSION PROCEDURES

Chair Johns reviewed the Historical and Landmarks Commission procedures for those present.

5. REQUESTS FOR EXCEPTIONS, WITHDRAWALS AND CONTINUANCES

- A. Withdrawals – None
- B. Continuances - None
- C. Exceptions – Honorary City Historian Lorie Garcia requested that Item 8.C. be moved to the front of the Public Meeting Items of the agenda.

6. ORAL PETITIONS/ANNOUNCEMENTS AND COMMUNICATIONS

- Honorary City Historian Lorie Garcia addressed the HLC on a historical update of the Franklin Post Office.

7. CONSENT CALENDAR

Consent Calendar items may be enacted, approved or adopted, based upon the findings prepared and provided in the written staff report, by one motion unless requested to be removed by anyone for discussion or explanation. If any member of the Historical and Landmarks Commission, staff, the applicant or a member of the public wishes to comment on a Consent Calendar item, or would like the item to be heard on the regular agenda, please notify Planning staff, or request this action at the Historical and Landmarks Commission meeting when the Chair calls for these requests during the Consent Calendar review.

7.A. File No.(s): **PLN2014-10701**
Location: 1510 Harrison Street, a 0.19-acre parcel located at the intersection of Harrison Street and Jefferson Street (APN: 269-13-003); Project site is zoned R3-36D (Medium-Density Multiple-Family Dwelling)
Applicant/Owner: Rasteen, LLC
Request: **Design Review** of window and door changes and re-roof
CEQA Determination: Categorically Exempt per CEQA Section 15301 – Existing Facilities
Project Planner: Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation: Recommend approval

Motion/Action: Motion was made by Luckinbill, seconded by Mahan to approve the Consent Calendar. (7-0-0-0)

*******END OF CONSENT CALENDAR*******

8. PUBLIC MEETING ITEMS

8.A. No.(s): **PLN2014-1010712**
Location: 746 Madison Street, a 9,120 square foot parcel (APN: 269-26-050). Property is zoned Single-Family (R1-6L).
Applicant/Owner: Sigrid Jacobsen
Request: **Historic Designation** of a single-family residential home.
CEQA Determination: Historical Resources under the Provisions of Public Resources Code section 21084.1
Project Planner: Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation: Recommend that the Commission determine whether the structure located at 746 Madison Street is eligible for listing on the City's Architecturally or Historically Significant Properties

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Lacey introduced the project to the Commission. Honorary City Historian Lorie Garcia spoke in favor of adding the property onto the City's List of Architecturally or Historically Significant Properties and clarified some comments in the staff report and DPR form that she prepared on behalf of the property owners. There were no public speakers.

The Commission discussed the proposal and noted its unanimous support for the property to be added onto the City's list of Architecturally or Historically Significant Properties.

Motion/Action: Motion was made by Luckinbill, seconded by Estes to recommend that the City Council add the property to the City's list of Architectural or Historically Significant Properties (7-0-0-0).

8.B. File No.(s): **PLN2014-10536**
Location: 1373 Benton Street, a 7,637 square foot parcel located at the intersection of Madison Street and Monroe Street (APN: 269-13-065). Project site is zoned R1-6L (Single-Family)
Applicant/Owner: Janice Kamachi / Desiderio Rodrigues
Request: **Design Review** to legalize the conversion of the sun room into a laundry room to the rear of the house, interior stair leading to a new habitable basement with one great room and a full bathroom. The project includes demolition of demising walls erected in the habitable basement to make bedrooms.
CEQA Determination: Categorically Exempt per CEQA Section 15301 – Existing Facilities
Project Planner: Payal Bhagat, Assistant Planner II
Staff Recommendation: Recommend approval, subject to conditions

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Lacey introduced the project to the Commission and answered questions. The applicant spoke in favor of the project and detailed the proposed scope of work, but noted that he was not interested in adding the property to the City’s list of Architecturally or Historically Significant Properties at the present time. There were no public speakers.

The Commission discussed the proposal and noted its unanimous support for the proposed work.

Motion/Action: Motion was made by Luckinbill, seconded by McKee to recommend that the project be approved as proposed (7-0-0-0).

8.C. File No.(s): **PLN2014-10666**
Location: 584 Park Court, a 5,091 square foot parcel (APN: 269-52-038); Project site is zoned R1-6L (Single Family Residential)
Applicant/Owner: Rob Mayer / Albert Au
Request: **Historic Designation** of a single-family residential home; **approval of a Mills Act Contract and Design Review** to construct an 87 square foot rear addition, includes interior and exterior alterations and the demolition of the existing storage shed
CEQA Determination: Categorically Exempt per CEQA Section 15331, Historical Resource Rehabilitation
Project Planner: Gregory Qwan, Planning Intern
Staff Recommendation: Recommend approval, subject to conditions

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Lacey introduced the project to the Commission. The applicant spoke in favor of the project and detailed the proposed scope of work, and requested that the property be added onto the City’s List of Architecturally or Historically Significant Properties. There were no public speakers.

The Commission discussed the proposal and noted its unanimous support for the property to be

added onto the City's list of Architecturally or Historically Significant Properties and enter into a Mills Act contract.

Motion/Action: Motion was made by Mahan, seconded by Luckinbill to recommend that the City Council add the property to the City's list of Architectural or Historically Significant Properties (7-0-0-0).

Motion/Action: Motion was made by Mahan, seconded by Luckinbill to recommend that the City Council accept a Mills Act agreement for the property (7-0-0-0).

8.D. File No.(s):	PLN2014-10735
Location:	189 Brookside Avenue, a 14,374 square-foot parcel located at the intersection of Brookside Avenue and Forest Avenue (APN: 303-22-001); Project site is zoned R1-8L (Single-Family Residential)
Applicant/Owner:	Eron Jokipii
Request:	Design Review for a new two-story house with a detached garage and second living unit and a historical determination of the subject property.
CEQA Determination:	Categorically Exempt per CEQA Section 15303 – New Construction
Project Planner:	Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation:	Provide feedback on the design and historical evaluation

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Lacey introduced the project to the Commission and answered questions. The applicant spoke in favor of the project and detailed the proposed scope of work, but noted that due to the condition of the existing house it was economically infeasible to maintain the home.

Chair Johns opened up the item for public comments. One speaker who lived near the subject property noted that the house was not historic and that the design concept was appropriate for the lot and the neighborhood. The public comment period was then closed.

The Commission discussed the proposal and noted its unanimous support for the proposed work. Commissioner Estes noted the high level of quality associated with prefabricated homes manufactured by Bluhomes. This is a unique example of a pre-fabricated home that use advanced technology to design and build a personalized home.

Motion/Action: Motion was made by Luckinbill, seconded by McKee to recommend that the project be approved as proposed (7-0-0-0).

9. OTHER BUSINESS

9.A. Commission Procedures and Staff Communications

i. Announcements/Other Items

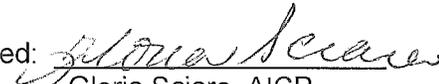
- Correspondence received for HLC
- Memo on Lick Mill Mansion from Gil Sanchez, FAIA
- The Commission requested to know if the Use Permit for a preschool issued to the property allowed public access.
- CLG Annual Report for 2013-2014
- The Commission requested that the HLC Staff Liaison fill out the form on their behalf.
- 2015 Session of Leadership Santa Clara
- Commissioners Standifer and Mahan noted interest in attending the program.

- Review of Historic Survey Consultants
 - Monthly Report on HT properties: Residential reversions (verbal update)
 - None
- ii. Report of the Liaison from the Planning and Inspection Department**
- City Council and Planning Commission Actions (verbal update)
 - Staff reported on the progress of the Draft Historic Preservation Ordinance
- iii. Commission/ Board Liaison and Committee Reports**
- Santa Clara Arts and Historic Consortium (McKee/Standifer as alternate) [Fourth Monday of each month at 7:15 p.m. - Headen-Inman House]
 - Historic Preservation Society of Santa Clara (Mahan/Luckinbill as alternate) [Second Friday of each month at 10:00 a.m. - Harris Lass Preserve]
 - Old Quad Residents Association (Hyams/Mahan as alternate)
 - Architectural Committee (Mahan / Johns as alternate)
 - Agnews Historic Cemetery Museum Committee (Standifer/Luckinbill as alternate)
 - BART/ High Speed Rail/ VTA BRT Committee (Johns / McKee as alternate)
 - Zoning Ordinance Update (Johns / Hyams Alternate)
 - Preservation Ordinance Ad-hoc Committee (Mahan and Luckinbill/McKee as alternate)
- iv. Commission Activities**
- Commissioner Travel and Training Reports
- v. Upcoming Agenda Items**
- Walking Tour for Mackay Neighborhoods (Yen Chen) – January
 - Review of CLG Annual Report for 2013-2014 – January
 - Review Public Information Handouts and Brochures – February
 - Franklin Post Office Update (Lorie Garcia) – TBD
 - Review of Street Name List (Lorie Garcia) – TBD

ADJOURNMENT

The meeting was adjourned at 8:15 p.m. The next regular Historical and Landmarks Commission meeting will be held on Thursday, January 8, 2015 at 7:00 p.m. in the City Council Chambers.

Prepared by: 
 Shaun Lacey, AICP
 Assistant Planner II

Approved: 
 Gloria Sciarra, AICP
 Development Review Officer

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MINUTES OF THE
SENIOR ADVISORY COMMISSION
CITY OF SANTA CLARA
SEPTEMBER 22, 2014
10:00 A.M. REGULAR MEETING
SENIOR CENTER ROOM 232

Commissioners Present: Wanda Buck, Dwight Collins, ArLyne Diamond, Bobbi Estrada,
Sam Orme

Commissioners Absent: Frank Kadlecek, excused
Alice Pivacek, excused

Staff Present: Phil Orr, Recreation Supervisor, Senior Center
Morgan Pershing, Reference Librarian II

Guests: Lucille Hirsch, Tom Freitas

Matters for Council Action: None.

- I. Call To Order
 - A. The meeting was called to order by Vice Chair Buck.
- II. Roll Call
 - A. Commissioners Kadlecek and Pivacek were excused.
- III. Approval of Minutes
 - A. On a motion by Commissioner Estrada and seconded by Commissioner Collins the Minutes of August 25, 2014 were approved.
- IV. Approval of the order of the meeting agenda
 - A. No changes to the agenda were offered.
- V. Correspondence/Communications
 - A. None.
- VI. Commissioners' Reports:
 - A. Commissioner Orme suggested voter registration materials be made available at the Senior Center. Supervisor Orr will look into the matter. Commissioner Orme introduced the age-friendly cities program initiated by the World Health Organization. He was asked to explain the movement more fully at the October meeting.
 - B. Commissioner Collins noted a senior resource guide may be downloaded from the Sourcewise web site (www.mysourcewise.com). Commissioner Collins asked about

the invitation to Council Member Kolstad to attend an upcoming commission meeting; Supervisor Orr will invite him after the November election.

- C. Commissioner Diamond noted the importance of electing candidates who are concerned with senior abuse.
- D. Commissioner Estrada reported that the 49ers are contributing funds to J.W. House and other charities.

VII. Staff Reports

- A. Librarian Pershing informed the Commission of the skin care program at the Central Park Library and her book discussion group.
- B. Supervisor Orr provided requested information to the commission regarding meeting attendance. Section 1004 of Santa Clara's City Code regarding Compensation and vacancies, in part states: "If a member of a board or commission absents himself/herself from three regular meetings of such board or commission, consecutively, unless with permission of such board or commission expressed in its official minutes, or is convicted of a crime involving moral turpitude, or ceases to be a qualified elector of the City, his/her office shall be vacant and shall be so declared by the City Council."

VIII. Old Business: None.

IX. New Business: None.

X. Public Presentations:

- A. Tom Freitas (woodshop volunteer) informed the commission of activities in the woodshop and noted additional information can be found in the monthly newsletter.

XI. Conference and Travel AB 1234: None.

XII. There being no further business, the meeting was adjourned. Next regular scheduled meeting is October 27, 2014 at 10:00 a.m., Senior Center Room 232.

Prepared by:


SAMUEL ORME
Secretary


PHILIP M. ORR/JENNIFER HERB
Staff Liaison

MINUTES OF THE
SENIOR ADVISORY COMMISSION
CITY OF SANTA CLARA
October 27, 2014
10:00 A.M. REGULAR MEETING
SENIOR CENTER ROOM 232

Commissioners Present: Wanda Buck, Dwight Collins, ArLyne Diamond, Frank Kadlecek,
Sam Orme, Alice Pivacek

Commissioners Absent: Bobbi Estrada, excused

Staff Present: Phil Orr, Recreation Supervisor, Senior Center
Jennifer Herb, Recreation Supervisor, Senior Center

Guests: Jolene Bradford
Chuck Roberts

Matters for Council Action: None.

- I. Call To Order
 - A. The meeting was called to order by Chair Pivacek.
- II. Roll Call
 - A. Commissioner Estrada was excused.
- III. Approval of Minutes
 - A. On a motion by Commissioner Buck and seconded by Commissioner Collins the Minutes of September 22, 2014 were approved.
- IV. Approval of the order of the meeting agenda
 - A. No changes to the agenda were offered.
- V. Correspondence/Communications
 - A. None.
- V. Commissioners' Reports:
 - A. Commissioner Orme shared information regarding the Global Age-Friendly Cities concept as originated by the World Health Organization. An age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age. At commissioners' request Mr. Orme will forward supportive documents to members of the commission and other interest persons.

- B. Commissioner Kadlecek recommends the commission research what the City is currently doing.
 - C. Commissioner Orme recommends the book *What Are Old People For?* by Wm. Thomas, MD.
- VII. Staff Reports
- A. Supervisor Orr introduced Jennifer Herb, Recreation Supervisor who will be working with the Senior Advisory Commission during this time of transition, while Supervisor Orr is at the Mission City Memorial Park Cemetery.
 - B. Supervisor Orr informed the Commission about the traffic update regarding parking around the Senior Center.
 - C. Supervisor Orr updated the Commission on the Park Impact Fee.
- VIII. Old Business: None.
- A. Commissioner Kadlecek inquired if there was an update about the Fitness Center hours being open later on Tuesday and Thursday.
- IX. New Business: None.
- X. Public Presentations:
- XI. Conference and Travel AB 1234: None.
- XII. There being no further business, the meeting was adjourned at 11:00am. Next regular scheduled meeting is November 24, 2014 at 10:00 a.m., Senior Center Room 232.

Prepared by:


SAMUEL ORME
Secretary


JENNIFER HERB
Staff Liaison

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 70.4

City of Santa Clara, California



Date: January 12, 2015
To: City Manager for Council Information
From: Director of Planning and Inspection
Subject: Note and File: Historical and Landmarks Commission Minutes of November 6, 2014

On January 8, 2015, the Historical and Landmarks Commission approved its Minutes of November 6, 2014. These Minutes are now being brought forward to the City Council to be noted and filed. Any items on these Minutes marked for City Council Action were either brought forward already or will be brought forward under separate cover accompanied by a separate Agenda Report.

Kevin L. Riley
Director of Planning and Inspection

APPROVED:

Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) *Historical and Landmarks Commission Minutes of November 6, 2014*



City of Santa Clara
**HISTORICAL AND LANDMARKS
COMMISSION MEETING MINUTES**

Thursday, November 6, 2014 – 7:00 P.M.
CITY COUNCIL CHAMBERS
1505 Warburton Avenue
Santa Clara, CA 95050

Please refer to the Historical and Landmarks Commission Procedural Items guideline for information on all procedural matters.
An audio recording of this meeting is available in the Planning Office for review or purchase the Friday following the meeting.

ITEMS FOR COUNCIL ACTION

The following items from this Historical and Landmarks Commission agenda will be scheduled for Council review following the conclusion of hearings and recommendations by the Historical and Landmarks Commission. Due to timing of notices for Council hearings and the preparation of Council agenda reports, these items will not necessarily be heard on the date the minutes from this meeting are forwarded to the Council. Please contact the Planning Division office for information on the schedule of hearings for these items:

- None

1. CALL TO ORDER

The meeting was called to order at 7:00 p.m.

2. ROLL CALL

Commissioners Present: Chair Brian Johns, Michael Hyams, Jeannie Mahan, Jerry McKee, J.L. "Spike" Standifer, Robert Luckinbill and Stephen Estes

Staff Present: Yen Chen, Associate Planner, Shaun Lacey, AICP, Assistant Planner II (Item 8.A.), Jeff Schwilk, AICP, Associate Planner (Item 8.B.)

3. DISTRIBUTION OF AGENDA AND STAFF REPORTS

Copies of current agendas and staff reports for each of the items on the agenda are available from the Planning Division office on the Friday afternoon preceding the meeting and are available at the Commission meeting at the time of the hearing. Chair Johns reviewed this procedure.

4. DECLARATION OF COMMISSION PROCEDURES

Chair Johns reviewed the Historical and Landmarks Commission procedures for those present.

5. REQUESTS FOR EXCEPTIONS, WITHDRAWALS AND CONTINUANCES

- A. Withdrawals – None
- B. Continuances - None
- C. Exceptions – None

6. ORAL PETITIONS/ANNOUNCEMENTS AND COMMUNICATIONS

- None

7. CONSENT CALENDAR

Consent Calendar items may be enacted, approved or adopted, based upon the findings prepared and provided in the written staff report, by one motion unless requested to be removed by anyone for discussion or explanation. If any member of the Historical and Landmarks Commission, staff, the applicant or a member of the public wishes to comment on a Consent Calendar item, or would like the item to be heard on the regular agenda, please notify Planning staff, or request this action at the Historical and Landmarks Commission meeting when the Chair calls for these requests during the Consent Calendar review.

7.A. Approval of Historical and Landmarks Commission Minutes for the meeting of October 2, 2014.

Motion/Action: Motion was made by McKee, seconded by Luckinbill to approve the Minutes of October 2, 2014. (6-0-1-0, Estes abstained)

*******END OF CONSENT CALENDAR*******

8. PUBLIC MEETING ITEMS

8.A. File No.(s):	PLN2014-10388
Location:	981 Fremont Street, a 0.66-acre parcel located at the intersection of Fremont Street and Washington Street (APN: 269-16-011); Project site is zoned HT (Historic Combining)
Applicant/Owner:	David LeBaron
Request:	Landscape plan for the Morse Mansion
CEQA Determination:	Categorically Exempt per CEQA Section 15331, Historical Resource Restoration Rehabilitation
Project Planner:	Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation:	Recommend approval, subject to conditions

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Lacey introduced the project and answered questions from the Commission. The Commission also received written comments from Lorie Garcia, Honorary City Historian, and Craig Mineweaser, Volunteer Architectural Advisor. The Commission discussed reviewing the proposal under the Secretary's Standards for Restoration. Mr. Chen noted that per the State Office of Historical Preservation the Commission has the discretion to consider multiple SIS treatments for one property.

Chair Johns opened the item for public comments. Several members of the public noted that the proposed redwood fence was not appropriate. Chair Johns then closed the item for public comments.

The Commission discussed the landscape concept and proposed fence. Commission Mahan noted that the original fence on the property was a metallic material approximately two to three feet in height, and that any new fence should replicate the original style and height. Commissioners Standifer, McKee and Estes agreed that the property would benefit from a higher-quality fence material such as wrought iron railing. Chair Johns and Commission Hyams inquired whether the property could balance the needs of the applicant as well as the integrity of the property. The project applicant was called to the dais and responded to questions from the Commission. The applicant noted that the need for a solid redwood fence was necessary for privacy and safety but that he would not consider installing a wrought iron fence throughout the property.

Motion/Action: Motion was made by Luckinbill, seconded by Hyams to approve the landscape plan excluding the fence detail (7-0-0-0), subject to the following condition:

- 1) The proposed street trees shall be reviewed for appropriateness in size and specimen by the City Arborist prior to planting.

Motion/Action: Motion was made by Luckinbill (7-0-0-0), seconded by Mahan to deny the proposed redwood fence.

8.B. File No.(s): **PLN2014-10437**
Location: 820 Civic Center Drive, a 0.36-acre parcel located at the intersection of Civic Center Drive and Alviso Street (APN: 224-29-022); Project site is zoned ML (Light Industrial)
Applicant/Owner: Michael Fisher
Request: Pre-Application presentation of a four-unit development proposal
CEQA Determination: Not applicable to pre-application review
Project Planner: Jeff Schwilk, AICP, Associate Planner
Staff Recommendation: Review and provide comments

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Schwilk introduced the project and answered questions from the Commission. The applicant addressed the Commission on the evolution of the preliminary project design, and requested specific comments on the overall project design with the proposed number of units, a new two-car garage on the east side of the existing house, proposed building massing, building separation, exterior materials and heights.

The Commission discussed the development concept. The Commissioners commended the applicant for preparing the property evaluation information for preliminary consideration. The Commissioners expressed support for the plan to retain and incorporate the existing house into the preliminary development design.

Commissioner Hyams noted the mix of industrial, auto repair and residential land uses on this block. He noted that three proposed units seemed too much and noted his preliminary support for two additional units, so there is more private yard space reserved for the existing house. Commissioner Estes noted the finished floor heights within the units should be verified for consistency with the existing house.

In response to Commissioner Estes' question, the Project Architect, Tom Connor, noted the proposed houses would have split level entries, with the front entry porches raised to approximately the same level as the existing porch, but then would drop down as the primary first main first-floor living areas of the new homes which would be on slab foundations.

Chair Johns opened the item for public comments. Judy Tucker noted she had been in the house recently and supports the preservation of it. She noted that she supports the addition of two houses to the west side, but noted she would not like to see an additional house fill in the back yard to the south (Lot 2) the existing house, as it would interfere with the majesty of the existing home. Lou Faria noted that he also went through the house when it was for sale. He noted his support for the proposal to save the house, though it would be a little too crowded with the addition of a home to the south of the existing home and he would rather see this area as a backyard. He also noted that the house interior included barrel ceiling and staircase should be restored and not be gutted in a way that would remove its historic character. Chair Johns then closed the item for public comments.

Motion/Action: As this item was a referral for a Pre-Application review and comments to the applicant, there was no formal action or recommendation by the Commission.

8.C. File No.(s): **PLN2014-10545**
Location: 1798 Fremont Street, a 6,552 square foot parcel located at the intersection of Fremont Street and Pierce Street (APN: 269-12-030); Project site is zoned R1-6L-Single Family
Applicant/Owner: Loida C. Kirkley
Request: Design Review of a proposed roof replacement, window replacement at the side and rear elevations, and interior improvements.
CEQA Determination: Categorically Exempt per CEQA Section 15301, Repair and Maintenance of existing structures
Project Planner: Payal Bhagat, Assistant Planner II
Staff Recommendation: Recommend Approval, subject to conditions

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Chen gave a brief presentation and answered questions from the Commission. The applicant showed pictures of the exterior of the residence. No comments were received from the public during public comment period.

The Commission discussed the removal of the window at the rear elevation and use of aluminum horizontal siding. It was noted that the window is visible from the street.

Motion/Action: Motion was made by Luckinbill, seconded by Estes to recommend that the project be approved as proposed (6-0-1-0, Johns abstained).

8.D. File No.(s): **PLN2014-10626**
Location: 1217 Harrison Street, a 5,670 square foot parcel located on the north side of Harrison Street approximately 50 feet west of Jackson street (APN: 269-03-096). Project site is zoned R1-6L (Single Family Residential).
Applicant/Owner: Curtis Campbell
Request: Design Review for a remodel of existing 2-story multi-unit structure into a single family residence; proposal includes new foundation and replacement of existing windows, and addition of doors at the rear of the property.
CEQA Determination: Categorically Exempt per CEQA Section 15331, Historical Resource Restoration Rehabilitation
Project Planner: Yen Chen, Associate Planner
Staff Recommendation: Recommend Approval, subject to conditions

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Chen introduced the project to the Commission and noted that the property is eligible for listing in the California Register of Historic Resources. Mr. Chen commented that staff is not supportive of having multiple door openings at the rear of the property which access onto a new redwood deck.

The owner addressed the City's stop work order on the property, stating that the property was being cleaned up after the purchase. He noted that the key features and elements were not

removed. The owner reviewed the termite report and noted the poor state of the foundation, structure and windows. The owner was agreeable to remove the multiple door openings at the rear. Commissioners noted that the front windows should be restored.

Chair Johns opened the item for public comments. Judy Tucker commended the owner for taking on this massive project. Chair Johns then closed the item for public comments.

Motion/Action: Motion was made by Luckinbill, seconded by Mahan to recommend that the project be approved (7-0-0-0), subject to the following:

- 1) Retention and repair of the original windows at the front of the property as detailed by a qualified consultant and approved by the Director of Planning and Inspection.
- 2) Comply with the Secretary of Interior Standards for Rehabilitation that deteriorated historic features need to be repaired rather than replaced. Where the severity of deterioration requires replacement of distinctive features, the new feature will match the old design, color, texture and where possible, materials.
- 3) Replacement of missing features will be substantiated by documentary and physical evidence.
- 4) Provide detail preservation notes on construction drawings.
- 5) Remove chain link fence and replace wood fence.
- 6) Removal of multiple door openings at the rear of the property.

8.E. File No.(s): **PLN2014-10648**
Location: 1850 Bellomy Street, a 7,734 square foot parcel located on the south side of Bellomy Street, approximately 140 feet west of Santa Clara Mission Cemetery (APN: 269-39-076). Project site is zoned R3-25D (Moderate-Density Multiple Dwelling).
Applicant: Juan Moreno
Owner: Jose Carvalho
Request: Design Review of an interior and exterior remodel to an existing two bedroom duplex unit with no added square foot and additional bedrooms.
CEQA Determination: Categorically Exempt per CEQA Section 15301, Existing facilities
Project Planner: Steve Le, Planning Intern
Recommendation: Recommend approval, subject to conditions

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Chen introduced the project to the Commission. The owner noted that the residence is a single family unit and not a duplex as noticed. No comments were received from the public during public comment period.

The Commission discussed the proposal and suggested that the use of alternative exterior siding, such as HardiePlank lap siding.

Motion/Action: Motion was made by Luckinbill, seconded by Mahan to recommend that the project be approved (7-0-0-0), subject to the use of lap siding for the exterior remodel.

9. OTHER BUSINESS

9.A. Commission Procedures and Staff Communications

i. Announcements/Other Items

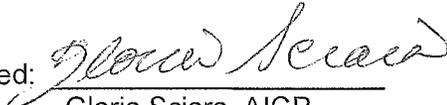
- Correspondence received for HLC
- Information on Mackay neighborhood provided by Mr. Stephen Estes

- Election of Commission Officer
 - Motion was made by Luckinbill, seconded by Hyams to maintain existing Officers (7-0-0-0).
 - Commission/ Board Liaison Assignments
 - No change to assignments
 - Set Walking Tour for Mackay Neighborhoods, Fairmede and Maywood Tracts
 - Set January 17, 2015 at 1:00pm for walking tour of the Maywood Tract with January 31, 2015 as alternate date
 - Monthly Report on HT properties: Residential reversions (verbal update)
 - None
- ii. Report of the Liaison from the Planning and Inspection Department**
- City Council and Planning Commission Actions (verbal update)
- iii. Commission/ Board Liaison and Committee Reports**
- Santa Clara Arts and Historic Consortium (McKee/Standifer as alternate)
[Fourth Monday of each month at 7:15 p.m. - Headen-Inman House]
 - Historic Preservation Society of Santa Clara (Mahan/Luckinbill as alternate)
[Second Friday of each month at 10:00 a.m. - Harris Lass Preserve]
 - Old Quad Residents Association (Hyams/Mahan as alternate)
 - Architectural Committee (Mahan / Johns as alternate)
 - Agnews Historic Cemetery Museum Committee (Standifer/Luckinbill as alternate)
 - BART/ High Speed Rail/ VTA BRT Committee (Johns / McKee as alternate)
 - Zoning Ordinance Update (Johns / Hyams Alternate)
 - Preservation Ordinance Ad-hoc Committee (Mahan and Luckinbill/McKee as alternate)
- iv. Commission Activities**
- Commissioner Travel and Training Reports
 - Commissioner Johns reported on completing the online Ethics Training
- v. Upcoming Agenda Items**
- Review Public Information Handouts and Brochures – December
 - Review of Historic Survey Consultants – December
 - Franklin Post Office Update (Lorie Garcia) – TBD
 - Review of Street Name List (Lorie Garcia) – TBD
 - City's Mackay neighborhoods (Yen Chen) – TBD

ADJOURNMENT

The meeting was adjourned at 10:02 p.m. The next regular Historical and Landmarks Commission meeting will be held on Thursday, December 4, 2014 at 7:00 p.m. in the City Council Chambers.

Prepared by: 
Yen Chen
Associate Planner

Approved: 
Gloria Sciara, AICP
Development Review Officer

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02-10-15

7D. 5

**CITY OF SANTA CLARA
CIVIL SERVICE COMMISSION
SUMMARY OF MINUTES**

January 12, 2015 at 7:00 PM
City Council Chambers, City Hall
1500 Warburton Avenue
Santa Clara, California

Present: Commissioners Mario Bouza, Brian Doyle, Andrew "Kim" Kristalyn, Fran Palacio, and Pat Staffelbach; Tina Murphy, Assistant Director of Human Resources, and Sheila Ivers, Recording Secretary

Recommendation for Council Action: None

I. ROUTINE ITEMS

- A. **CALL TO ORDER - PLEDGE OF ALLEGIANCE**
Chairperson Doyle called the meeting to order at 7:00 p.m., and led the meeting in the Pledge of Allegiance.

- B. **MINUTES OF NOVEMBER 10, 2014 CIVIL SERVICE COMMISSION MEETING**
There being no objections or changes, **the minutes stand approved as written.**

- C. **CHANGE OF STATUS REPORT** for November and December, 2014

- D. **CURRENT RECRUITMENT ACTIVITY REPORT** for November and December, 2014

- E. **EXAMINATION REPORT** for November and December, 2014
Ms. Tina Murphy, Assistant Director of Human Resources, stated that in November 2014, Commissioner Staffelbach reviewed the oral examinations for Staff Aide II and Health and Wellness Coordinator. In December, Commissioner Kristalyn reviewed the oral and written examinations for Code Enforcement Technician, and the oral examination for Grounds Maintenance Worker II. In all cases, the examinations were found to be job-related and appropriate.
MOTION by Commissioner Palacio, seconded by Commissioner Bouza, to **NOTE AND FILE Items I-C, I-D, and I-E.**
MOTION carried, 5-0.

II. UNFINISHED BUSINESS - None

III. NEW BUSINESS

- A. CONSIDER REQUEST to Extend Eligible List for Senior Energy Systems Analyst
MOTION by Commissioner Kristalyn, seconded by Commissioner Staffelbach, **to EXTEND the eligible list for Senior Energy Systems Analyst by one year to January 29, 2016.**

MOTION carried, 5-0.

- B. CONSIDER REQUEST to Reverse Disqualification of Firefighter I Candidate Jeremy Grundmann on the Firefighter I Physical Ability Examination
MOTION by Commissioner Palacio, seconded by Commissioner Staffelbach, **to REVERSE the disqualification of Firefighter I Candidate Jeremy Grundmann on the Firefighter I Physical Ability Examination, and allow the candidate to re-take the Physical Ability examination.**

MOTION carried, 5-0.

IV. INFORMATIONAL ITEMS

- A. EXAM REVIEW SCHEDULE for 2015
Ms. Murphy explained the matrix schedule of examination reviews for the year 2015.

- B. TRAVEL GUIDELINES for 2015
Ms. Murphy stated that the rules and limits for travel as City representatives are released by the City Clerk's Office each year, and, should the Commissioners find themselves in that situation, they should adhere to these parameters.

V. REPORTS OF COMMISSIONERS - None

- VI. ORAL COMMUNICATIONS – The law does not permit Commission action, or extended discussion of, any item not on the Agenda except under special circumstances. Note the instructions in the Agenda regarding Oral Communications.

VII. ADJOURNMENT

CSC Summary of Minutes – January 12, 2015 continued

MOTION by Commissioner Kristalyn, seconded by Commissioner Bouza, to **ADJOURN** the meeting at 7:36 p.m., until the next scheduled meeting of the Civil Service Commission at 7:00 p.m. on Monday, March 9, 2015. **MOTION** carried, 5-0.

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 7D.6

City of Santa Clara, California



Date: January 16, 2015
To: City Manager for Council Information
From: Director of Planning and Inspection
Subject: Note and File: Planning Commission Minutes of December 10, 2014

On January 14, 2015, the Planning Commission approved its Minutes of December 10, 2014. These Minutes are now being brought forward to the City Council to be noted and filed. Any items on these Minutes marked for City Council Action were either brought forward already or will be brought forward under separate cover accompanied by a separate Agenda Report.

Kevin L. Riley
Director of Planning and Inspection

APPROVED:

for Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) *Planning Commission Minutes of December 10, 2014*



City of Santa Clara

**PLANNING COMMISSION
MEETING MINUTES**

ZONING CODE UPDATE OPEN HOUSE 6:00 P.M. to 7:00 P.M.

Wednesday, December 10, 2014 – 7:00 P.M.

**CITY COUNCIL CHAMBERS
1500 Warburton Avenue
Santa Clara, CA 95050**

Please refer to the Planning Commission Procedural Items coversheet for information on all procedural matters.
An audio recording of this meeting is available in the Planning Office for review or purchase the Friday following the meeting.

OPEN HOUSE – 6:00 P.M. TO 7:00 P.M.

The open house provided an introduction to the City of Santa Clara Zoning Code update. Staff and representatives from PMC were present to give information and answer questions related to the Zoning Code update, process and timelines for completion.

ITEMS FOR COUNCIL ACTION

The following items from this Planning Commission agenda will be scheduled for Council review following the conclusion of hearings and recommendations by the Planning Commission. Due to timing of notices for Council hearings and the preparation of Council agenda reports, these items will not necessarily be heard on the date the minutes from this meeting are forwarded to the Council. Please contact the Planning Division office for information on the schedule of hearings for these items:

- **Item 8.B. PLN2012-09540, PLN2012-09542, and CEQ2012-01149:** 3610-3700 El Camino Real - Rezone
- **Item 8.C. PLN2014-10456:** 297 Bel Ayre Drive- Rezone
- **Item 8.D. PLN2014-10320:** 1701 Lawrence Road - Rezone

1. PLEDGE OF ALLEGIANCE and STATEMENT OF VALUES

Chair Stattenfield initiated the Pledge of Allegiance, and the Statement of Values was read.

2. ROLL CALL

The following Commissioners responded to roll call: Chair Keith Stattenfield, Raj Chahal, Ian Champeny, Deborah Costa, Yuki Ikezi, Steve Kelly, and Joe Sweeney. (Commissioner Champeny left the meeting at 9:06)

Staff present were Director of Planning and Inspection Kevin Riley, City Planner Steve Lynch, Development Review Officer Gloria Sciara, Associate Planner Jeff Schwilk, Assistant Planner II Shaun Lacey, Assistant Planner II Payal Bhagat, Assistant City Attorney Alexander Abbe, and Office Specialist IV Megan Valenzuela.

3. DISTRIBUTION OF AGENDA AND STAFF REPORTS

Copies of current agendas and staff reports for each of the items on the agenda are available from the Planning Division office on the Friday afternoon preceding the meeting and are available at the Commission meeting at the time of the hearing.

4. DECLARATION OF COMMISSION PROCEDURES

Chair Stattenfield reviewed the Planning Commission procedures for those present.

5. REQUESTS FOR EXCEPTIONS, WITHDRAWALS AND CONTINUANCES

A. Withdrawals - None

B. Continuances without a hearing - None

C. Exceptions (requests for agenda items to be taken out of order) – A request to hear Item 8.C., 297 Bel Ayre Rezone, prior to Item 8.A. was discussed and granted.

6. ORAL PETITIONS/ ANNOUNCEMENTS AND COMMUNICATIONS

Members of the public may briefly address the Commission on any item not on the agenda.

None.

7. CONSENT CALENDAR

Consent Calendar items may be enacted, approved or adopted, based upon the findings prepared and provided in the written staff report, by one motion unless requested to be removed by anyone for discussion or explanation. If any member of the Planning Commission, staff, the applicant or a member of the public wishes to comment on a Consent Calendar item, or would like the item to be heard on the regular agenda, please notify Planning staff, or request this action at the Planning Commission meeting when the Chair calls for these requests during the Consent Calendar review. Items listed on the Consent Calendar with associated file numbers constitute Public Hearing items.

7.A. Planning Commission Minutes of November 12, 2014

Motion/Action: The Commission motioned to approve the Minutes from the November 12, 2014, Planning Commission meeting (6-0-0-1, Costa abstained).

7.B. File: **PLN2014-10226**
Location: 2333 El Camino Real, a 14,800 square-foot lot on the north side of El Camino Real, approximately 240 feet from the intersection of El Camino Real and Los Padres Boulevard. APN: 224-14-090; property is zoned Thoroughfare Commercial (CT)
Applicant/Owner: Jonghun Jeong / Chuck Hammers
Request: **Six-month review of Use Permit** allow an expansion to an existing restaurant allowing seating from 25 seats to 40 seats and approval to allow beer and wine service (Type 41 ABC License)
CEQA Determination: Categorically Exempt per CEQA Guidelines 15301 (Class 1–Existing Facilities)
Project Planner: Shaun Lacey, Assistant Planner II
Staff Recommendation: **Note and File Report**

After the consent calendar had been approved, a resident later expressed concern about the additional seating at the restaurant and its impact on the neighborhood. Staff agreed to look into the issue and report back to the Commission at the next meeting.

7.C. File: **PLN2014-10682**
Location: 3597 Homestead Road, a 2,642 square foot tenant space within a 5.5 acre parcel, located at the northeast corner of Lawrence Expressway and Homestead Road (APN: 290-23-053).
Applicant/Owner: SBH Homestead Properties

Request: **Conditional Use Permit** to allow on-site beer and wine sales in conjunction with a proposed new Asian cuisine restaurant

CEQA Determination: Categorical Exemption per Section 15301, Existing Facilities

Project Planner: Shaun Lacey, AICP, Assistant Planner II

Staff Recommendation: Approval, subject to conditions

7.D. File: PLN2014-10717

Location: 1349 Coleman Avenue, a 2.96 acre site, located at the southwest corner of Coleman Avenue and Brokaw Road. The property is zoned Heavy Industrial (MH) (APN: 230-06-049)

Applicant/Owner: Tadayoshi Nakamura for Men-Bei Ramen/Thomas Biagini

Request: **Use Permit** to allow beer and wine service (Type 41 ABC License) in an existing restaurant

CEQA Determination: Categorically Exempt per CEQA Guidelines 15301 (Class 1-Existing Facilities)

Project Planner: Steve Le, Planning Intern

Staff Recommendation: Approve, subject to conditions

Motion/Action: The Commission motioned to approve the remainder of the consent calendar unanimously (7-0-0-0).

*******END OF CONSENT CALENDAR*******

8.A. File: Zoning Code Update

Location: City-wide

Applicant: City of Santa Clara

Request: Introduction to the City of Santa Clara's Zoning Code Update. The City's consultant PMC will give an overview of the update process and will review the existing Code.

CEQA Determination: Reuse of the previously adopted Environmental Impact Report for the 2010-2035 General Plan

Project Planner: Jeff Schwilk, Associate Planner

Staff Recommendation: Information only

Notice: The notice of public hearing for Item 8.A. was posted and mailed to property owners within 300 feet of the project site.

Discussion: Steve Lynch introduced the representatives from the City's consultant, PMC, who gave a brief presentation on the Zoning Code Update. Highlights of the presentative included an overview of zoning, the project timeline, general plan directives, and key elements of the update.

The Commission inquired about electric vehicle charging and car-share programs being represented in the zoning code update. The Commission also encouraged the new zoning code to minimize the use of Planned Development (PD) zoning through more modern zoning regulations. It was also clarified that the zoning code would not address historic preservation districts.

Motion/Action: The Commission noted and filed the report.

8.B. File: **PLN2012-09540, PLN2012-09542, and CEQ2012-01149**
Location: 3610 and 3700 El Camino Real, two lots totaling 12.59 acres at the southwest corner of El Camino Real and Lawrence Expressway, (APNs: 313-06-002 & 004); property is zoned CC (Community Commercial)
Applicant/Owner: Essex Property Trust/Santa Clara Square, LLC
Request: **Rezone** from Community Commercial (CC) to PD (Planned Development) for Mixed Use development with 476 residential apartment units, and up 86,000 square feet of retail and office space; **Tentative Subdivision Map and Certify an Environmental Impact Report (EIR)** for the project
CEQA Determination: Environmental Impact Report (EIR)
Project Planners: Gloria Sciara, AICP, Development Review Officer
Payal Bhagat, Assistant Planner II
Staff Recommendation: **Recommend City Council Approval, subject to conditions**

Notice: The notice of public hearing for Item 8.B. was posted and mailed to property owners within 500 feet of the project site. Commissioner Stattenfield abstained and recused himself for this item.

Discussion: Gloria Sciara gave a brief presentation on the project and introduced the City's environmental consultant for the project who discussed the scope and content of the Environmental Impact Report (EIR).

The Commission inquired about the traffic calming measures. It was clarified that the measures are required as a condition of approval and are designed to address the realized impacts and allow for improvements and/or corrections to the original traffic plan if needed.

The Commission inquired about the Tentative Subdivision Map and it was explained that the map is being requested by the applicant for financial and functional purposes in the actual development of the project.

The Commission confirmed that there is a construction management plan to reduce construction activity impacts on the existing neighbors.

John Eudy, applicant, introduced his architect, Russ Mayler. Mr. Eudy gave an overview of development projects from Essex Property Trust and highlighted the project schedule, history, and collaborative efforts with the City and public to come up with the project being presented tonight. Mr. Mayler noted the design changes to the project since the original proposal, including amenities, parking garages, open space, landscaping, roof line, and site circulation.

The Commission inquired if there was a plan to be able to add additional parking if the need were to arise. The applicant indicated that a lift parking system could be considered to add more parking spaces.

The Commission expressed concern for the privacy impacts on existing neighbors at the rear of the property due to the height of the building and potential lack of sufficient landscape screening.

The Public Hearing was opened.

Doug Hosking, neighboring resident, stated that the developer has tried to address concerns and improved plans; however, he still had major concerns about the impact on traffic and pedestrian safety.

A neighboring resident stated that he was concerned with the height of the building and felt the tree shading would not provide enough privacy.

Judy Crates, neighboring resident, stated that the project is stunning and will be an improvement to neighborhood; however, improvements to address privacy concerns, such as larger tree replacements, are still needed.

Keith Stattenfield, neighboring resident, stated that the redesigned project was a great improvement over the last proposal; however, the project still has major issues with two traffic intersections that will have a lower Level of Service (LOS) grade and no Fair Share contributions from the applicant for roadway improvements. Mr. Stattenfield added that the traffic and pedestrian flow needs to be improved and that the residential component of the project will have a lot of impacts on parking, safety, and schools.

Carlos Rosas, neighboring resident, stated that public safety includes pedestrian and bicyclist safety, as we all have to share the road, and this project doesn't promote that concept.

Myron Von Raesfeld, local resident, stated that the project is a great mixture of commercial and residential that helps the jobs housing imbalance in the City. Mr. Von Raesfeld added that the project location is ideal for this type of density and that the layout of the combined retail and residential is well thought-out and beneficial for both the residents and City.

Ed Goacka, neighboring resident, stated that the traffic and parking impacts will also affect the City of Sunnyvale residents.

In a rebuttal statement the applicant stated that the shadow study showed that the sun was never blocked as a result of the four-story building. The traffic consultant noted that some of the traffic improvements that can be done are in the City of Sunnyvale, which limits the ability to implement and/or require them through the City of Santa Clara approval process.

The Commission discussed various possibilities to address traffic concerns including adding lanes to Lawrence Expressway, a pedestrian overpass, and signalized crosswalks. It was noted that many options were considered in the preparation of the EIR and traffic analysis and that most measures were considered either infeasible or non-beneficial. The Commission noted that a signalized crosswalk would help pedestrian safety and benefit the project. The Commission expressed additional concern for the implications the Bus Rapid Transit (BRT) system would have on the area's traffic when compounded with this project.

At 11:00pm a motion was carried to extend the Planning Commission meeting to complete the Public Hearing for this item (5-0-1-1, Champeny absent, Stattenfield abstaining).

The Public Hearing was closed.

The Commission requested that the applicant utilize larger trees to enhance the privacy screening and that the parking structure be designed in such a way that could accommodate additional parking in the future.

The Commission confirmed that the project was exempt from the new Park Impact fees as the project was deemed complete by the Project Clearance Committee prior to adoption of those fees. It was also noted that this project is exempt from the Below Market Rate (BMR) program as it is rental units and not for-sale units. The Commission further discussed the concerns about the traffic impacts from the project. It was suggested that adding a right-turn-only on Halford Avenue would help the traffic flow. Staff agreed the request would be beneficial and reviewed additional elements of the Transportation Demand Management (TDM) program.

The Commission expressed overall appreciation for the project and felt it would be an improvement to the area and City. It was noted that most schools in Santa Clara are at capacity and that impacts from this project and other residential projects are significant and need to be addressed.

Motion/Action: The Commission motioned to adopt a resolution to recommend that the City Council certify the Environmental Impact Report for the project located at 3610 and 3700 El Camino Real (5-0-1-1, Champeny absent, Stattenfield abstaining).

Motion/Action: The Commission motioned to adopt a resolution to recommend that the City Council approve the rezone from Community Commercial (CC) to Planned Development (PD) for the project located at 3610 and 3700 El Camino Real (5-0-1-1, Champeny absent, Stattenfield abstaining) with the following added conditions:

- 1) Implement a right-turn-only restriction from the project site onto Halford Avenue,
- 2) Install a signalized crosswalk at Halford Avenue and Burnley Way,
- 3) Plant larger, mature specimen trees at the back of the property to enhance privacy screening between the project and existing neighborhood, and
- 4) Conduct a six-month review of traffic and parking after the project is completed and occupied.

Motion/Action: The Commission motioned to adopt a resolution to recommend that the City Council approve the Tentative Subdivision Map for the project located at 3610 and 3700 El Camino Real (5-0-1-1, Champeny absent, Stattenfield abstaining).

8.C. File:	PLN2014-10456
Location:	297 Bel Ayre Drive, a 20,131 square foot parcel located mid-block along Bel Ayre Drive, (APN: 303-21-040); property is zoned R1-6L (Single-Family Residential).
Applicant/Owner:	John Faylor
Request:	Rezone from Single-Family Residential (R1-6L) to Planned Development (PD) and Tentative Parcel Map to allow the construction of two single-family residential homes on two lots and a second living unit
CEQA Determination:	Categorically exempt per Section 15303, New Construction, of the California Environmental Quality Act (CEQA)
Project Planner:	Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation:	Recommend City Council Denial

Notice: The notice of public hearing for Item 8.C. was posted and mailed to property owners within 300 feet of the project site.

Discussion: Shaun Lacey gave a brief presentation on the project. Commissioners Champeny, Costa, Kelly, Chahal, and Sweeney disclosed meeting with the applicant.

The Commission inquired about design standards specific to flag lots, to which staff confirmed there are none. Staff clarified that a PD rezone was necessary for the subdivision due to the shape of the lot not allowing the divided properties to meet the minimum dimensions of the single-family zoning standards. The Commission confirmed the project, if approved, would go through the Architectural Review process as part of the Conditions of Approval.

John Faylor, applicant, introduced Michelle Miner, project architect, who gave a brief overview of the project, highlighting the orientation of the lots, project design, and comparison of the proposed homes to nearby existing homes.

The Commission confirmed that there are eight dedicated parking spaces for the two houses and that the driveway may be used as additional parking as well. The Public Hearing was opened.

Marcella Miranda, neighboring resident, urged the Commission to protect the neighborhood, and opposed the rezone to Planned Development (PD). Ms. Miranda expressed concern that the property would be flipped and not utilized as promised.

Brian Gregory read a letter from the neighbor of the property stating that they support the proposal and would enjoy having two beautiful homes next door.

Darrel Von Raesfeld, local resident, stated that the design is great for such a unique parcel and utilizes the available space. Mr. Von Raesfeld added that it would be nice if the zoning could be kept as R1-6L, but that PD zoning is not bad.

Kevin Moore, local resident, stated that many residents from Santa Clara have moved away and that the neighborhood has been through some tough times. Mr. Moore noted that adding two nice homes to the neighborhood would be a great benefit to the neighborhood.

Tino Gallo, local resident, stated that the property is currently full of weeds and the proposal would provide two beautiful homes. Mr. Gallo added that the applicant is a trust-worthy person who will be great neighbor.

Craig Runway, neighboring resident, stated that while the plans are well thought-out, the neighborhood is meant to be single family and the proposal overdevelops the lot.

Jerry Smith, local resident, stated that the lot type does not work and that is why it has been vacant all these years. Mr. Smith added that the proposal utilizes the parcel and enhances the beauty of neighborhood.

Pat Miller, local resident, stated that the applicant's projects have all been thoughtfully designed, professional, on time, on budget, and successful and urged the Commission to approve the proposal.

Mike O'Halloran, neighboring resident, stated that is in favor of approval of the project because the lot size is abnormally large and can support the two homes while providing ample parking.

Jane Madelitch, neighboring resident, stated that she is opposed to splitting the lot as it would be out of character with the neighborhood. Ms. Madelitch added that the home will stick out farther than neighboring homes and that old, mature trees will be lost with this proposal.

Amy Morminister, local resident, commended the design of the proposal and noted that the lot shape and size makes it difficult to come up with such a quality proposal.

Tracey Johnson, neighboring resident, stated that the original home on the lot was completely in line with the neighbors and fit in with the neighborhood's General Plan and Zoning designations. Approval of the project would be bad for the neighborhood.

Robert Almasetti, local resident, stated that the project site is in a neighborhood that used to be great but died away. Mr. Almasetti noted that proposals like this can revitalize the neighborhood and that the direct neighbors to the project site are in favor of the proposal.

Myron Von Raesfeld, local resident, stated that the City has a housing-to-jobs imbalance and that the lot size would be underutilized as a single-family home. Mr. Von Raesfeld noted that if a modest proposal like this isn't developed, it's possible that a larger development may come in

its place some years down the road and that the current proposal takes an eyesore and turns it into something beautiful.

Michael Kohl, local resident, stated that Michelle Miner is a great designer and did a great job with the architecture on the current proposal.

Bob Lin, neighboring resident, stated that Santa Clara has many large lots and that allowing this density will encourage everyone to submit similar proposals which will destroy the integrity of our neighborhoods.

Joe Goshey, neighboring resident, stated that he has concerns about the parking and that the applicant could always sell the property to a less desirable neighbor.

Randy Wong, neighboring resident, stated that he is opposed to the project because he bought his home assuming the neighborhood would stay single-family and this proposal would set an unfavorable precedent.

Pete Williamson, neighboring resident, stated that he opposes the proposal and does not want to see the lot subdivided. Mr. Williamson added that he would be in favor of a large home, but the current proposal has two fairly large homes with not enough parking.

David LeBarron, local resident, stated that the proposal is a thoughtful plan that is in keeping with the single-family design spirit. Mr. LeBarron added that the proposal offers a reasonable design with ample parking and will be a vast improvement to the vacant lot and neighborhood.

Stu Fiedelman, local resident, stated that he supports the project as it is a great use of a large lot.

Randy Strong, local resident, stated that this is a great project and Santa Clara needs more projects like it.

Maria Coughlin, neighboring resident, stated that the majority of people speaking on this item are real estate developers, not residents of the neighborhood, and therefore do not have a sense of what is best for the neighborhood. Ms. Coughlin emphasized that the neighborhood is full of single family homes and this proposal would put three structures on the parcel and would take away from the character of the neighborhood.

Todd Tomlitz, local resident, stated that the demographics of Santa Clara are changing and that this proposal represents a good change.

Dave Albertalliet, neighboring resident, stated that he bought his home in the neighborhood for the large lots; however, everything changes and the proposal looks okay. Mr. Albertalliet added that he is not in favor of the mother in law unit or the setbacks of the design and confirmed that the project will be reviewed at the Architectural Committee.

In a rebuttal statement, Ms. Miner clarified that the front home is generally in-line with the neighboring homes on either side with a less than 10-foot difference. Ms. Miner added that the driveway is wide enough to accommodate turn-around space so that vehicles do not have to back-out the complete length of the driveway. It was further noted that this lot is more than double the size of the average lot size in the neighborhood, and as such, a subdivision is a reasonable request.

The Public Hearing was closed.

The Commission clarified that the proposal consists of two single-family homes and one accessory unit and that the entire project will be subsequently reviewed by the Architectural

Committee. The Commission noted that one of the direct neighbors who had previously opposed the project submitted a letter that rescinded the opposition and instead supported the project. It was also noted that the landscape plan, including both old and new landscape, would be part of the Architectural Review process.

The Commission deliberated on the project, noting that the lot size is unique in both size and shape and could support a higher density proposal than what has been presented. The Commission sympathized with concern that placing two homes on the property would compromise the neighborhood integrity; however, expressed appreciation for the design's ability to maintain the single-family neighborhood look-and-feel.

Motion/Action: The Commission motioned to direct staff to prepare a resolution to recommend that the Council approve the rezone from R1-6L (Single Family Residential) to PD (Planned Development) unanimously (7-0-0-0). *[Note: This resolution will be brought forward for adoption at the January 14, 2015 Planning Commission meeting]*

8.D. File: **PLN2014-10320**
Location: 1701 Lawrence Road, a .52 acre parcel at the northeast corner of Lawrence Road and Warburton Avenue, (APN: 220-040040); property is zoned Agriculture (A)
Applicant/Owner: Antony Joma, Joma Studio Architects/Ali Mozaffari
Request: **General Plan Amendment (#82)** from Medium Density Residential to Low Density Residential; Rezoning from A-Agriculture to PD-Planned Development, and a **Tentative Subdivision Map**; to allow the development of a nine unit attached townhome project and related site improvements. The proposal includes demolition of two existing commercial structures and one residential structure onsite.
CEQA Determination: Categorical Exemption per Section 15322, Infill Development
Project Planner: Debby Fernandez, Associate Planner
Staff Recommendation: **Recommend City Council Approval, subject to conditions**

Notice: The notice of public hearing for Item 8.D. was posted and mailed to property owners within 300 feet of the project site.

Discussion: As the meeting had reached 11:00pm prior to hearing this Agenda item, the Public Hearing was opened and continued to the next Planning Commission meeting.

Motion/Action: The Commission motioned to continue the Public Hearing to January 14, 2015 (6-0-1-0, Champeny absent).

9. OTHER BUSINESS

9.A. Commission Comment for the Committee's Report back to Council on Draft Neighborhood Protection Ordinance (30-minute maximum)

As the meeting had reached 11:00pm prior to hearing this Agenda item, the item was continued to the next Planning Commission meeting.

9.B. Commission Procedures and Staff Communications

- i. Announcements/Other Items
- ii. Report of the Director of Planning and Inspection
 - City Council Actions

iii. Commission/Board Liaison and Committee Reports

- Architectural Committee: Commissioners Stattenfield and Chahal
- Station Area Plan: Commissioner Champeny

iv. Commission Activities

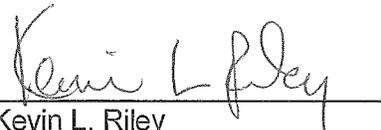
- Commissioner Travel and Training Reports; Requests to Attend Training

v. Upcoming agenda items

10. ADJOURNMENT

The meeting adjourned at 11:51 p.m. The next regular Planning Commission meeting will be held on Wednesday, January 14, 2015, at 7:00 p.m.

Prepared by: 
Megan Valenzuela
Office Specialist IV

Approved: 
Kevin L. Riley
Director of Planning & Inspection

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 8A

City of Santa Clara, California



Date: February 3, 2015

To: City Manager for Council Action

From: Director of Planning and Inspection

Subject: Public Hearing for the Project Located at 1075 Pomeroy Avenue: Rezone from Low Density Multiple-Family Residential (R3-18D) to Planned Development (PD), Subdivision Map for Five Lots [PLN2013-10129]

EXECUTIVE SUMMARY:

This is a Rezone and Tentative Subdivision Map application to allow individual ownership and sale of five, two-story homes at a proposed density of 17 dwelling units per acre at the subject property. The site is currently occupied by a single-family residential structure that will be removed as part of the project. The project also re-landscapes the property.

The project was reviewed at the August 20, 2014 Planning Commission meeting. The project applicant was present for the meeting and presented the request to the Commission. A number of residents from nearby properties spoke at the meeting and expressed concerns about the proposed density, traffic, parking, landscape and privacy impacts associated with the project. Following a discussion, the Commission voted 4-2 to recommend denial of the proposed rezone, and voted 4-2 to recommend denial of the tentative map. The basis for the Commission's decision was that the proposed project would be inconsistent with the surrounding residential neighborhood, finding that the proposed lot areas, lot widths, front and side yards would all be insufficient. The Commission further determined that the applicant could potentially redesign the project with fewer units and still comply with the density range within the General Plan land use designation (8 to 18 dwelling units per acre) without rezoning the property. The meeting minutes and staff report from the August 20, 2014 Planning Commission meeting are attached for reference. Staff also received written correspondence from residents opposing the project, which is also attached for reference.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

Denying the project will still allow the City to achieve its housing goals by providing a variety of housing types and sizes through the administration of the existing R3-18D zoning regulations. The R3-18D zoning regulations also provide housing opportunities on the property within an acceptable density range outlined by the General Plan. Alternatively, should the Council decide to approve the Rezone and Tentative Subdivision Map application, the project would be subject to the conditions of approval attached for reference.

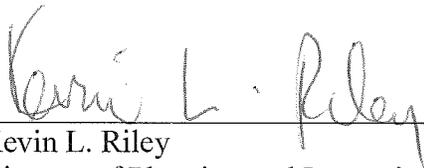
ECONOMIC/FISCAL IMPACT:

There is no cost to the City other than administrative staff time and expense.

RECOMMENDATION:

That the Council adopt resolutions for the project located at 1075 Pomeroy Avenue to:

1. Deny a Rezone from Low Density Multiple-Family Residential (R3-18D) to Planned Development (PD), and
2. Deny a Tentative Subdivision Map for Five Residential Lots.



Kevin L. Riley
Director of Planning and Inspection

APPROVED:



67 Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) ***City Council Rezone Resolution***
- 2) ***City Council Tentative Map Resolution***
- 3) ***Conditions of Approval***
- 4) ***Planning Commission Meeting Minutes Dated August 20, 2014***
- 5) ***Planning Commission Staff Report Dated August 20, 2014***
- 6) ***Correspondence***
- 7) ***Development Plans***

RESOLUTION NO. _____

**A RESOLUTION OF THE CITY OF SANTA CLARA,
CALIFORNIA, DENYING A PROPOSED REZONING OF
THE PROPERTY LOCATED AT 1075 POMEROY
AVENUE, SANTA CLARA, FROM LOW DENSITY
MULTIPLE DWELLING RESIDENTIAL (R3-18D) TO
PLANNED DEVELOPMENT (PD)**

PLN2013-10129 (Rezone and Tentative Subdivision Map)

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, on November 19, 2013, Dory Marhamat (“Applicant”) filed an application to rezone property totaling 12,383 square feet, located at 1075 Pomeroy Avenue (APN 290-69-079) in the City of Santa Clara (“Project Site”);

WHEREAS, the Project Site is currently zoned as Low Density Multiple Dwelling (R3-18D);

WHEREAS, the General Plan land use designation is Low Density Residential;

WHEREAS, in order to effectuate the development application and its change in use, the Applicant proposes to rezone the Project Site to Planned Development (PD) to allow construction of a five unit residential project with 12 vehicle spaces, outdoor space, landscaping and site improvements on the Project Site, as shown on the Development Plans attached hereto and incorporated herein by reference;

WHEREAS, pursuant to SCCC Sections 18.112.030 and 18.112.040, at its August 20, 2014 meeting, the Planning Commission conducted a public hearing and voted to recommend that the City Council deny the requested rezoning; and

WHEREAS, on January 28, 2015, the City published notice of a public hearing in the *Santa Clara Weekly*, a newspaper of general circulation;

WHEREAS, in compliance with SCCC Section 18.112.060, on January 30, 2015, the City posted notice of the public hearing at three locations within three hundred (300) feet of the Project Site;

WHEREAS, notices of the public hearing on the proposed rezoning were also mailed to all property owners located within 300 feet of the Project Site, according to the most recent assessor's roll; and

WHEREAS, on February 10, 2015, the City Council conducted a public hearing to consider the proposed rezoning. At the hearing, the City Council considered the Planning Commission's recommendation, as well as inviting and considering any and all verbal and written testimony offered in favor of and in opposition to the proposed rezoning.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. The City Council hereby finds that the above Recitals are true and correct and by this reference makes them part hereof.
2. Pursuant to SCCC Section 18.112.010, the City Council determines that the following findings exist to deny the rezoning:
 - A. The existing zoning for the Project Site is not inappropriate or inequitable, in that the current zoning allows a variety of residential uses. Moreover, the current zoning does not limit residential development to a density range less than the desired range outlined in the General Plan.
 - B. The proposed zone change will not protect or improve the existing character and stability of the area in question, in that the proposed zoning would allow for the construction of

five houses in a size and configuration that is incompatible with the surrounding neighborhood, including insufficient lot areas, lot widths, front yards and side yards.

3. That, based on the findings set forth in this Resolution, the evidence in the City Staff Reports, and all evidence presented at the hearing, the City Council hereby denies the request to rezone the Project Site as set forth herein.

4. Constitutionality, severability. If any section, subsection, sentence, clause, phrase, or word of this resolution is for any reason held by a court of competent jurisdiction to be unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of the resolution. The City of Santa Clara, California, hereby declares that it would have passed this resolution and each section, subsection, sentence, clause, phrase, and word thereof, irrespective of the fact that any one or more section(s), subsection(s), sentence(s), clause(s), phrase(s), or word(s) be declared invalid.

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5. Effective date. This resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE ___ DAY OF _____, 2015, BY THE FOLLOWING VOTE:

AYES:	COUNCILORS:
NOES:	COUNCILORS:
ABSENT:	COUNCILORS:
ABSTAINED:	COUNCILORS:

ATTEST:

 ROD DIRIDON, JR.
 CITY CLERK
 CITY OF SANTA CLARA

Attachments Incorporated by Reference:
 1. Development Plans

RESOLUTION NO. _____

**A RESOLUTION OF THE CITY OF SANTA CLARA,
CALIFORNIA, TO DENY A TENTATIVE SUBDIVISION
MAP AT 1075 POMEROY AVENUE, SANTA CLARA, FOR
FIVE RESIDENTIAL LOTS**

PLN2013-10129 (Rezone and Tentative Subdivision Map)

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, on November 19, 2013, Dory Marhamat (“Applicant”) made an application for a Tentative Subdivision Map on a 12,383 square-foot site located at 1075 Pomeroy Avenue, Santa Clara, California (“Project”);

WHEREAS, pursuant to Section 17.05.210 of the Code of the City of Santa Clara (“SCCC”), a tentative subdivision map shall be required for all divisions of land into five or more parcels;

WHEREAS, on August 20, 2014, the Planning Commission reviewed the application and voted to recommend denial of the proposed tentative map to the City Council in conformance with Section 17.05.300 of the SCCC;

WHEREAS, the proposal is to subdivide the project into five parcels as shown on Exhibit “Tentative Map”;

WHEREAS, on January 28, 2015, in compliance with Government Code Section 66451.3, the City published notice of the public hearing on the proposed Tentative Map in the *Santa Clara Weekly*, a newspaper of general circulation in the City;

WHEREAS, on January 30, 2015, notices of the public hearing on the Tentative Map were posted in three public places and mailed to all property owners within three hundred (300) feet of the site shown on the proposed Tentative Map; and

WHEREAS, the City Council has reviewed the Tentative Map and conducted a public hearing, at which time all interested persons were given an opportunity to provide testimony and the City Council considered all verbal and written evidence.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. That this Resolution incorporates, and by this reference makes a part hereof, that certain Tentative Map, attached hereto as Exhibit “Tentative Map”.

2. Tentative Map Findings. Pursuant to California Government Code Sections 66426 and 66428 and SCCC Section 17.05.300(h), the City Council finds and determines that:

A. The Tentative Map would not be consistent with the General Plan and all applicable provisions of the City Code, in that the tentative map would have subdivided the 12,383-square-foot project site into five parcels in a size and configuration that is incompatible with the surrounding neighborhood and the R3-18D zoning designation, including but not limited to insufficient lot areas, lot widths, front yards and side yards.

B. The site is physically not suitable for the proposed density of development, in that the project as proposed would place five houses onto parcels with inadequate setbacks and lot areas, and would provide insufficient parking to serve the development.

3. Based on the findings set forth in this Resolution and the evidence in the Agenda Report and such other evidence as received at the public hearings on this matter before the City Council, the City Council hereby denies the Tentative Map, substantially in the form on file as shown in Exhibit “Tentative Map”.

4. Constitutionality, severability. If any section, subsection, sentence, clause, phrase, or word of this resolution is for any reason held by a court of competent jurisdiction to be unconstitutional or invalid for any reason, such decision shall not affect the validity of the

remaining portions of the resolution. The City of Santa Clara, California, hereby declares that it would have passed this resolution and each section, subsection, sentence, clause, phrase, and word thereof, irrespective of the fact that any one or more section(s), subsection(s), sentence(s), clause(s), phrase(s), or word(s) be declared invalid.

5. Effective date. This resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE ____ DAY OF _____, 2015, BY THE FOLLOWING VOTE:

AYES: COUNCILORS:

NOES: COUNCILORS:

ABSENT: COUNCILORS:

ABSTAINED: COUNCILORS:

ATTEST: _____
ROD DIRIDON, JR.
CITY CLERK
CITY OF SANTA CLARA

Attachments Incorporated by Reference:
1. Exhibit "Tentative Map"

PROJECT CONDITIONS OF APPROVAL

In addition to complying with all applicable codes, regulations, ordinances and resolutions, the following conditions of approval are recommended:

GENERAL

- G1. If relocation of an existing public facility becomes necessary due to a conflict with the developer's new improvements, then the cost of said relocation shall be borne by the developer.
- G2. The Developer agrees to defend and indemnify and hold City, its officers, agents, employees, officials and representatives free and harmless from and against any and all claims, losses, damages, attorney's fees, injuries, costs, and liabilities arising from any suit for damages or for equitable or injunctive relief which is filed by a third party against the City by reason of its approval of Developer's project.

PLANNING AND BUILDING INSPECTION

- P1. If the developer chooses to apply for building permit review concurrent with the entitlement process, they are allowed to do so at the developer's risk. The City shall not be responsible for any funds lost in processing of the building permit package, should the project change during the planning entitlement process.
- P2. Obtain required permits and inspections from the Building Official and comply with the conditions thereof.
- P3. Final design review shall be referred to the Architectural Review Committee. Submit plans for final architectural review to the Planning Division and obtain architectural approval prior to issuance of building permits. Said plans shall include, but are not be limited to: site plans, floor plans, building elevations, landscaping, and lighting. Landscaping installation shall meet City water conservation criteria in a manner acceptable to the City standards.
- P4. The transformer shall be screened and landscaped per the direction of the Planning Division. The location of the screen shall meet the Electric Department's standards.
- P5. Developer is responsible for collection and pick-up of all trash and debris on-site and adjacent public right-of-way.
- P6. Incorporate Best Management Practices (BMPs) into construction plans and incorporate post construction water runoff measures into project plans in accordance with the City's Urban Runoff Pollution Prevention Program standards prior to the issuance of permits. Proposed BMPs shall be submitted to and thereafter reviewed and approved by the Planning Division and the Building Inspection Division for incorporation into construction drawings and specifications.
- P7. All exterior lighting shall be shielded as needed to prevent spillover and glare effects on adjacent properties and users and shall apply with all applicable CLUP requirements.
- P8. Prior to the issuance of building permit, the Developer shall submit to the Planning Division all draft covenants, conditions and restrictions (CC&Rs) and/or shared-access agreements, for the purpose of record keeping. Such agreements shall ensure consistent maintenance of all landscaped areas and shared access between adjacent parcels.
- P9. The Developer will employ all reasonable efforts such that the project will be built to, and certified in, accordance with Green Building Guidelines.

“Build It Green” is a nationally acceptable benchmark for the design, construction, and operation of high performance green buildings.

ENGINEERING

- E1. Obtain site clearance through Engineering Department prior to issuance of Building Permit. Site clearance will require payment of applicable development fees including the reimbursement for El Camino Real widening improvements prior to issuance of the Building Permit. Other requirements may be identified for compliance during the site clearance process. Contact Engineering Department at (408) 615-3000 for further information.
- E2. All work within the public right-of-way and/or public easement, which is to be performed by the Developer/Owner, the general contractor, and all subcontractors shall be included within a **Single Encroachment Permit** issued by the City Engineering Department. Issuance of the Encroachment Permit and payment of all appropriate fees shall be completed prior to commencement of work, and all work under the permit shall be completed prior to issuance of occupancy permit.
- E3. Developer to provide a complete storm drain study for the 10-year and 100-year storm events. The grading plans shall include the overland release for the 100-year storm event and any localized flooding areas. System improvements, if needed, will be at developer’s expense.
- E4. Submit public improvement plans prepared in accordance with City Engineering Department procedures which provide for the installation of public improvements. Plans shall be prepared by a Registered Civil Engineer and approved by the City Engineer prior to approval and recordation of final map and/or issuance of building permits.
- E5. Manhole shall be provided for proposed storm drain lateral connection to the public storm drain main.
- E6. Use concrete saddle per City standard detail MI-3 or MI-4 if utility crossing clearance is less than 12”.
- E7. Storm drain lateral shall have a full flow velocity between 2 feet per second and 10 feet per second.
- E8. Driveway on property’s Pomeroy Avenue frontage shall be per City Standard Detail ST-4 with 24’ minimum width.
- E9. Developer is responsible for cost of relocation or modification of any public facility necessary to accommodate subject development.
- E10. Damaged curb, gutter, and sidewalk within the public right-of-way along property’s frontage shall be repaired or replaced (to the nearest score mark) in a manner acceptable to the City Engineer or his designee. The extents of said repair or replacement within the property frontage shall be at the discretion of the City Engineer or his designee.
- E11. Existing non-standard or non-ADA compliant frontage improvements shall be replaced with current City standard frontage improvements as directed by the City Engineer or his designee.
- E12. Unused driveways in the public right-of-way shall be replaced with City standard curb, gutter, and sidewalk.
- E13. Show and comply with City’s driveway vision triangle requirements at all driveways and City’s intersection visibility obstruction clearance requirements. No trees and/or

- structures obstructing drivers' view are allowed in the vision triangle & visibility obstruction areas. Contact Traffic Engineering at (408) 615-3000 for further information.
- E14. On-street public parking shall not be used to count toward Developer's parking requirement.
 - E15. Provide root barrier for existing and new street trees within five (5') to ten (10') feet of sidewalk or utilities. Root barriers shall be 12' long x 2' deep, centered on trees, and placed away from the trees (closer to the back of walk).
 - E16. File and record subdivision map to create parcels for proposed development and pay all appropriate fee(s) prior to Building Permit issuance.
 - E17. Provide 1 Class II bicycle rack spaces for guests.
 - E18. After City Council approval of Tentative Tract Map, submit 10 copies of Final Tract Map, prepared by a Licensed Land Surveyor or a Registered Civil Engineer with Land Surveyor privileges to the Engineering Department. The submittal shall include a title report, closure calculations, and all appropriate fees. Final Tract Map must be approved by City Council and recorded by developer prior to building permit issuance.
 - E19. Record subdivision map to create parcels for proposed development and pay all appropriate fee(s) prior to Building Permit issuance.

ELECTRICAL

- EL1. Prior to submitting any project for Electric Department review, applicant shall provide a site plan showing all existing utilities, structures, easements and trees. Applicant shall also include a "Load Survey" form showing all current and proposed electric loads. A new customer with a load of 500KVA or greater or 100 residential units will have to fill out a "Service Investigation Form" and submit this form to the Electric Planning Department for review by the Electric Planning Engineer. Silicon Valley Power will do exact design of required substructures after plans are submitted for building permits.
- EL2. The Developer shall provide and install electric facilities per Santa Clara City Code chapter 17.15.210.
- EL3. Electric service shall be underground. See Electric Department Rules and Regulations for available services.
- EL4. Installation of underground facilities shall be in accordance with City of Santa Clara Electric Department standard UG-1000, latest version, and Santa Clara City Code chapter 17.15.050.
- EL5. Underground service entrance conduits and conductors shall be "privately" owned, maintained, and installed per City Building Inspection Division Codes. Electric meters and main disconnects shall be installed per Silicon Valley Power Standard MS-G7, Rev. 2.
- EL6. The developer shall grant to the City, without cost, all easements and/or right of way necessary for serving the property of the developer and for the installation of utilities (Santa Clara City Code chapter 17.15.110).
- EL7. All electric meters and services disconnects shall be grouped at one location, outside of the building or in a utility room accessible directly from the outside. A double hasp locking arrangement shall be provided on the main switchboard door(s). Utility room door(s) shall have a double hasp locking arrangement or a lock box shall be provided. Utility room door(s) shall not be alarmed.

- EL8. If transformer pads are required, City Electric Department requires an area of 17' x 16'-2", which is clear of all utilities, trees, walls, etc. This area includes a 5'-0" area away from the actual transformer pad. This area in front of the transformer may be reduced from a 8'-0" apron to a 3'-0", providing the apron is back of a 5'-0" min. wide sidewalk. Transformer pad must be a minimum of 10'-0 from all doors and windows, and shall be located next to a level, drivable area that will support a large crane or truck.
- EL9. All trees, existing and proposed, shall be a minimum of five (5) feet from any existing or proposed Electric Department facilities. Existing trees in conflict will have to be removed. Trees shall not be planted in PUE's or electric easements.
- EL10. Any relocation of existing electric facilities shall be at Developer's expense.
- EL11. Electric Load Increase fees may be applicable.
- EL12. The developer shall provide the City, in accordance with current City standards and specifications, all trenching, backfill, resurfacing, landscaping, conduit, junction boxes, vaults, street light foundations, equipment pads and subsurface housings required for power distribution, street lighting, and signal communication systems, as required by the City in the development of frontage and on-site property. Upon completion of improvements satisfactory to the City, the City shall accept the work. Developer shall further install at his cost the service facilities, consisting of service wires, cables, conductors, and associated equipment necessary to connect a customer to the electrical supply system of and by the City. After completion of the facilities installed by developer, the City shall furnish and install all cable, switches, street lighting poles, luminaries, transformers, meters, and other equipment that it deems necessary for the betterment of the system (Santa Clara City Code chapter 17.15.210 (2)).
- EL13. Electrical improvements (including underground electrical conduits along frontage of properties) may be required if any single non-residential private improvement valued at \$200,000 or more or any series of non-residential private improvements made within a three-year period valued at \$200,000 or more (Santa Clara City Code Title 17 Appendix A (Table III)).
- EL14. Non-Utility Generator equipment shall not operate in parallel with the electric utility, unless approved and reviewed by the Electric Engineering Division. All switching operations shall be "Open-Transition-Mode", unless specifically authorized by SVP Electric Engineering Division. A Generating Facility Interconnection Application must be submitted with building permit plans. Review process may take several months depending on size and type of generator. No interconnection of a generation facility with SVP is allowed without written authorization from SVP Electric Engineering Division.
- EL15. Applicant is advised to contact SVP (CSC Electric Department) to obtain specific design and utility requirements that are required for building permit review/approval submittal. Please provide a site plan to Leonard Buttitta at 408-261-5469 to facilitate plan review.

WATER

- W1. Prior to issuance of Building Permits, the applicant shall submit plans that show required fire hydrants as part of a private system to the satisfaction of the Director of Water & Sewer Utilities.
- W2. Prior to the issuance of Building or Grading Permits, the applicant must indicate the disposition of all existing water services on the plans. The applicant must properly

- abandon all existing water services on the property that will not be used per Water & Sewer Utilities standards.
- W3. Upon completion of construction and prior to the City's issuance of a Certificate of Occupancy, the applicant shall provide "as-built" drawings of the on-site public water utility infrastructure prepared by a registered civil engineer to the satisfaction of the Director of Water & Sewer Utilities.
 - W4. Approved backflow prevention device(s) are required on all potable water services. Prior to City's issuance of Building Permits, the applicant shall submit plans showing the location of the approved backflow prevention device(s) to the satisfaction of the Director of Water & Sewer Utilities.
 - W5. Prior to issuance of Building Permits or commencement of site grading or construction, the applicant shall ensure that the existing water well or wells on the site have been sealed in accordance with the standards promulgated by Santa Clara Valley Water District and submit a copy of the Destruction Permit issued by District, indicating that the well or wells have been properly sealed, to the satisfaction of the Director of Water & Sewer Utilities.
 - W6. Prior to issuance of Building Permits, the applicant shall submit plans for independent water service to each individual parcel connected to a public main in the public right-of-way to the satisfaction of the Director of Water & Sewer Utilities. Additionally, different types of water use (domestic, irrigation, fire) shall be served by individual water services.
 - W7. Applicant is advised that building height may require pumping to maintain adequate pressure for fire and domestic water. Prior to issuance of Building Permits, submit plans providing for private water service facilities as necessary to provide adequate water pressure for fire flow and domestic water needs to the satisfaction of the Director of Water & Sewer Utilities.
 - W8. The applicant shall bear the cost of any relocation of existing Water Department facilities required for project construction to the satisfaction of the Director of Water and Sewer Utilities.
 - W9. Prior to issuance of Building Permits, the applicant shall submit plans showing a clean out at the property line for each sanitary sewer lateral to the satisfaction of the Director of the Water & Sewer Utilities.
 - W10. If existing water services are not used, then the water service lateral must be abandoned at the main as per City std details.
 - W11. Two water meters per service lateral must be designed for the proposed new development.
 - W12. The proposed water meters must be in public right-of-way and if not, they can be on private property within the water easements.

FIRE

Santa Clara Municipal Fire and Environmental Code:

- F1. Refer to <http://santaclaraca.gov/index.aspx?page=564> for local amendments and standards.

S903.2 ATTIC PROTECTION FOR RESIDENTIAL SPRINKLER SYSTEMS. A

minimum of one sprinkler head shall be installed in the attic space for any residential

occupancy, which a NFPA 13D or NFPA 13R sprinkler system is installed. Depending on the size and configuration of the attic space additional sprinkler heads may be required to be installed.

Required Fire Protections/ Detection Systems and Equipment:

- F2. An approved automatic sprinkler system in accordance with Section 903.1.1 shall be allowed to be substituted for 1-hour fire-resistance rated construction, provided such system is **not otherwise required by other provision of the code** or used for an allowable increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. **The 1-hour substitution for the fire resistance of exterior walls shall not be permitted (CBC Table 601, footnote d).**
- F3. An automatic fire sprinkler system shall be provided for all buildings (13D system)
- F4. **For R-3 occupancies (single family homes) the installation of a 13D system shall meet the following configuration:** Where a common supply main is used to supply both domestic and sprinkler systems, a single control valve located in the water meter pit shall be provided to shut off both the domestic and sprinkler systems, and a separate shutoff valve shall be provided for the domestic system only (2013 NFPA 13D, 7.1). **NOTE:** A separate sprinkler control valve **shall not** be installed since monitoring is not required for a 13D system.
- F5. **In all new Group R buildings,** an approved carbon monoxide alarm (with listing and approval from the Office of the State Fire Marshal) shall be installed in dwelling units and in sleeping units within which fuel-burning appliances are installed; and in dwelling units that have attached garages. The primary power source shall be from the building wiring from a commercial power source, and be equipped with battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection (Exception: In existing dwelling units, a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes or there is no access by means of attic, basement or crawl space) (2010 CBC, 420.4). **Interconnection:** Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit, the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit. (Exception: Interconnection is not required in existing dwelling units or within sleeping units where repairs do not result in the removal or wall and ceiling finishes, there is no access by means of attic, basement or crawl space, and no previous method for interconnection existed) (2010 CBC, 420.4.1.2).
- F6. **Installation locations of carbon monoxide alarms:** 1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s). 2. On every level of a dwelling unit including basements. 3. For R-1 (i.e. hotels) only: On the ceiling of sleeping units with permanently installed fuel-burning appliances. **NOTE:** It is recommended to install “multi-purpose alarms” – Carbon monoxide alarms combined with smoke alarms, that are listed and approved by the Office of the State Fire Marshal.

Fire Safety During Construction:

- F7. **At the time of permit application, submit a construction “Fire Safety Plan”** to the Fire Department for review and approval. The “Fire Safety Plan” shall address fire protection (i.e., access roads, water mains, on-site fire hydrants, fire extinguishers and standpipes) be installed and made serviceable prior to the time of construction. Include in the safety plan the location of fire extinguishers, fire hydrants (public and private), storage of combustible construction materials, propane tanks, and “NO SMOKING” signs. Plus the Safety plan shall address the how the following items will be used: temporary heating devices, temporary electrical wiring, cutting/welding and other open-flame devices. See “Standards for Construction site fire Safety” handout or website at www.unidocs.org/fire

Fire Department (Required on plans/ drawings at the time of application):

- F8. **At the time of Building Permit application**, submit Civil Drawings that denote existing and proposed locations of fire hydrants, underground sectional valves, fire department connections and post indicator valves for fire department review and approval.
- F9. Prior to combustible materials being brought onto the site, approved fire apparatus access roads shall be constructed. These shall be capable of supporting the imposed fire apparatus load (75,000 lbs.) and have a FD approved all-weather driving surface.
- F10. Construction materials shall not obstruct access roads, access to buildings, hydrants or fire appliances.
- F11. Combustible construction in excess of 100 feet from the street shall not commence until emergency access roads; underground fire service lines and permanent on-site hydrants are in service and have been tested, flushed and approved by the Fire Department.
- F12. During construction of a building and until permanent fire-extinguishers have been installed, portable fire extinguishers are required within 50 feet travel distance to any part of the building in accordance with California Fire Code and the Santa Clara Municipal Fire and Environmental Code.
- F13. General Permit Storm Water Discharges Associated with Construction Activity-Water Quality through the State (order 99-08-DWQ) shall be adhered to regarding non-point source issues on construction sites. (i.e., prevention of paints, debris, etc. from going down storm drains). The Permit is issued by the State Water Resources Control Board. Information regarding the permit can be found at www.waterboards.ca.gov/stormwtr/index.html.
- F14. Internal-combustion-powered construction equipment shall be used as follows; (a) Equipment shall not be refueled while in operation, (b) Exhausts shall be piped to the outside of the building.

POLICE

- PD1. The Developer shall provide a minimum average illumination of one-foot candle in carport, parking areas and in all common pedestrian or landscaped areas of the development, subject to adjustments by the Police Chief in consultation with Silicon Valley Power and Planning Department as necessary for the project to meet LEED Certification, or equivalent, objectives. The illumination should be deployed in fixtures that are both weather and vandal resistant.
- PD2. Address numbers of the individual units shall be clearly visible from the street and shall be a minimum of six (6) inches in height and of a color contrasting with the background material. Numbers shall be illuminated during the hours of darkness. Individual

apartment numbers shall be a minimum of six (6) inches in height and a color contrasting to the background material and either visible from the street or from the center area of the project. Where multiple units/buildings occupy the same property, unit/building address shall be clearly visible.

- PD3. The Developer shall provide enclosure fencing (trash area, utility equipment, etc.) that is either see-through or that has a six (6) inch opening along the bottom for clear visibility. Any gates or access doors to these enclosures should be locked.

STREET

- ST1. Prior to the issuance of demolition or site grading permits, the Developer shall submit copy of complete landscape and automatic irrigation plans for review and comment by the City Arborist. Plans are to include all existing trees with 4" or larger diameter (measured 30" above ground) on development property and adjacent property if they may be impacted. Trees are to be correctly labeled with specie name and correctly plotted as to exact location on the plans. Trees are to be noted as to whether they are proposed to be saved or removed. City tree preservation specifications are to be included on all plans where existing trees are to be saved during construction. A copy of these specifications can be obtained from the City Arborist at 408-615-3080.
- ST2. The Developer shall supply and install City street trees per City specifications; spacing, specie, and size (15 gallon minimum) to be determined by City Arborist.
- ST3. No cutting of any part of City trees, including roots, shall be done without following city tree preservation specifications and securing approval and direct supervision from the City Arborist at 408-615-3080.
- ST4. No cutting of any part of private trees, as identified to remain on the tree preservation plan, including roots, shall be done without direct supervision of a certified arborist (Certification of International Society of Arboriculture).
- ST5. Applicant is advised to contact Street Department to obtain required tree removal permits in the event trees are removed. Please contact John Mendoza at 408-615-3080 to facilitate plan review.
- ST6. Identified existing mature trees to be maintained. The Developer shall prepare a tree protection plan for review and approval by the City prior to any demolition, grading or other earthwork in the vicinity of existing trees on the site.
- ST7. Landscaping shall be of the type and situated in locations to maximize visibility from the street while providing the desired degree of aesthetics. Security planting materials are encouraged along fence and property lines and under vulnerable windows.
- ST8. All trees, existing and proposed, must maintain minimum of ten (10) feet from any existing or proposed Water Department facilities. Existing trees that conflict must be removed by the Developer. Trees shall not be planted in water easements or public utility easements.
- ST9. Prior to submitting any project for Street Department review, applicant shall provide a site plan showing all existing trees (including size and species), proposed trees (including size and species), existing stormwater drainage facilities, proposed storm water drainage facilities, proposed locations of solid waste containers and, if applicable, a statement on the site plan confirming compliance with Fire Department approved fire apparatus access roads (1998 CFC 902.2.2.1 & 902.2.2.3).

- ST10. All landscaping and irrigation systems prepared by the Developer shall meet City standard specifications.
- ST11. The Developer shall obtain required permits and inspections from the Building Official and comply with the conditions thereof. If this project involves land area of 15,000 sq. ft. or more, the Developer shall file a Notice of Intent (NOI) with the State Water Resources Control Board prior to issuance of any building permit for grading, or construction; a copy of the NOI shall be sent to the City Building Inspection Division. A storm water pollution prevention plan is also required with the NOI.
- ST12. An erosion control plan shall be prepared by the Developer and copies provided to the Planning Division and to the Building Inspection Division for review and approval prior to the issuance of grading permits or building permits that involve substantial disturbance of substantial ground area.
- ST13. All post construction structural controls shall require property owner to execute with City a Stormwater Treatment Measures Inspection and Maintenance Agreement.
- ST14. The Developer shall ensure that decorative water features such as fountains and ponds are designed and constructed to drain to sanitary sewer only. No discharges allowed to storm drain.
- ST15. Applicant to comply with City Development Guidelines for Solid Waste Services as specified by development type.
- ST16. The Developer shall provide trash enclosures, the location and design of which shall be approved by the Director of Planning and Inspection, prior to issuance of any building permits.
- ST17. Commercial, industrial, and multi-family residential buildings must have enclosures for solid waste and recycling containers. The size and shape of the enclosure(s) must be adequate to serve the estimated solid waste and recycling needs and size of the structure, and should be designed and located on the property so as to allow ease of access by collection vehicles. As a general rule, the size of the enclosure(s) for the recycling containers should be similar to the size of the trash enclosure(s) provided onsite. Roofed enclosures with masonry walls and solid gates are the preferred design.
- ST18. Applicant to comply with City Code Section 8.25.285 and recycle or divert at least fifty percent (50%) of materials generated for discards by the project during demolition and construction activities. No building, demolition or site development permit shall be issued unless and until applicant has submitted a construction and demolition debris materials check-off list. After completion of project, applicant shall submit a construction and demolition debris recycling report as stipulated by ordinance, or be subject to monetary, civil, and/or criminal penalties.

A Santa Clara University student clarified that the driveway does not have tenants backing onto Lafayette Street, but rather Bellomy Street. He noted that he lived next-door to the property and felt the driveway was very safe.

A Santa Clara university student stated that the house does not allow alcohol or partying and that most of the tenants will not have vehicles so parking will not be an issue.

In a rebuttal statement the applicant stated that the house is not a boarding house; it is communal living. Mr. Fiedelman noted that the property will have a 15-year lease and is being looked at as a very long-term investment.

The Commission clarified that the insurance carried by the sorority institutes the rules about alcohol, partying, and other restrictions. It was noted that a "Den Mother" is part of both the lease agreement sorority charter.

The Public Hearing was closed.

The Commission deliberated on the applicability of the PD zoning versus multi-family zoning, and discussed the difference between the parking allocations on the previous and current proposal. It was noted that the PD zoning will lock-in entitlements for setbacks, parking, as well as the land-use that the multi-family zoning might not otherwise address

The Commission inquired about the Historical and Landmarks Commission's recommendation on the project. Shaun Lacey indicated that the HLC expressed concern that the use could negatively impact nearby historic structures.

The Commission discussed the covenant prepared for the project and noted that the covenant should be a recorded document.

The Commission further deliberated on the parking included in the current proposal. It was noted that there should be a minimum of 14 parking spaces as part of the PD approval.

Motion/Action: The Commission motioned to adopt a resolution to recommend that the City Council approve the rezone from Single-Family Residential (R1-6L) to Planned Development (PD) for the project located at 930 Bellomy Street (6-0-1-0, Champeny absent) with the following added recommendations:

- 1) Add Condition P6: Property owner shall record the Memorandum and Notice of Lease Agreement with the Santa Clara County Clerk Recorder and shall provide a copy of the recorded document to the City.
- 2) Condition P4 shall stipulate a minimum of 14 parking spaces.
- 3) A "Den Mother" shall be encouraged to the full extent permitted by law.

8.B. File No.(s):	PLN2013-10129
Location:	1075 Pomeroy Avenue, a 12,383 square foot lot located on the east side of Pomeroy Avenue APN: 290-69-079; property is zoned R3-18D (Low-Density Multiple- Dwelling)
Applicant:	Dory Marhamat
Owner:	Martha Polanco
Request:	Rezone from R3-18D (Low-Density Multiple- Dwelling) to PD (Planned Development/R3-18D) to construct five single family homes
CEQA Determination:	Categorical Exemption per Section 15332 (Infill Development)

Project Planner: Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation: **Recommend City Council Approval**, subject to conditions

Notice: The notice of public hearing for Item 8.B. was posted within 300 feet of the site and mailed to property owners within 300 feet.

Discussion: Shaun Lacey gave a brief presentation on the project.

The Commission discussed the density of the proposal and expressed concern that five units may be overly dense for the project site.

The applicant stated that five units was the preferred density and that Staff had advised that PD zoning was the best approach to proceed with the proposal. Mr. Hensen stated that the original design for the project was heritage architecture (mission revival); however, after presenting the plans to the neighbors, it was rejected on account of the architectural style. Mr. Hensen stated that the project was redesigned with flat roofs to fit in with the neighborhood and that the setbacks were also increased.

The Commission confirmed that the units are for-sale units and the common driveway will be managed by a homeowners association.

The Public Hearing was opened.

Ken Kratz, neighboring resident, stated that 130 residents signed a petition to encourage denial of the project. Mr. Kratz added that the project is too big and will negatively impact existing properties with regard to shadows, traffic, and applicant zoning standards. Mr. Kratz stated that the project does not comply with the General Plan, should not be exempt under CEQA, and needs an EIR.

Sain Chow, neighboring resident, stated that he opposed project as the PD zoning increases density and decreases setbacks. Mr. Chow urged the Commission to deny the project and instruct the applicant to redesign the project to fit within the restraints of the zoning standards.

Peggy Parkins, neighboring resident, stated that she opposes the project as the units would be out of scale with the existing homes. Ms. Parkins added that the natural light will be reduced and the current open space will become unpleasant with huge buildings next to it.

A neighboring resident stated that the open space in their community is used frequently, and the reduction of light and ventilation will reduce the ability to enjoy said open space.

Lara Ruffalo, neighboring resident, stated that the project does not provide benefit to the City aside from providing additional housing.

Nick Rossi, neighboring resident, stated that the project does not increase the quality of the neighborhood and detracts from the existing composition. Mr. Rossi added that there is no pressing reason to allow this type of density at this project site with all the housing being constructed along the El Camino Real and Kiely Boulevard.

A neighboring resident stated that more housing was not needed in the neighborhood and that the School District is already overly impacted by the recently approved and constructed housing developments.

John Solera, neighboring resident, stated that the proposal would change the enjoyment of his home that he has owned for 20 years. Mr. Solera noted that the proposed buildings would block the sunlight and negatively impact the privacy of neighbors.

Michael Onso, neighboring resident, stated that he frequently uses and enjoys the community open space and does not want to see it ruined by the proposal.

Julie Lee, neighboring resident, stated that the open spaces is a great amenity that the proposal would diminish. Ms. Lee added that the Eichler buildings are critical in Silicon Valley and that the architecture should be respected.

In a rebuttal statement the applicant stated that only eight homes are directly affected by the proposal and that they have been trying to work with the neighborhood to develop an agreeable proposal. Ms. Hensen added that the City needs housing, specifically ownership housing, and that the proposal is optimized site for maximum parking so as not to disturb the street scape.

The Public Hearing was closed.

The Commission deliberated on the proposed density of the project, noting that the City is in need of additional housing and expressing concern that this project site might not be the appropriate place for the proposed level of density. The Commission also deliberated on the number of parking spaces included with the proposal, noting that a lack of parking is the most common received complaint for new developments.

The Commission inquired about historical context to which staff noted that mid-century modern architecture is controversial in a historical context and that the project site is not listed as protected at this time.

The Commission expressed additional concern about the reduced setbacks, loss of mature trees, lack of parking, and high density associated with the proposal. The Commission also noted difficulty in making the findings required to approve a PD zoning.

Motion/Action: The Commission motioned to recommend that the City Council deny the rezone from R3-18D (Low-Density Multiple- Dwelling) to PD (Planned Development/R3-18D) for the project located at 1075 Pomeroy Avenue (4-2-1-0, Kelly and Sweeney dissenting, Champeny absent).

Motion/Action: The Commission motioned to recommend that the City Council deny the Tentative Map for the project located at 1075 Pomeroy Avenue (4-2-1-0, Kelly and Sweeney dissenting, Champeny absent).

It was noted that resolutions representing the Commission's actions would be brought forward for adoption at the next Planning Commission meeting and that the Public Hearing would not be reopened.

9. OTHER BUSINESS

9.A. Commission Procedures and Staff Communications

i. Announcements/Other Items

ii. Election of Officers: the Commission elected the following slate of officers: Keith Stattenfield, Chair; Steve Kelly, Vice Chair; and Yuki Ikezi, Secretary.

iii. Report of the Director of Planning and Inspection

- City Council Actions

iv. Commission/Board Liaison and Committee Reports

Planning Commission

STAFF REPORT

Meeting Date: 08/20/14Agenda Item # 8.B.

Planning and Inspection Department
City of Santa Clara, California



File No.(s): PLN2013-10129
Location: 1075 Pomeroy Avenue, APN 290-69-079
Applicant/Owner: Dory Marhamat
Subject: Rezone from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development) and Tentative Map to construct five dwelling units
CEQA Determination: Categorically Exempt per Section 15332, Infill Development
Project Planner: Shaun Lacey, AICP, Assistant Planner II, (408) 615-2454, slacey@santaclaraca.gov

EXECUTIVE SUMMARY:

The applicant requests approval of a Rezone application from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development). The project also includes a subdivision map in order to allow individual ownership and sale of five, two-story dwellings at a proposed density of 17 dwelling units per acre.

Project Data

	Existing	Proposed
General Plan Designation	Low Density Residential	Same
Zoning District	R3-18D	PD (Planned Development)
Land Use	Residential	Same
Lot Size	12,383 square feet	Five lots (1,968-2,850 square feet)
Lot Coverage	0.17 (approximate)	0.42
Density	3 du/acre	17 du/acre
Building Square Footage	2,123 square feet (approximate)	8,607 square feet
Parking	2 spaces	12 spaces

Site Location and Context

The project site is a rectangular lot near the intersection of Pomeroy Avenue and Benton Avenue. The project site and the majority of surrounding lots have a General Plan designation of Low Density Residential (8 to 18 units per acre) and are zoned R3-18D (Low Density Multiple Dwelling). The subject property has a single-family residential home on the lot. Existing uses immediately adjacent to the lot are made up of condominium buildings. The landscape along the street is varied with no distinct street tree pattern.

The "18D" denotes a maximum density of 18 dwelling units. The project site is 12,383 square feet, which may accommodate 4.95 units (rounded down to four units at a density of 14 dwelling units per acre as prescribed in the R3-18D regulations). In addition to setting a density threshold, the R3-18D zoning regulations also set minimum lot area (8,500 square feet), lot width (70 feet), lot coverage (35 percent) and setback regulations (20-foot front yard; 15-foot rear yard; and 10-foot side yards) with respect to new development. If the project followed these standards, it would be infeasible to achieve the maximum density permissible within the General Plan, which allows up to 18 dwelling units per acre. Thus, the applicant has filed a request to rezone the property to PD, which allows greater flexibility with respect to development standards and the opportunity to provide five units at a density of 17 dwelling units per acre.

Circulation and Parking: Access to and from the property is served by a single driveway off of Pomeroy Avenue. A total of 12 parking spaces (including two guest spaces) serve the residences within individual garages at the ground-level of the property. The parking spaces meet the typical regulations associated with residential development, in that each home will provide two covered parking spaces. The two guest spaces face the side yards in between the units. The project also includes a bicycle rack integrated into the landscape plan in the front yard.

Architecture and Site Plan: The project is a contemporary style similar to the form of the surrounding co-op buildings, utilizing flat and shed roofs, covered porches, rectangular windows and customary two-car garages. The project maintains 15-foot setbacks from the front and rear property lines. The project proposes a 10-foot side yard setback along the south property line and a five-foot side yard setback along the north property line. Each unit is designed to have a private landscaped yard space. The overall building height is 28 feet tall; however it is appropriate to note that the proposed building height nearest the adjoining property lines is approximately 21 feet given the location of the flat roofs. Building materials include stucco and hardiplank siding, standing seam metal roof, and wood-trimmed windows. Staff added a condition to refer the final design details to the Architectural Review Committee for consideration.

Landscaping: The applicant worked with staff and the Pomeroy East homeowners surrounding the site on a landscape concept that minimizes privacy impacts and buffers the project from the adjoining properties. The project proposes to remove one large Ash tree in the front yard and some fruit trees in the rear yard as they conflict with the building footprint. A second Ash tree nearest the front property line will be retained and protected throughout construction under the guidance of an arborist. A variety of evergreen screening trees and groundcover are proposed throughout the site. Proposed tree specimens include strawberry, crape myrtle and Chinese pistache. Evergreen screening includes fern pines, nandinas and wax myrtles. A six-foot tall solid fence with one foot of open lattice will be installed and maintained along the site perimeter. New street trees will be added to the front yard to enhance the visual appeal of the project from the street.

Environmental Determination: The project is categorically exempt from the California Environmental Quality Act as it qualifies under Section 15332 (Class 32 - Infill Development).

General Plan and Zoning Conformance: The project is consistent with the General Plan designation of Low Density Residential, which encourages a variety of housing types. The General Plan states that residential development in this classification should range from 8 to 18 units per acre. The proposed project is designed to have a density of 17 units per acre.

The R3-18D zoning district requires new lots to be a minimum of 8,500 square feet and 70 feet wide. In addition to these standards, lot coverage may not exceed 35 percent of the lot area and setbacks are subject to a 25-foot front yard, 10-foot side yards, and a 15-foot rear yard. Thus, the project proposes a zone change to PD, which relaxes the requirements otherwise prescribed for underlying the R3-18D zone and provides an opportunity to build to the maximum density supported by the General Plan. The PD zoning district is intended to accommodate development that is compatible with the community, utilizing creative planning and design concepts. The proposal conforms to the PD zoning district in that the project provides a high-quality product, designed to the desired density range outlined in the General Plan and visually complements the surrounding neighborhood with five new dwellings designed in a similar contemporary form. The project also takes careful consideration to the surrounding co-op buildings in that it provides similarly-scaled buildings, and provides rear and left side yard setbacks designed to the existing R3-18D regulations in order to maintain a compatible distance from nearby buildings.

Public Contact

Public Notices and Comments: On August 8, 2014, a notice of public hearing for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet of the project site. Two neighborhood outreach meetings were held at the City Library, where the applicant presented the renderings and discussed potential impacts with neighbors. Approximately 20 members of the public attended the meetings and expressed concerns regarding the proposed density, traffic impacts, parking layout and a potential loss of privacy. The applicant worked with the neighborhood to minimize these impacts by reconsidering the site plan to provide greater setbacks, improving the landscaping plan, and redesigning the style of the buildings to make them compatible with the surrounding neighborhood.

Correspondence

Staff received several letters from residents who expressed concerns about the density, height, traffic, parking and loss of privacy associated with the project. As discussed, the five units fall within the acceptable range outlined in the General Plan. The 28-foot tall building is not considered an abrupt height change from the older co-op buildings surrounding the site given that the perimeter of the buildings utilize a flat roof that is 21 feet in height. The 12 parking spaces conform to the residential parking requirement of two spaces for each dwelling with additional guest parking spaces. With the broadened rear and side yard setbacks and landscape plan, the project will not create an unreasonable privacy impact to nearby properties in the context of a multi-family residential project.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The Rezone and Tentative Map helps the City achieve its housing goals by providing a variety of housing types and sizes with five new for-sale dwellings. The project also complements the overall visual quality of the neighborhood and streetscape.

RECOMMENDATION:

That the Planning Commission adopt resolutions for the project located at 1075 Pomeroy Avenue, subject to conditions of approval, to:

- 1) Recommend that the City Council adopt a Resolution to approve a Rezone from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development); and
- 2) Recommend that the City Council adopt a Resolution to approve a Tentative Map for five dwelling units.

Documents Related to this Report:

- 1) *Planning Commission Rezone Resolution*
- 2) *Planning Commission Tentative Map Resolution*
- 3) *Conditions of Approval*
- 4) *Correspondence*
- 5) *Development Plans*

Daryoush Marhamat

627 Sleeper Avenue * Mountain View, CA 94030
Phone: 408.898.6465 * E-Mail: daryoush@marhamat.com

September 3, 2014

The Honorable Jamie Mathews
Mayor of Santa Clara
And Members of Santa Clara City Council

1500 Warburton Avenue
Santa Clara, Ca 95050

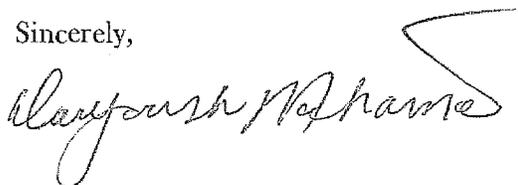
Re.: 1075 Pomeroy Ave (Rezoning request from R3-18 D to PD)

Dears Sirs,

I would like to share some facts about the proposed project:

1. The planning department was contacted several times before the purchase of the property and this is the 2nd time that all the plans including architectural, civil (grading, utilities, tentative map), landscaping and rendering were completed to the satisfaction of all the City's Departments.
2. Two neighborhood outreach meetings were held at the City Library and the applicant has worked with the neighborhood to minimize any impacts by re-designing the site plan and re-designing the style and size of the houses to make them more compatible with the surrounding neighborhood.
3. The proposed housing project will maintain all of the R3-18 D set backs that were of a privacy concern. And additionally screening plants will be planted for more privacy as requested by the neighbors.
4. The project calculates out to 4.95 units with the existing R3-18 D zoning. The proposed 5 units, at the density of 17/acre is well within the acceptable density of 18/acre (general plan designation).
5. All units are 1300 - 1880 square feet of living area with very nice, modern designs complimenting the overall visual quality of the neighborhood and streetscape.
6. The proposed rezoning and tentative map helps the city achieve its housing goals by providing a variety of housing types and sizes. The project also complements the overall visual quality of the neighborhood and streetscape.

Sincerely,



August 15, 2014
3269 Benton Street
Santa Clara, Ca. 95051

Mr. Shaun Lacey
Assistant City Planner
1500 Warburton Avenue
City of Santa Clara, Ca. 95050

Dear Mr. Lacey:

I really appreciate your personal participation in our situation - your attendance at public meetings, meeting with shareholders, visiting our property, and showing an interest in our concerns.

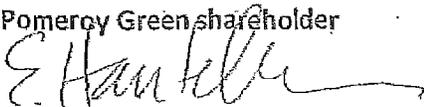
I remain frustrated and disappointed that the developer intends to rezone the property to Planned Development. While I appreciate the efforts the developer has made to change the aesthetics of the building and increase the set-backs, they don't adequately address my concerns.

As you know, my property is the sole unit that shares a fence with 1075 Pomeroy. All other properties are separated by a small alleyway (pictures attached) or open space. While this doesn't change the distance the new development will be from my actual home it does put everything much closer to my living space. If trees are planted along the fence line (necessary for privacy), it further reduces the very limited sun light I get as they will eventually tower directly over my yard. I worry that I will be in continual shade. To the best of my knowledge, light and ventilation studies have not been done to determine the impact this project will have on me given my unique situation of sharing a fence with 1075 Pomeroy.

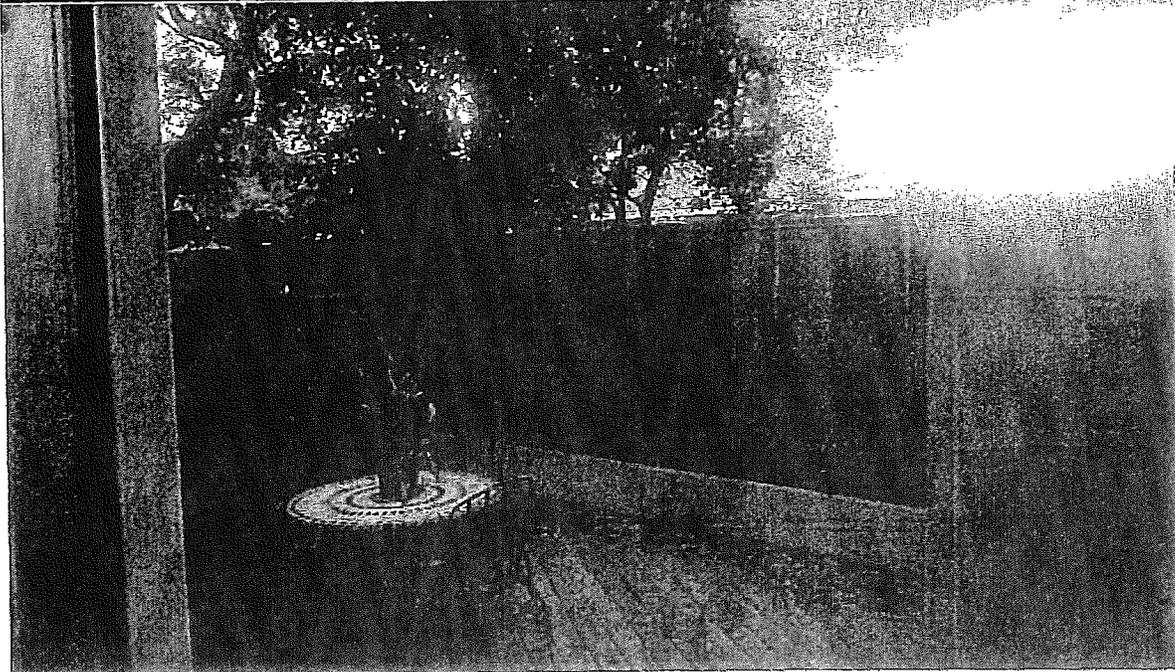
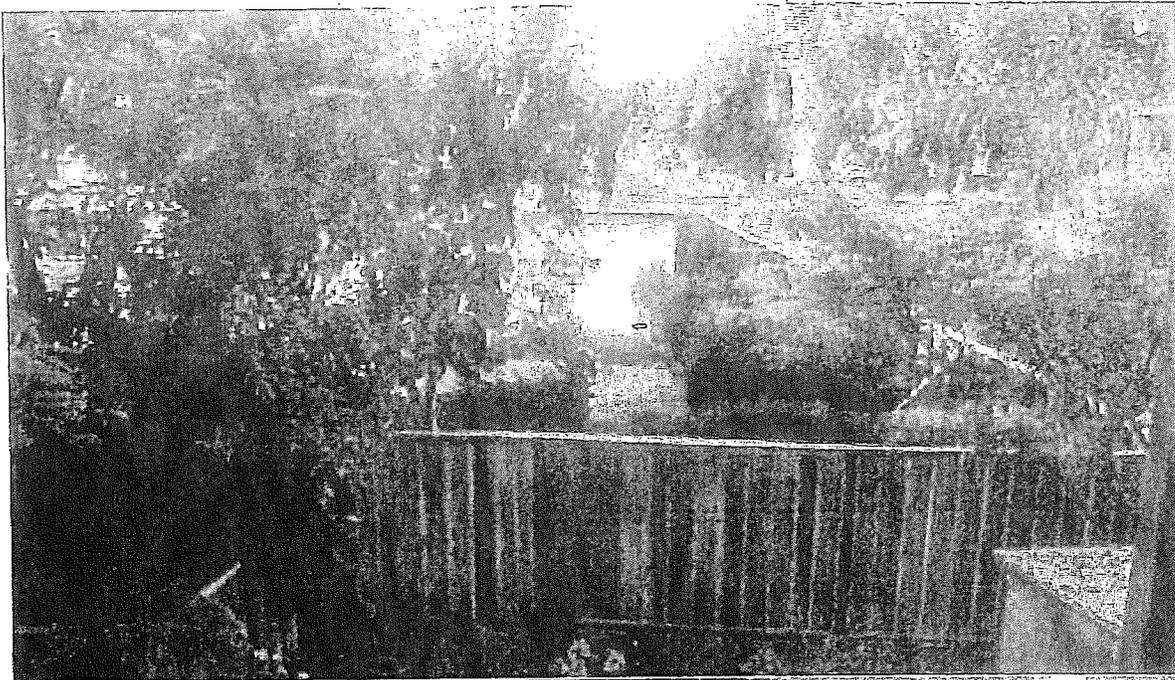
1075 Pomeroy sits approximately 2 feet higher than the homes in my block (pictures attached). As mentioned above, I am very concerned about light and ventilation and losing the only breeze that passes through. Our complex does not allow air conditioners, so the breeze is quite important. When I raised this issue with the builder, he essentially stated that the height difference was a good thing. That it should reduce any privacy concern. The height of the new buildings will greatly impact those of us directly surrounding 1075 Pomeroy, and me in particular. This leaves me with the impression that the builder has never fully toured 1075 Pomeroy and its surrounding neighbors to understand the implications and impact of the proposed project and rezoning.

Thank you for considering my concerns.

Sincerely,
Evaley Hantelman
Pomeroy Green shareholder







From: PlanningCommission
Sent: Tuesday, August 19, 2014 10:49 AM
To: Lara Ruffolo; PlanningCommission
Cc: Megan Valenzuela; Shaun Lacey
Subject: RE: 1075 Pomeroy project

Dear Ms. Ruffolo,

Thank you for your comments on the above referenced project. A copy of your email will be provided to the Planning Commission at tomorrow's meeting.

Sincerely,

Gloria M. Sciara, AICP
Development Review Officer
Department of Planning and Inspection
City of Santa Clara
1500 Warburton Avenue, Santa Clara, CA 95050
gsciara@santacruz.ca.gov
408 615 2453 (direct)
408 615 2450 (main)
www.santacruz.ca.gov

From: Lara Ruffolo [<mailto:larar32@gmail.com>]
Sent: Tuesday, August 19, 2014 7:56 AM
To: PlanningCommission
Subject: 1075 Pomeroy project

Hello,

I am writing with responses to Shaun Lacey's report recommending that the Commission permit the rezoning of 1075 Pomeroy from Low-Density to Planned Development.

There seem to be two main thrusts to the report's positive recommendation:

- 1) the developer met with local residents and changed the plan to respond to some of their objections;
- 2) the additional "homes for sale" is a public good for the community that justifies the rezoning.

Here are my objections:

- 1) The new plan does not answer community objections. There will still be 12 cars generating trips across our sidewalks and affecting traffic. To accommodate these cars the buildings have grown taller than in the previous plan, looming over our patios and blocking sunlight even more than before. While the buildings have been moved away from the east and south sides of the lot, they abut the north side, and will loom 21-28 feet over a 6-foot fence, blocking the sunlight, which is always southerly, from a park in Pomeroy Green.

This actually removes open space from Santa Clara. The north side of 1075 Pomeroy borders a widely-used open space, a park containing trees and shrubs, benches, and lawns, where many of our community enjoy basking in the sun and enjoying the peace and quiet. We won't be able to enjoy ourselves in peace with 2-story buildings looming over us. The planned development infringes this open space.

2) If the addition of "homes for sale" is indeed a public good that earns the developer the privilege of this rezone in an old, established, historically Eichler neighborhood, it is not a very big public good. Without rezoning 3-4 homes can be built - is the additional home worth the aggravation this development will cause? Two blocks southeast the Gallery at Kaiser will soon offer 766 homes for sale and rent; 1.5 blocks north, at the corner of Pomeroy and El Camino, a huge apartment complex will still open. These planned redevelopments will add nearly 2000 homes for sale and rent to the neighborhood, compared to which the additional one that will be built with the rezone is insignificant.

I would like to know just whom the Planning Commission serve. Is it the established homeowners and taxpayers of Santa Clara? If so, why bend backwards to accommodate this ad-hoc redevelopment of a tiny patch of land in an old established neighborhood, in defiance of the residents and the General Plan, which I will quote below:

"1.2.2 Areas of Stability and Potential Development

"...Santa Clara's established residential neighborhoods, with their distinctive character and sense of community, are not proposed for land use changes.

"General Plan policies support compatibility between new development and existing neighborhoods in terms of scale, height and land use. Current residents will benefit from public and private investments resulting from the implementation of the Plan, including new and upgraded public facilities, transportation improvements and retail services planned in concert with new development."

If you rezone 1075 Pomeroy you will permit the building of homes that are out of scale with the communities that surround them on all four sides; they are too tall and too big for the scrap of land planned for them. They are out of scale with the neighborhood; they will worsen traffic.

Please think carefully before permitting this rezone; it is not in accordance with the General Plan: it infringes existing open space; it is out of scale with the existing neighborhood; it satisfies the demands of a developer based in Mountain View while aggravating Santa Clara homeowners who pay property taxes and vote. Please preserve our neighborhood and open space - reject the report recommendation and refuse to rezone 1075 Pomeroy Avenue.

Thank you,
Lara Ruffolo

From: Megan Valenzuela
Sent: Wednesday, August 20, 2014 2:16 PM
To: Megan Valenzuela
Subject: FW: 1075 Development--Peggy Parkins presentation photos

From: Ken Kratz [mailto:kskratz@yahoo.com]
Sent: Friday, August 15, 2014 5:00 PM
To: Megan Valenzuela
Cc: Ken Kratz; Peggy Parkin; Shaun Lacey
Subject: 1075 Development--Peggy Parkins presentation photos

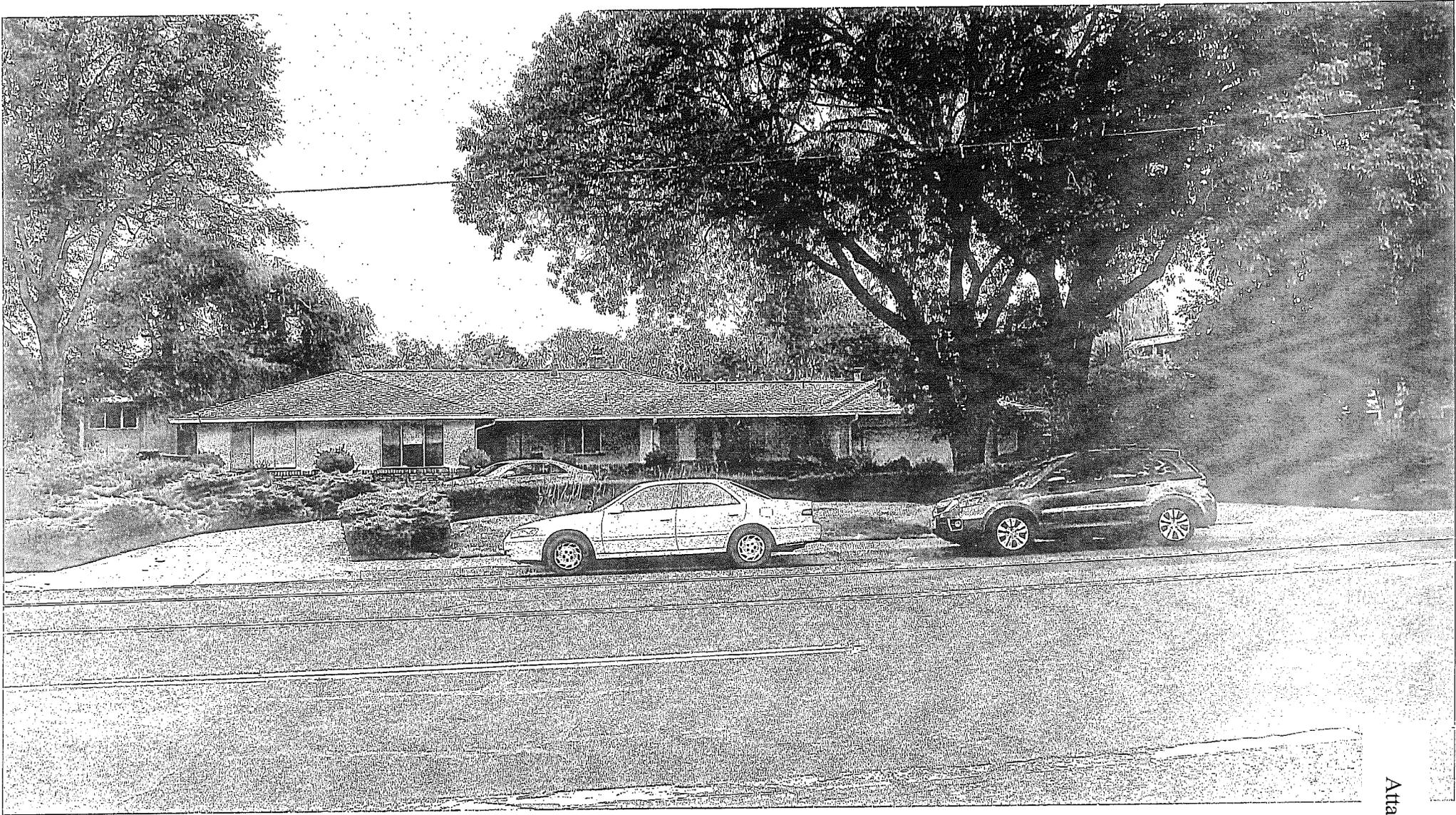
Dear Ms. Valenzuela:

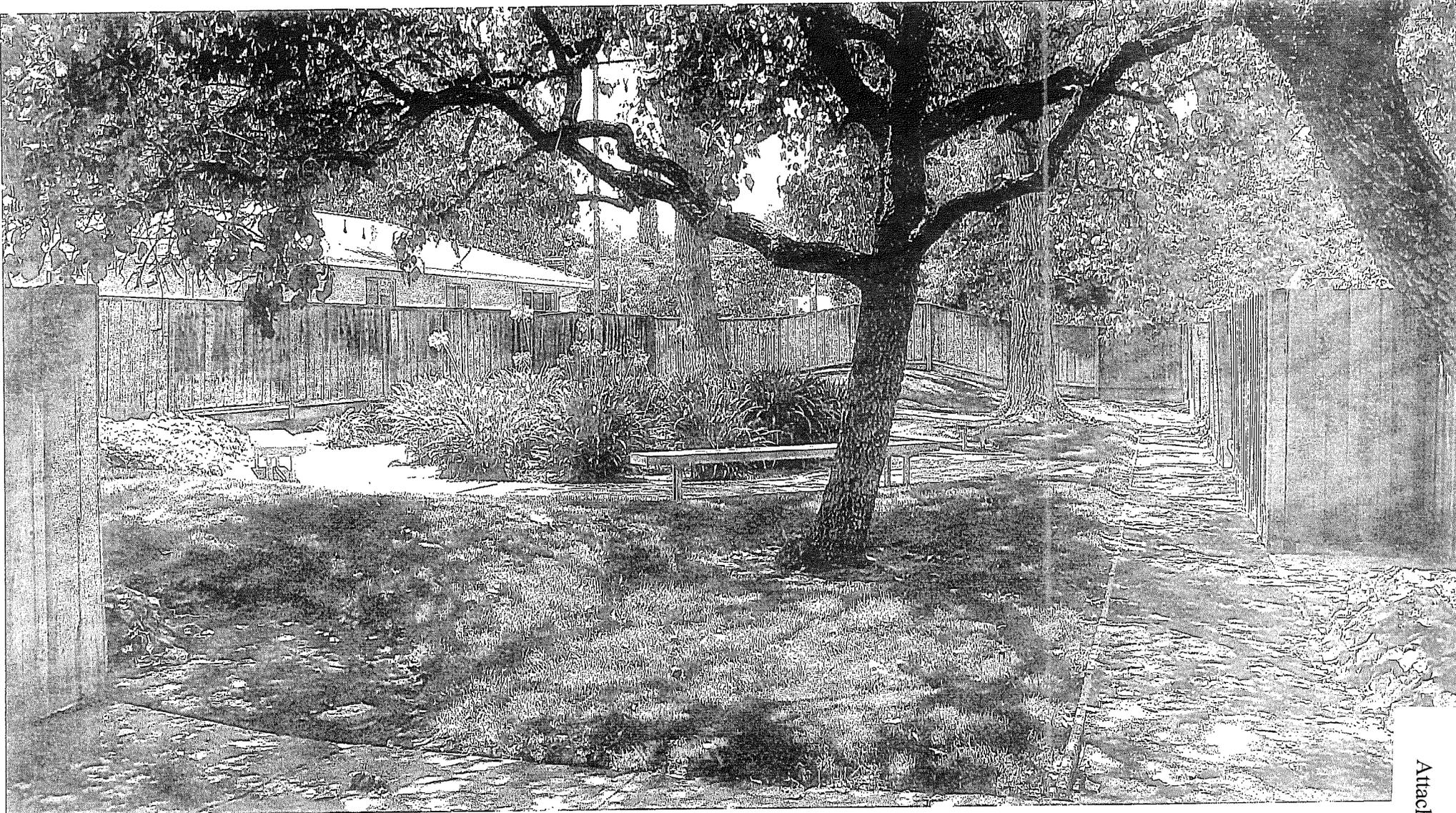
I have attached the photos that Peggy Parkin, a resident of Pomeroy Green, wants to show for her public presentation during the meeting of the Planning Commission meeting next Wednesday. I changed the format of her pictures to PDF

There are seven (7) photos total.

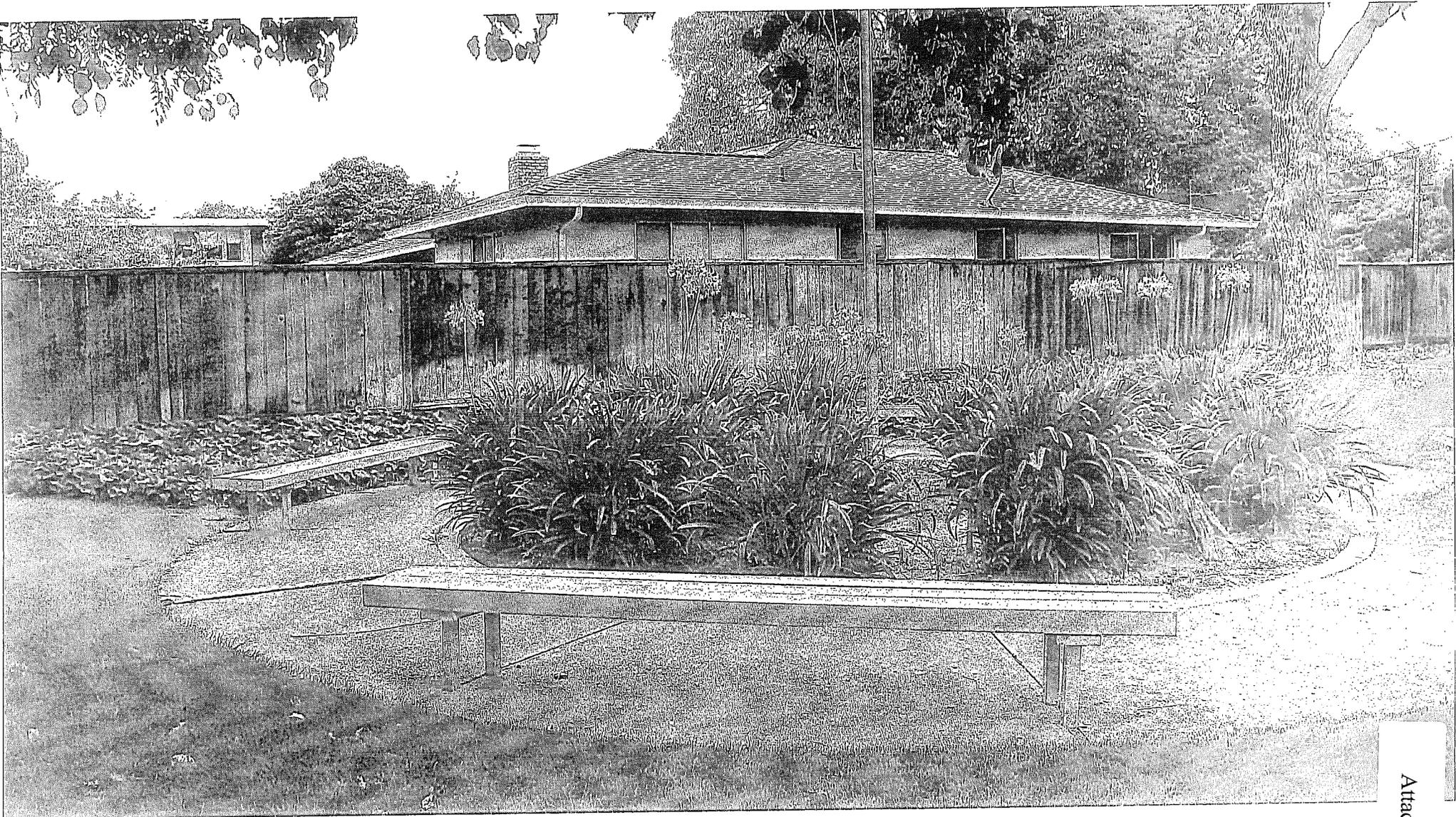
Thank you for working on this item.

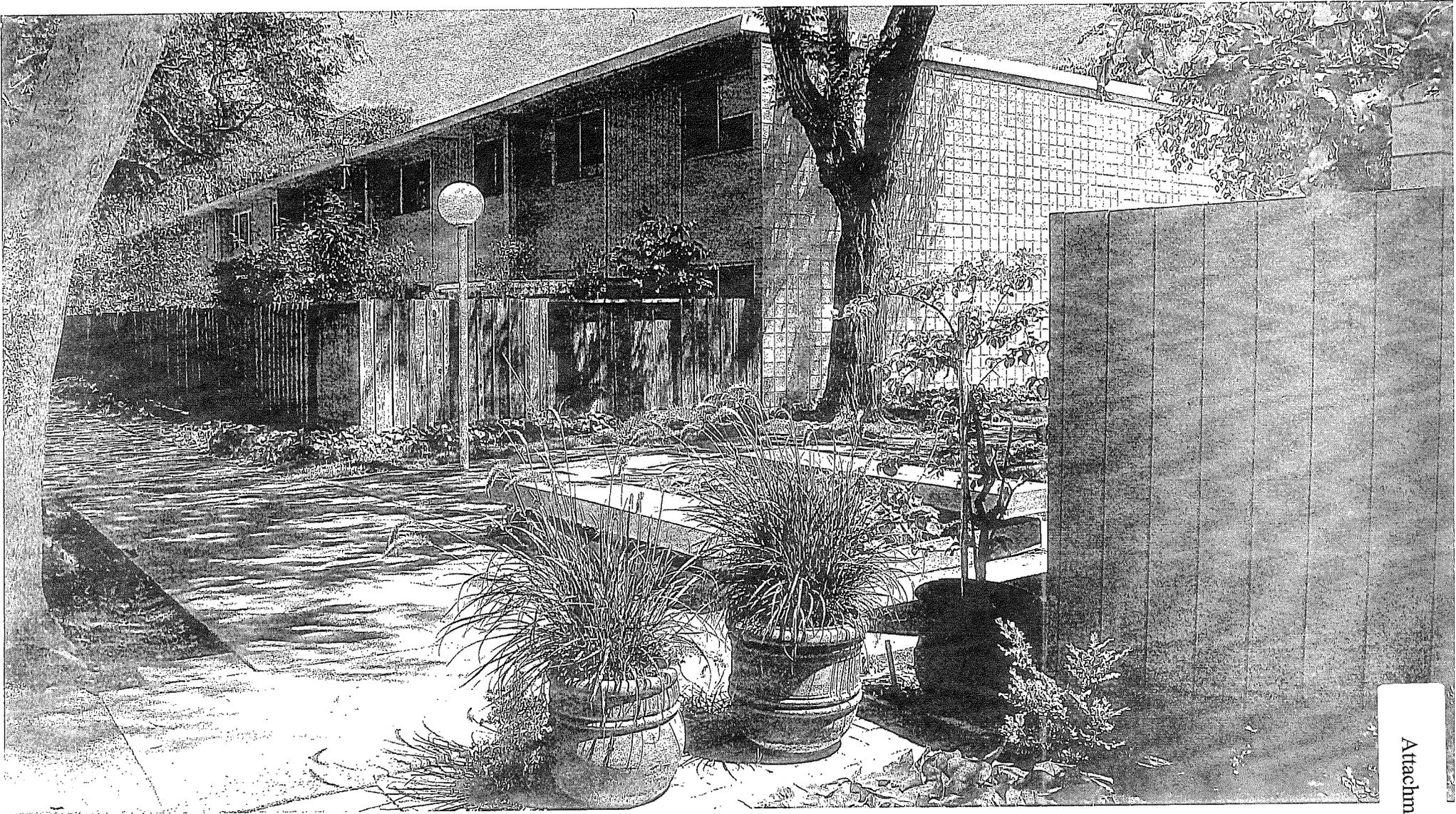
Ken Kratz
3283 Benton Street
Pomeroy Green shareholder



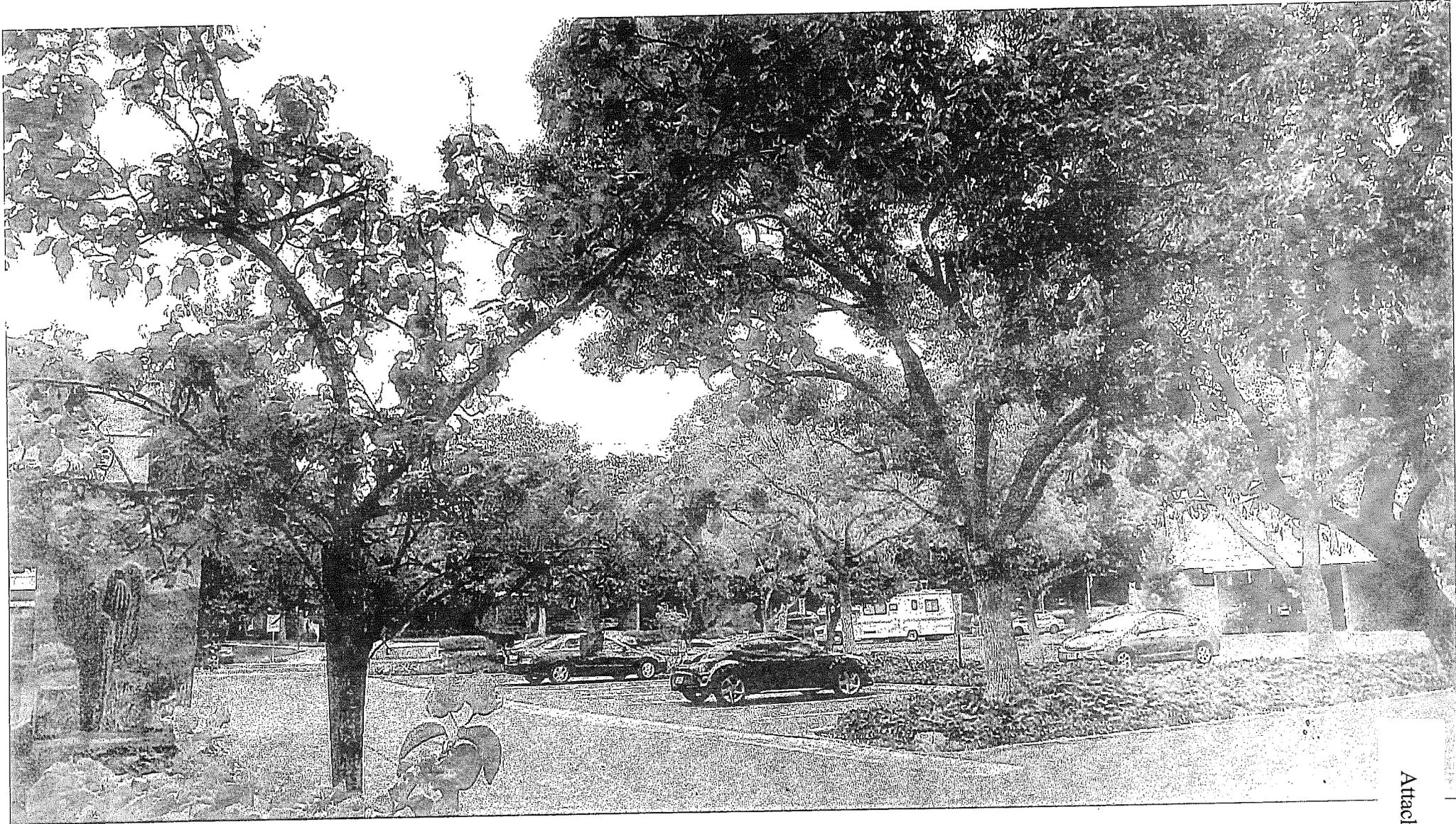


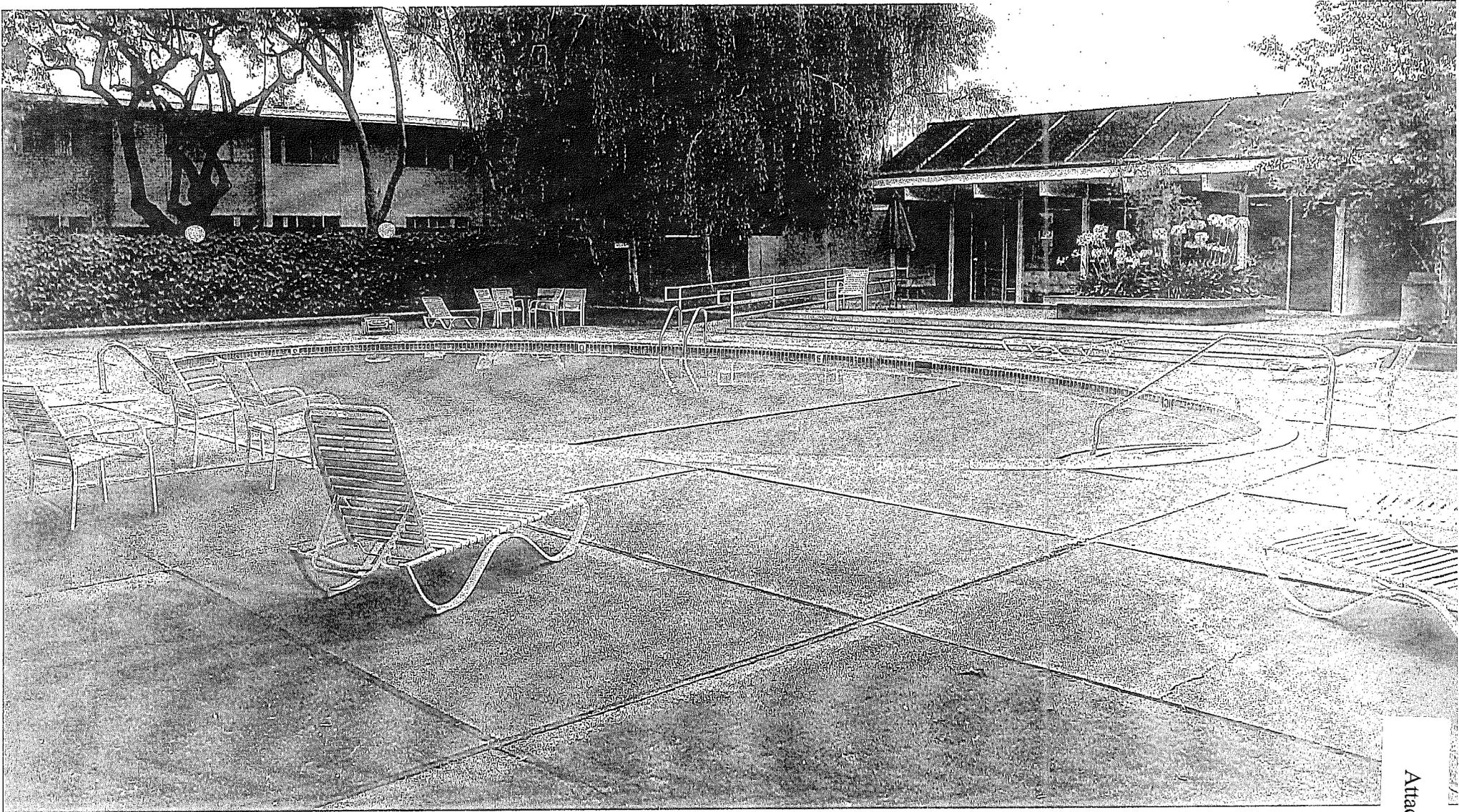
Attachment 6



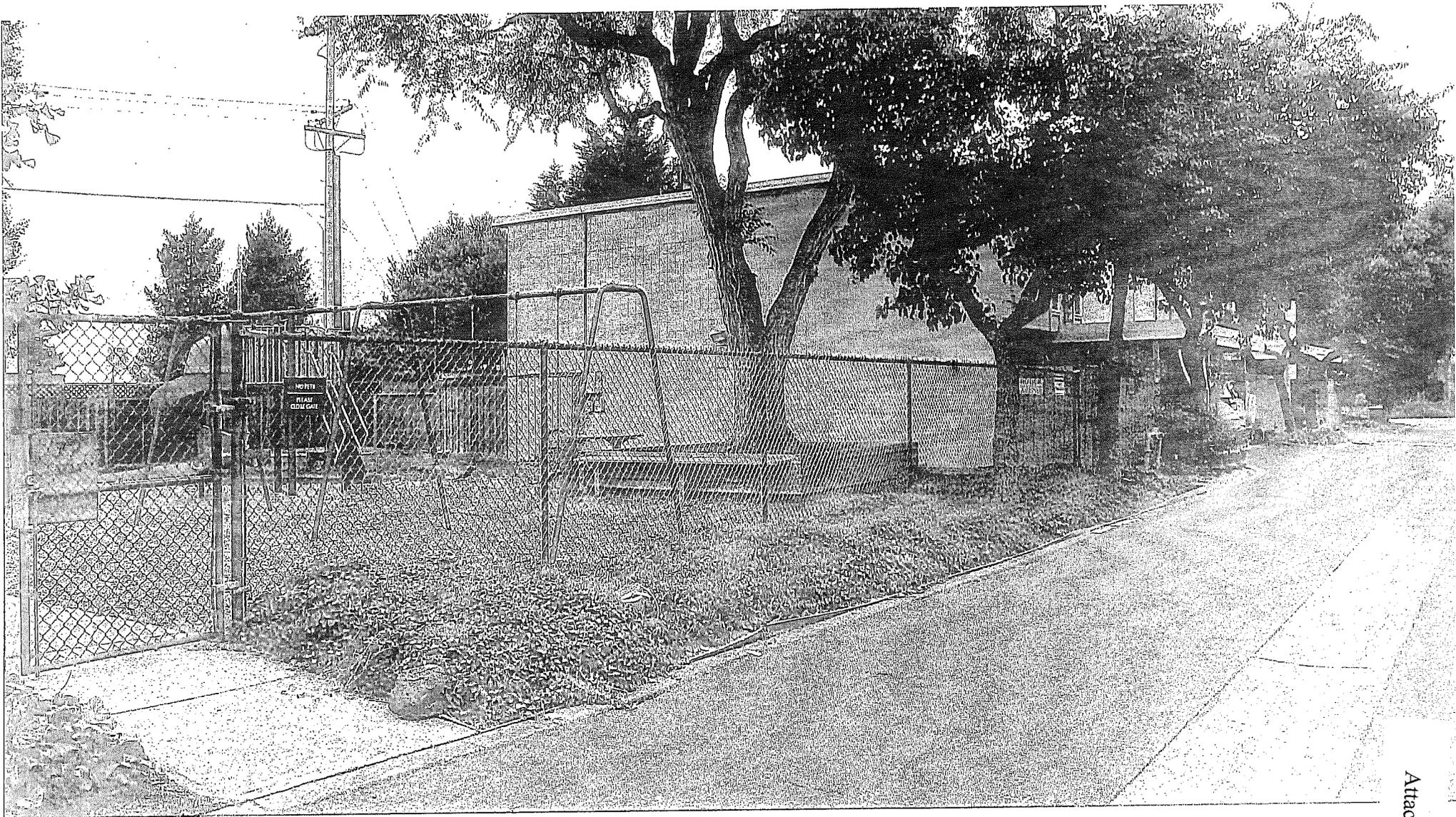


Attachment 6





Attachment 6



From: Shaun Lacey
Sent: Wednesday, August 20, 2014 3:44 PM
To: Megan Valenzuela
Subject: FW: 1075 Pomeroy Development--more objections, letter to the Planning Commission

From: Ken Kratz [mailto:kskratz@yahoo.com]
Sent: Wednesday, August 20, 2014 3:26 PM
To: Shaun Lacey
Cc: Ken Kratz
Subject: 1075 Pomeroy Development--more objections, letter to the Planning Commission

August 20, 2014
3283 Benton Street
Santa Clara, Ca. 95051

Planning Commission
City of Santa Clara
1500 Warburton Avenue
Santa Clara, Ca. 95050

re: 1075 Pomeroy Avenue rezoning

Dear Planning Commission:

This letter will include more of my objections to the rezoning of the 1075 Pomeroy property. In general, the rezoning is in conflict with many of the provisions of the General Plan and the project is not exempt from the California Environmental Quality Act. I will expand on these two areas of objections below.

Conflicts with the General Plan are:

1. The property is not identified as underutilized on the Housing Sites Inventory Map on page 8.12-37.
2. The property is not identified as underutilized on the Housing Sites Inventory Map on page 8.12-54.
3. The residential standards under R3-18D zoning classification, as mentioned on page 8.12-34, Table 8.12-5-2: Residential Zoning Classifications, are not being met. Those standards stipulate minimum lot sizes, setbacks, widths, and densities, as well as restrictions on building and landscape coverage. The north setback and building coverage stipulations are not met with the proposed project for 1075 Pomeroy.
4. The project does meet the Transition Goals and Policies stated on page 5-71 paragraph 5.5.2 of Chapter five, "Neighborhood Compatibility" that stipulates certain setbacks and step backs between development and existing adjacent structures. The new project is surrounded by Pomeroy Green's dwelling units, backyards, and common area park and the new project will infringe on the current uses of those areas.
5. Neighborhood integrity goals are met with the proposed development. Our General Plan states on page 4-3, " 4.2 PRESERVE AND CULTIVATE NEIGHBORHOODS", that:

"In addition, the Plan promotes preservation through goals and policies for neighborhood integrity that address the scale, density and design of new development adjacent to existing homes."

The proposed building is too massive, too tall, does not include enough open landscape area, does not include enough trees to match the character of the neighborhood.

California Environmental Quality Act in-fill exemption.

The project is not exempt from the California Environmental Quality Act (CEQA) because the exemption requires the project to conform with the zoning, CEQA guideline (Section 15332, In-Fill Development Projects) states:

"Class 32 consists of projects characterized as in-fill development meeting the conditions described in this section. (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations."

Therefore, the project must not only meet the city's general plan policies and applicable zoning but also must meet the applicable zoning designation and regulations. The project does not conform to the first and second second CEQA exemption criteria, the General Plan criteria nor the zoning designation and regulations (setbacks, building heights, building footprint, and open landscape area).

If the city is interested in providing five units on the 1075 site as the developer wishes to do rather than four (4) units on the site that are allowed by R3-18, then please have the developer meet all the other stipulations of the R3-18D zoning (building height, setbacks, building coverage, open landscape area).

Perhaps the car parking should be placed underground in order to provide more open landscape area (I know of one project in Palo Alto that placed the parking underground on a site about the size of 1075 Pomeroy--so it can be done.

Again, please deny the developer's request to rezone the 1075 Pomeroy Avenue property from R3-18D to Planned Development. I think enforcement of the current R3-18D zoning regulations will provide a better project for the city.

Thank you for considering my request.

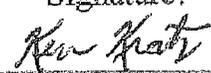
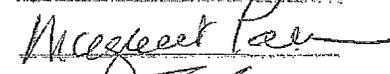
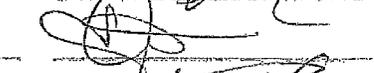
Ken Kratz
Pomeroy Green shareholder

1075 Pomeroy Avenue
Proposed Development

PETITION

We the undersigned, residents of the City of Santa Clara, request that the City of Santa Clara Planning Commission deny the developer's request to rezone the property located at 1075 Pomeroy Avenue from the current R3-18D zoning to Planned Development zoning.

The proposed project is too big for the lot, has too many dwelling units for the lot, does not have enough landscape, and is out of scale with the surrounding neighborhood. That project will reduce sunlight, reduce ventilation, compromise privacy, increase noise, and increase traffic in the surrounding neighborhood.

Name: (printed)	Address: (printed)	Signature:
1. Ken Kratz	3283 Benton	
2. Margaret Perkins	1095 Pomeroy	
3. EVA LAU	1121 Pomeroy	
4. JOHN GAY	1121 Pomeroy	
5. Alesha Fatland	1123 Pomeroy	
6. CYNTHIA FATLAND	1123 Pomeroy	
7. Howie Chan	1119 Pomeroy	
8. Jessica Tang	1119 Pomeroy	
9. Anthony Casupang	1139 Pomeroy	
10. Marko Amay	1139 Pomeroy	
11. Sunny Chew	3257 Benton	
12. ZIAB DWEIRI	1145 Pomeroy	
13. DAVID FATLAND	1123 Pomeroy	
14. Sandy Cho	3279 Benton St.	
15. Jenny Tung	3277 Benton St.	
16. Andrew Cheng	(same as above)	

1075 Pomeroy Avenue
Proposed Development

PETITION

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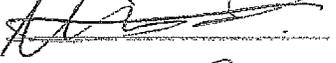
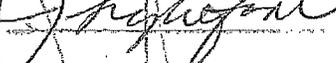
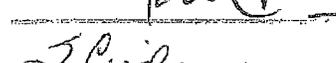
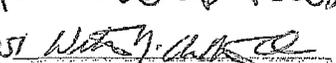
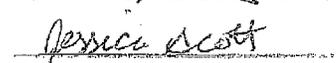
Name: (printed)	Address: (printed)	Signature:
1. Diane Harrison	3283 Benton St.	Diane Harrison
2. GARY Tang	3277 Benton St.	GARY Tang
3. ^{Hideko Yamagi} H. Peko Yamagi	3275 Benton St	H. Peko Yamagi
4. Melissa Faber	3273 Benton St	Melissa Faber
5. Evelyn Hantelman	3269 Benton St.	E. Hantelman
6. J. Hantelman	3269 Benton St.	J. Hantelman
7. V. Shchemelinin	3261 Benton St.	V. Shchemelinin
8. M. Pogozov	3239 Benton St	M. Pogozov
9. Lydia Huffman Bar	3237 Benton	Lydia Huffman
10. John Francis	3237 Benton	JOHN FRANCIS
11. Aaron Huffman	3237 Benton	Aaron Huffman
12. Selin Olivares	3223 Benton	S. Olivares
13. THINH - NGO	3221 BENTON ST	Thinh - Ngo
14. Joel Wagner	3217 Benton St	Joel W.
15. ^{Pamela S. WYMAN} Pamela S. Wyman	3215 Benton St.	Pamela S. Wyman
16. ^{VICTOR M WYMAN} V. M. Wyman	3215 BENTON ST	V. M. Wyman

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Name: (printed)	Address: (printed)	Signature:
1. Rick Dodge	3211 Benton St	
2. Minerva Dodge	3211 Benton St	
3. Sherraz Patel	3209 Benton St	
4. Jeryl Lynn Lightfoot	3207 Benton St	
5. George SANCIA	3207 Benton St	
6. Mohan Belcha	3205 Benton	
7. Reena Kommanje	3287 Benton St	
8. PRASAD KOMMAYN	3287 Benton	
9. SARA CRIDER	3265 BENTON	
10. GEORGE JOHNSON	3201 BENTON	
11. Diane O'Hearn	1090 Pomeroy	
12. Rita Bram	1084 Pomeroy	
13. Cassandra Blanco	1082 Pomeroy Ave.	
14. Sharini Venkatesh	1078 Pomeroy Ave, SC, CA 95051	
15. William DuMontier	1078 Pomeroy Ave, SC, CA 95051	
16. Jessica Scott	1076 Pomeroy Ave, SC, CA 95051	

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Name: (printed)	Address: (printed)	Signature:
1. Jennith Klooster	1072 Pomeroy Ave	Jennith Klooster
2. Jessica Prettol	1070 Pomeroy Ave.	Jessica Prettol
3. Nate Prettol	1070 Pomeroy Ave.	Nate Prettol
4. Wandablen	1060 Pomeroy Ave	Wandablen
5. Joanne Zoda	1056 Pomeroy Ave.	Joanne Zoda
6. Daniel Glennon	1060 Pomeroy Ave	Daniel Glennon
7. Zeyen Fan	1058 Pomeroy Ave	Zeyen Fan
8. Sally A. Connell	1042 Pomeroy Ave	Sally A. Connell
9. Donald B. Connell Jr.	1042 Pomeroy Ave.	Donald B. Connell Jr.
10. Allison Aubrey	1180 Pomeroy Ave.	Allison Aubrey
11. Sephy Hady	1162 Pomeroy Ave	Sephy Hady
12. Michelle Parker	1170 Pomeroy Ave	Michelle Parker
13. Michael Fallon	1114 Pomeroy Ave	Michael Fallon
14. Rita Fallon	1114 Pomeroy Ave	Rita Fallon
15. Chun Zhu	1112 Pomeroy Ave	Chun Zhu
16. Mian Zhu	1112 Pomeroy Ave	Mian Zhu

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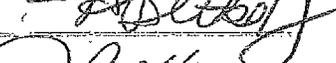
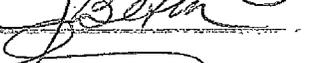
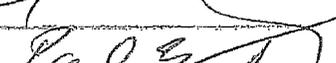
Name: (printed)	Address: (printed)	Signature:
1. <u>Guang Wang</u>	<u>1112 Pomeroy</u>	<u>Wang, Guang</u>
2. <u>GANG LI</u>	<u>1112 Pomeroy</u>	<u>[Signature]</u>
3. <u>WILLIAM FRANCO</u>	<u>1110 Pomeroy</u>	<u>W.F.</u>
4. <u>STEVE SREED</u>	<u>1096 Pomeroy</u>	<u>Steve Sreed</u>
5. <u>Steven Ng</u>	<u>1150 Pomeroy</u>	<u>[Signature]</u>
6. <u>EVA. M. LUKINS</u>	<u>1144 POMEROY</u>	<u>Eva M. Lukins</u>
7. <u>Blanca Sanchez</u>	<u>1140 Pomeroy</u>	<u>Blanca Sanchez</u>
8. <u>Jose Alvarez</u>	<u>1140 Pomeroy</u>	<u>Jose Alvarez</u>
9. <u>Jose A Gonzalez</u>	<u>1140 Pomeroy</u>	<u>Jose A Gonzalez</u>
10. <u>[Signature]</u>	<u>1132 Pomeroy</u>	<u>Jean Pond</u>
11. <u>FRANCES MADDEN</u>	<u>3393 BENTON</u>	<u>Frances Madden</u>
12. <u>Linda Pierson</u>	<u>3413 BENTON ST.</u>	<u>Linda Pierson</u>
13. <u>Cynthia A. Cohen</u>	<u>3435 Benton St.</u>	<u>Cynthia A. Cohen</u>
14. <u>ERIC NU</u>	<u>3437 BENTON ST</u>	<u>[Signature]</u>
15. <u>Jennifer Wong</u>	<u>3351 Benton St</u>	<u>Jennifer Wong</u>
16. <u>MARY NILSON</u>	<u>3359 Benton St</u>	<u>Mary Nilson</u>

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Name: (printed)	Address: (printed)	Signature:
1. Mark Asmar	3377 Benton St.	
2. Mark Sin	3383 Benton St.	
3. Robin Stamps	3385 Benton St.	
4. Candace Connell	3387 Benton St.	
5. MARK GORDON	3389 BENTON ST.	
6. William Scott Jaikower	1130 Pomeroy Ave.	
7. FRED BETHE	1128 POMEROY AVE	
8. Jan Beckler	1128 POMEROY AVE	
9. RAFAEL CRUZ	1124 POMEROY AVE	
10. Paul Zoda	1056 Pomeroy Ave	
11. Rameya Venkatesh	1102 Pomeroy Ave	
12. VIGNA CHUCK	3301 Benton St.	
13. Patrick Wenzel	3303 Benton St.	
14. GAYATHRI VUPULUR	3307 BENTON ST	
15. Eileen Crane	3319 Benton St.	
16. Frank Crane	3319 Benton St.	

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Name: (printed)	Address: (printed)	Signature:
1 Michael Nabelek	3323 Benton St	<i>Michael Nabelek</i>
2 Beverly Shenfield	3309 Benton St	<i>Beverly Shenfield</i>
3 Heather Shenfield	3379 BENTON ST	HEATHER SHENFIELD
4 Mary B. Rich	3315 Benton St.	<i>Mary B. Rich</i>
5 BYRON TADA	1021 POMEROY AVE	<i>Byron Tada</i>
6 PAULINE TADA	1021 POMEROY AVE	<i>Pauline Tada</i>
7 Steve Tak	1021 Pomeroy Ave	<i>Steve Tak</i>
8 Marlene O'Donnell	1040 Pomeroy Ave	<i>M. O'Donnell</i>
9 Chet O'Donnell	1040 Pomeroy Ave	Chet O'Donnell
10 PARI EVSICY	1007 Julie Ct	<i>Pari Evsicy</i>
11 Derrick Eszlinger	1002 Julie Ct	<i>Derrick Eszlinger</i>
12 Eleanor J. Prokopakis	1008 Julie Ct.	<i>Eleanor J. Prokopakis</i>
13 Sepna Agrawal	1155 Pomeroy Ave	<i>Sepna Agrawal</i>
14 _____	_____	_____
15 _____	_____	_____
16 _____	_____	_____

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Name: (printed)	Address: (printed)	Signature:
1. <u>RITHA CANALES-ROSSI</u>	<u>1091 POMEROY AVE Santa Clara CA 95051</u>	<u>Ritha Canales-Rossi</u>
2. <u>LILY W. LEE</u>	<u>1097 POMEROY AVE, SANTA CLARA CA 95051</u>	<u>Lily W. Lee</u>
3. <u>SU Ting</u>	<u>1099 Pomeroy Ave Santa Clara CA 95051</u>	<u>Su Ting</u>
4. <u>Der Ting</u>	<u>1099 Pomeroy Ave Santa Clara CA 95051</u>	<u>Der Ting</u>
5. <u>Diane Dobbins</u>	<u>1093 Pomeroy Ave Santa Clara CA 95051</u>	<u>Diane Dobbins</u>
6. <u>Shuching Cheng</u>	<u>1107 Pomeroy Ave Santa Clara CA 95051</u>	<u>Shuching Cheng</u>
7. <u>Sutar Jahansoor</u>	<u>1111 Pomeroy Ave Santa Clara CA 95051</u>	<u>Sutar Jahansoor</u>
8. <u>GHODSI DERAKHSHANI</u>	<u>1111 Pomeroy Ave Santa Clara CA 95051</u>	<u>GHODSI DERAKHSHANI</u>
9. <u>Matt Gtashi</u>	<u>1101 Pomeroy Ave Santa Clara CA 95051</u>	<u>Matt Gtashi</u>
10. <u>LAMBERT DOLPHIN</u>	<u>1103 POMEROY AVE SANTA CLARA CA 95051</u>	<u>Lambert Dolphin</u>
11. <u>Petra Olivero</u>	<u>1113 POMEROY AVE, Santa Clara, CA 95051</u>	<u>Petra Olivero</u>
12. <u>Christine Cytarski</u>	<u>1101 Pomeroy Ave Santa Clara CA 95051</u>	<u>Christine Cytarski</u>
13. <u>Stephen Austin</u>	<u>3267 Benton St Santa Clara, CA 95051</u>	<u>Stephen Austin</u>
14. <u>Victoria Gerne</u>	<u>1129 Pomeroy Ave Santa Clara CA 95051</u>	<u>Victoria Gerne</u>
15. <u>R.M. FRONKO</u>	<u>1133 Bonway Ave Santa Clara CA 95051</u>	<u>R.M. FRONKO</u>
16. <u>Miriam Sanchez</u>	<u>1135 Pomeroy Ave Santa Clara</u>	<u>Miriam Sanchez</u>

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Name: (printed)	Address: (printed)	Signature:
1. AC Rucker	1117 Pomeroy Ave	AC Rucker
2. Thomas Oliverio	1113 Pomeroy Ave	Thomas Oliverio
3. Blanca Pradenas	1115 Pomeroy Ave	Blanca Pradenas
4. Michael Alonso	1109 Pomeroy Ave	Michael Alonso
5. Cynthia Alderson	1109 Pomeroy Ave.	Cynthia Alderson
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	Name: (printed)	Address: (printed)	Signature:
92 415 OLD!	1. GOLDA T. HOWES	1147 POMEROY ^{SANTA} CLARA	Golda T. Howes
	2. <i>Pamela</i>	1137 Pomeroy Ave	<i>[Signature]</i>
	3. _____	_____	_____
	4. _____	_____	_____
	5. _____	_____	_____
	6. _____	_____	_____
	7. _____	_____	_____
	8. _____	_____	_____
	9. _____	_____	_____
	10. _____	_____	_____
	11. _____	_____	_____
	12. _____	_____	_____
	13. _____	_____	_____
	14. _____	_____	_____
	15. _____	_____	_____
	16. _____	_____	_____

Shaun Lacey

From: Stephen Austin <stephenaustin@mac.com>
Sent: Monday, August 11, 2014 9:56 PM
To: Shaun Lacey
Subject: 1075 Pomeroy Green rezoning - please no !

Hello Mr. Lacey,

I live at 3267 Benton Street, one of the Pomeroy Green townhomes that will be directly affected by the proposed rezoning and development at 1075 Pomeroy Avenue in Santa Clara. My home is behind and to the north (kitty corner) to the property and would be directly affected by the added height, density, blocked sunlight, and loss of property value if the rezoning takes place and one home is turned into too many on the same piece of property.

I have no objection to rebuilding within the current zoning, but the proposed re-zoning will allow for greater heights and reduced setbacks to the fences thereby 'robbing' the value of our properties in order to increase the profits to the developers. I only want this to be more in harmony with the surrounding homes and townhomes - which I am sure will still leave the project economically viable.

Thank you for your attention to this,

Stephen & Shirley Austin
3267 Benton Street
Santa Clara, CA 95051
408-476-4274

Shaun Lacey

From: John Salera <johnsalera@hotmail.com>
Sent: Wednesday, August 13, 2014 7:15 AM
To: Shaun Lacey
Subject: Protesting the proposed development at 1075 Pomeroy
Attachments: 3273_Benton.pdf

John Salera
3273 Benton Street
Santa Clara, CA 95051
408 248 2777
johnsalera@hotmail.com

August 12, 2014

Mr. Shaun Lacey
Assistant to The Planner
Santa Clara City Hall
1500 Warburton Avenue
Santa Clara, 95050

Dear Mr. Shaun Lacey:

I am writing to express my concerns about the proposed re-zoning and development at 1075 Pomeroy. My wife and I have been living at 3273 Benton Street for over 20 years, and our home has been in my wife's family since the late 1970's. We have two young daughters, aged 5 and 6.

The proposed development will dramatically impact our family's privacy, the value of our home, and the sense of openness we currently enjoy. The development will be directly behind our unit.

While the Pomeroy Green development is densely populated, the rectilinear layout and the distance between the unit groups affords the residents a great amount of privacy in their back patios. Our daughters frequently play in the back area, enjoying the open view of the sky, and I'm comforted to know they are doing so without strangers being able to watch them.

In contrast, were this development to move forward, our privacy would be gone. Instead of an open sky, the new units would loom over our back patio and my young daughters would be on display. Our bedrooms on the second floor would also no longer have privacy, but rather face into the second stories of Lots 3 and 4.

We are quite concerned about the impact this proposed project will have on our family's ability to enjoy our home. Please do not grant the re-zoning request and allow this project as currently proposed to move forward.

Thank you.

John Salera

Peggy Parkin

August 11, 2014

Mr. Shaun Lacey
Assistant to the Planner
Santa Clara Planning Commission
Santa Clara City Hall
1500 Warburton Avenue
Santa Clara, CA 95050

The Honorable Jamie Mathews, Mayor of Santa Clara
and Members of the Santa Clara City Council
Santa Clara City Hall
1500 Warburton Avenue
Santa Clara, Ca. 95050

Re: 1075 Pomeroy Avenue Rezoning Request from R3-18D to PD (Planned Development)

Dear Mr. Lacey, Mayor Mathews and Members of the City Council:

I have been a Santa Clara citizen and home owner for thirty-nine years. In this letter I will share my opinions regarding the few larger issues regarding the referenced project, issues that will affect not only our Pomeroy Green residential area but that of our Eichler neighbors in Pomeroy West across the street, our neighborhood at large.

I have attended the meetings; I have been involved. I am presently against this project entirely; I want it to be stopped.

The developer, Mr. Marhamat of Mountain View, needs to follow the present zoning R3-18D. Instead he requests the 1075 property be rezoned to PD (Planned Development). I understand that one of the reasons why zoning laws were developed is to make new developments compatible so that all citizens have (can enjoy) light, air, and sunlight in their homes and environment. Those attributes will be adversely affected if the planned development is approved.

Surrounding this proposed project are seventeen Pomeroy Green units which are *directly affected* by the proposed development including our Common Area Park. These units are in three buildings that include Benton Street as well as Pomeroy Avenue addresses.

Presently, 1075's site is a beautiful Ranch style home built in 1958, 2,123 square footage on 0.28 of an acre, 3 bedrooms, 2.5 baths, large rooms with a meticulously maintained front yard, two beautiful mature trees. The back yard is large with citrus trees, large mature Italian Cypress trees with seasonal and year round nesting wildlife. Both Eichler communities, Pomeroy Green and Pomeroy West are circa early 1960's. It is believed 1075's original owners sold their surrounding orchards for the construction of Pomeroy Green.

Herein are my reasons why this proposed development is not good for our neighborhood's residents and environment. I feel the developer's design for five stand alone homes would work very well elsewhere on a larger site within our City. However, the proposed project is too large for the 1075 site and dwarfs the buildings in the neighborhood; therefore, the project fails to consider the scale of the neighborhood and, thereby, the concerns of the neighborhood's residents.

My recommendations are as follows should the developer's project moves forward:

- (1) Deny the zone change to PD (Planned Development); the developer should be required to remain within the guidelines of R3-18D, the current zoning for that property.
- (2) Lower the roof height to maintain R3-18D zoning; otherwise, this proposed project will look very out of place with its adjacent neighbors, Pomeroy Green and Pomeroy West.
- (3) Reduce the number of individual homes within proposed project from five homes to four. Three homes are more acceptable for overall neighborhood safety and consideration of the scale of the existing building complexes and would establish room for outdoor activities for those new residents. In one sense, providing more outdoor space would give back something to their community, if approved.

Mr. Dory Marhamat, the developer, purchased 1075 Pomeroy, for profit with the intention to rezone to accommodate his proposed development's features such as roof height that will be taller in height than Pomeroy Green as well as to accommodate his residential development's high interior ceilings. Furthermore, he wants the rezoning to accommodate five homes, each a two story with a fire place, 4 bedrooms, two car garage, small patio and so forth. Also provided in the plans are two additional open guest parking spaces to be shared by all residents.

That is the extent of the improvements on the developer's site; there is no play ground for children or other amenities as there is no room. Therefore, most outdoor activities will likely require automobile trips to other areas of the city thereby increasing local traffic, congestion within the neighborhood.

Our Pomeroy green community is complete and gives back to its residents thereby reducing the burden of government to provide spaces for these activities. We have

experienced a quiet, serene atmosphere over the years, with our children out and about playing in our common areas, designated playground, our teenagers congregating in the breezeways between the buildings, youngsters playing basketball on a designated property built court.

Our community was built fifty-two years ago with extraordinary foresight. It has been a most comfortable place to live. We have working families of all ages and quite a few at home seniors; seniors who live adjacent to the proposed project, work at home residents, residents who have night time positions (sleep during the daytime) who would be subjected to extreme construction noise.

(4) The proposed building should be at least ten feet from the shared Pomeroy Green Common Park fence line to allow for sunlight, air ventilation, and for visual and acoustic privacy in the park.

(5) Major Concern: Traffic. The proposed development will have a maximum of twelve cars on site under the present proposal. The primary entering/exiting driveway is very close to the Benton/Pomeroy Intersection (within 1/10th of a mile) and across the street from Pomeroy West with their 138 units, half of which exit onto Pomeroy, the other half exits onto Benton.

More importantly, pedestrian travel by children to Pomeroy's Grammar School is in very close proximity. Joggers utilize the sidewalk and bicyclist use their newly designated adjoining lane along the frontage of 1075. We also have Santa Clara High School's high end traffic.

In addition, a newly constructed high rise apartment/condo building on the El Camino Real at Pomeroy Avenue is soon to be completed. Our street will absorb a good amount of its traffic as Pomeroy is a valid North to South link from the El Camino Real to Benton's East to West, also to Kiely Boulevard and Homestead Road.

We have a very busy Pomeroy Avenue along with our Benton Street addresses at present; thus, the proposed project's additional traffic is a real hazard.

In addition, the proposed project's roll-over guest parking will be vying for street parking along with established Pomeroy Green and Pomeroy West.

For all of the above mentioned traffic and parking reasons, should the new proposed development be approved be kept to a maximum of four or three homes.

(6) Major Concern: Pomeroy Green Common Area is a private park style setting established with trees, natural grass, twenty-one mature Lilly of the Nile plants, benches for sitting, and a small area to enjoy family time, air breezes. Pomeroy Green's Common Area Park referenced dimensions are: 91'6" (length) x 42'6" (width).

The park area's length is in close proximity to that of 1075's property length. Calculations were performed by a former City employee (who is also a Pomeroy Green long time resident) with a UC Berkeley degree in Environmental Design, with a Major in Architecture, to determine the sun, shade, shadowing patterns affecting our Common area. The conclusion is the Common area will lose its winter's sun and our winter's warmth due to the height of the proposed development's roof line shadowing our area.

The rear of Pomeroy Green buildings will be affected; sunlight into their living/dining rooms, patios will be reduced as well as their privacy reduced by the proposed development.

The Developer's architect presently shows the new building set back ten feet from the property line fence on the south property line while there is only a five foot setback on the north property line where the Common Area Park is located. We asked for at least the required ten foot setback at that park location at the last neighborhood meeting to allow for sun, air ventilation, and privacy but our idea was rejected.

We also proposed, at the last neighborhood meeting, trees along the common fence line for our park privacy and our upper story and back yard privacy. This was also not honored per the developer's recent plans. We understand there will be a new seven foot fence to separate the two properties.

Another concern is the 40" drop in the landscape from the rear of 1075 Pomeroy's property to the Pomeroy Green property which is adjacent to Building O and Q's rear patio fence. We have an alley way in that location. In other words, Pomeroy Green's property is lower than the 1075 property and we are concerned that rainwater from the large roof of the proposed development will run into our alley way.

I want to acknowledge the Developer did present a revised second set of plans to which we appreciated as being more compatible in design with the surrounding neighborhood (Pomeroy Green and Pomeroy West). However, the building's roof is so large and the project's footprint so big in relation to the landscaped area that a lot of rain water could very well have problems draining along the surface of the 1075 property in its way to the city's street drains. Again, we are concerned that water will flow into the Pomeroy Green alley and thus create a serious flood in that area.

(7) Major Concern: Decline in property value. Our particular Eichler Town homes are unique in its construction with their over sized height in sliding glass doors, windows and five skylights, individual side by side rear unit construction that provides privacy during patio use, each with a front patio and large rear patio.

With the height of the proposed building, our surrounding units will be greatly affected--our quality of life will go down--since we will be losing much light for our first level (living/dining room area and back patio) as well as privacy.

(8) This project's building is supervised periodically in order that the Council's instructions and Architectural wishes are totally fulfilled should the proposed development be confirmed.

If the proposed 1075 property redevelopment is approved, all of Pomeroy Green would be compromised in some manner, as we are well within 300 feet of the project, and a good portion of Pomeroy West will be affected as well.

If I speak at the Planning Commission meeting on this subject I will only make reference to this letter with pictures. I realize I have written in depth with an extraordinary amount of detail, but I needed to, this is my community, my home and we all are affected.

In summary, please do not approve the rezoning change and instead require the developer to conform to the current R3-18D zoning and to reduce the number of homes if so approved. The proposed project is too big for the site and the neighborhood.

Thank you for your patience in considering my concerns.

Sincerely,


Peggy Parkin

1095 Pomeroy Avenue
Santa Clara, CA

Shaun Lacey

To: Planning
Subject: RE: 1075 Pomeroy Avenue

From: Sara Crider (scrider) [mailto:scrider@cisco.com]
Sent: Monday, April 21, 2014 8:48 AM
To: Planning
Subject: 1075 Pomeroy Avenue

To whom it may concern,

I am writing to voice my opposition to the change in zoning for the property located at 1075 Pomeroy Avenue.

I believe the density proposed is too much for the size of the lot and the lot lines are much too small given the proximity to the neighboring buildings.

The buildings will be so close that air flow for 2 of the Pomeroy Green (PG) buildings (the one east of 1075 and the one to the south) will be impacted. Given that those units have no air conditioning and cannot install HVAC (due to the Eichler construction), their residents will suffer from hotter temperatures in the summer when the west/northwest flowing breeze is blocked by the 1075 buildings.

Additionally, the proposed placement of the units gives their windows a direct view into the first and second story windows of the existing PG units to the east and south of them. If you review the Pomeroy Green development and the West Pomeroy development you will note that all the buildings are positioned such that blank side walls face the windowed walls of adjacent buildings, thus allowing residents in both buildings to have privacy. Although 1075 is designed to give its residents privacy among themselves, the same consideration has not been given to the Pomeroy Green residents. Even 1075 has no privacy with the Pomeroy Green units behind/to the side of them.

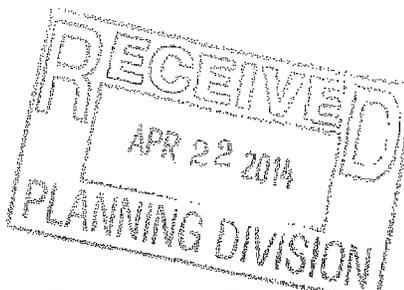
I am not opposed to construction of units that meet the current zoning but strongly feel the design submitted for the new zoning will have a heavy negative impact on the 11 units and families of Pomeroy Green that are adjacent to 1075. I hope that you do not approve the rezoning.

Regards,
SAra Crider
3265 Pomeroy Green
Santa Clara, CA 95051

Lara Ruffolo
1151 Pomeroy Avenue
Santa Clara, CA 95051

April 19, 2014

Santa Clara Planning Commission
City Hall, 1500 Warburton
Santa Clara, CA 95050



Re: Objections to rezoning 1075 Pomeroy Avenue from Single-Family/low density residential to Planned Development

Dear members of the Planning Commission,

I live in Pomeroy Green Co-operative Corporation, the owner-occupied townhouse community that surrounds 1075 Pomeroy Avenue on three sides, I would like you to refuse to rezone that property (1075 Pomeroy) from its current single-family/low-density status. Here are my reasons:

1) The entire stretch of Pomeroy Avenue, from Pereira to El Camino, is single-family/low density. Why should this one property be rezoned to allow higher density and construction up to the property line? The plans for development of 1075 Pomeroy show all new structures abutting the property lines, and directly adjacent to eight existing low-density homes. The planned units are two stories high and will loom over our six-foot high fences; we don't want neighbors looking directly into our yards and bedrooms. This is out of character with our existing neighborhood. The homes directly affected are at 3269, 3271, 3273 and 3275 Benton St., and 3283, 3285, 3287 and 3289 Benton St.

2) Why should a single lot in a single-family/low-density residential zone be rezoned as Planned Development, which allows high density and mixed use? Does it make sense to do this on a one-off basis in a low-density zone? Wouldn't you set a precedent that would allow any single-family home owner to redevelop their lot to mixed use? This is not in accordance with any long-term plans for our neighborhood. The General Plan for the City does not mention redevelopment of residential districts south of the Caltrain corridor, except for this remark:

"1.2.2 Areas of Stability and Potential Development

"Most areas of the City are not expected to change substantially over the course of the Plan. Specifically, Santa Clara's established residential neighborhoods, with their distinctive character and sense of community, are not proposed for land use changes.

"General Plan policies support compatibility between new development and existing neighborhoods in terms of scale, height and land use. Current residents will benefit from public and private investments resulting from the implementation of the Plan,

including new and upgraded public facilities, transportation improvements and retail services planned in concert with new development."

Nothing in the General Plan justifies rezoning 1075 Pomeroy Avenue for Planned Development.

3) The City just spent millions of dollars on traffic-calming measures at the corner of Pomeroy and Benton, and at the Humbolt-Pomeroy crossing. Many schoolchildren cross the driveways of 1075 Pomeroy on their way to Pomeroy Elementary School or Santa Clara High School, and there are bicyclists, strollers, dog-walkers and skateboarders at all hours of the day. If you rezone this property we will have ten more cars driving in and out of our area. The plans call for construction of more driveways and the resulting removal of several street parking spaces. The street parking is already oversubscribed now. How is this a "transportation improvement," which is supposed to confer benefits on current residents?

4) Changing the zoning to Planned Development is too loose a designation for our low-density residential neighborhood. Planned Developments permit mixed use of property. What's to prevent this owner or subsequent ones from opening an unsuitable business in their home? Mixed use would allow a property owner to demolish their house and substitute a liquor store, for instance, or a pornography shop. If the purpose of rezoning is to allow higher density housing, then say so, but limit it to housing, not businesses.

5) As you can see from Google Maps Satellite and Street Views, the Pomeroy Green townhouses that surround this property, and the Pomeroy West buildings across the street from it, are all Eichler homes, designed and built by that culturally significant modern architect. Eichlers are famous for their open feel, for their efficient use of space, and their rectilinear design. Any new buildings at 1075 Pomeroy should blend in with the existing structures, to preserve the character of our Eichler neighborhood.

A "Planned Development Zone" allows demolition of existing structures in favor of high-density housing or mixed use. It allows the owner to build up to the property line, rather than preserving the buffer zones we have between properties in low-density housing. If I had wanted to live in a development with such close proximity to my neighbors, I would have bought a condo elsewhere.

Please note that I don't object to the owners of 1075 Pomeroy re-developing that property. They could probably modify the property to contain three townhouses and still fulfill the conditions of its current low-density zoning. But I do object to the City's rezoning that one small piece of land in our low-density neighborhood, so that the owners can cram as many units into it as possible, without regard for the privacy of the people who already live here, or to the safety and character of the neighborhood.

For all these reasons, I hope you will refuse to rezone 1075 Pomeroy Avenue.

Respectfully yours,



Shaun Lacey

To: Planning
 Subject: RE: In opposition to the development proposed for 1075 Pomeroy Avenue.

From: Quentin Polosky [mailto:daqun_2014@yahoo.com]
 Sent: Monday, April 21, 2014 5:11 PM
 To: Planning
 Subject: In opposition to the development proposed for 1075 Pomeroy Avenue.

Hello.

I'm writing in opposition to the proposed development planned for 1075 Pomeroy Ave. Reasons for my opposition are in agreement with those listed in the text below as written by an owner in Pomeroy Green.

Thank you for your consideration.
 Quentin Polosky
 owner in Pomeroy West

The development will adversely affect seventeen units at Pomeroy Green (buildings "F", "O", and "Q") as well as the entire neighborhood. In my opinion, the proposed zoning change will allow a project that is too large for that lot and will create a lot of problems.

If the city allows a new development next to our buildings, Pomeroy Green buildings "Q", "O", and "F", I would prefer that it be developed similarly to Pomeroy Green—density, features, and aesthetics. I would like to see the new building be set back the required 10' from the side property lines and present a blank face (no windows) along those side elevations, in the same way as the buildings at Pomeroy Green, and that some landscaping such as birch trees be planted in the same configuration and number as seen at Pomeroy Green (a few trees strategically placed to break up the blank wall for aesthetic reasons). The required set back will allow for more landscaping and trees. These actions will provide privacy (acoustic as well as visual) to the units in Pomeroy Green buildings "Q" and "F" as well as the residents of the new development.

The rear setback should be a minimum of 20' rather than the 15' allowed per R3-18D zoning regulations in order to provide the 52' of separation between Pomeroy Green building "O" and the proposed building. The fifty-two feet of separation is what Pomeroy Green now enjoys between its buildings "B" and "C" on the long Pomeroy court. This amount of separation is needed to allow space for the planting of trees in order to provide a beautiful screen between the windows in the Pomeroy Green building "O" and the proposed building. The trees should be selected by the developer and the residents of PG building "O".

The proposed building setbacks are the main issue. If the required minimum setbacks per the R3-18D zoning regulations were applied to the development, I calculate the five housing units would only be 900 sq.ft. or less in size. Therefore, I think the developer wants the PD zoning to allow for larger units. Alternatively, the number of new units should be reduced, in order to harmonize with Pomeroy Green's building density.

The proposed building will cover too much of the lot, 41% of the lot, rather than the allowed 35%. The proposed development will only provide 30% landscape coverage rather than the required 40%. Unfortunately, the developer will be removing one of the large ash trees that is located in the front of the lot.

The fact that two-car garages are provided deep into the lot in the proposed development, rather than providing group parking as is done at Pomeroy Green, means more paving and less landscaping in the proposed development. This proposed design contributes to the unusual, and in my opinion, unattractive bulk of the buildings on that small lot.

I think the new buildings should be oriented parallel to Pomeroy Avenue in a fashion similar to what has been done with Pomeroy Green building "Q" on Benton Street. Building "Q" is parallel to the street and has grouped parking along the frontage. The proposed buildings need a larger lot than 1075 Pomeroy provides.

I would also like to see flat roofs on the proposed buildings in the new development because this will allow more light to penetrate to the ground as well as allow residents of Pomeroy Green and the residents

of the new development to view the sky from their homes. I think it is psychologically important to be able to view the sky, the changing weather patterns and changing light intensity, as a means to good mental health.

I would also like to see that fireplaces be excluded in the new development because those proposed buildings are very close to the Pomeroy Green units. Those new housing units are upwind (the prevailing wind is from the north and, at times, from the west and the south during storms—rarely is the wind from the east) and, since the Pomeroy Green buildings are to the north, south, and east of the proposed development, the air quality around and in the surrounding Pomeroy Green buildings will be reduced when the fireplaces are in use in the new development. I don't think there would be a problem with natural gas burning fireplaces in the new development if restrictions are in place to prohibit the residents of the new development from converting their natural gas fireplace to wood, oil, and coal burning fireplaces.

I also anticipate the new development will block or reduce the cooling summertime breezes, particularly near ground level. Since the Pomeroy Green units are not air conditioned, those units may become uncomfortably hot during the summer. The addition of central air conditioning units to mitigate the heat in the Pomeroy Green units will be difficult and expensive to install and expensive to run. The addition of room window air conditioners to the Pomeroy Green units will be unsightly and will create unwanted mechanical noise.

I think the architectural aesthetics of the new development, Mission Revival Style (orange/red color, ironwork looking details, mullioned double-hung windows, and tile roofs), will clash with the Modern architecture style of Pomeroy Green, that surrounds the proposed development on three sides, and Pomeroy West that is directly across the street from the proposed development.

Pomeroy Green and Pomeroy West are both excellent examples of Modern architecture (light colors--beige and light green, flat roofs, grouped parking, carports integrated with the housing, and large expanses of window glass). The proposed architectural style of the new development clashes so much with the architectural style of the two existing complexes that I think the whole neighborhood will become an eyesore.

Pomeroy Green and Pomeroy West, developed by Joe Eichler with architect Claude Oakland, are nationally and internationally recognized for their progressive design and Modern architecture. I recently hosted, with another Pomeroy Green resident, a group of architects from Holland who came specifically to tour our multi-family complex.

If the city is interested in encouraging architectural tourism in the city, it would behoove them to consider the overall architectural distinction of these two complexes, Pomeroy Green and Pomeroy West, in the debate about the appropriate development of 1075 Pomeroy.

Unfortunately, the new development does not even meet the intent of the Planned Development regulations in my opinion. The intent of the PD regulations are to encourage progressive and innovative designs, especially mixed use, that benefits the community as well as the residents of the project. This proposed development seems to only address the issue of getting the biggest residences, with features more amenable to single family detached homes and their larger lots, onto the smallest lot possible while providing the least amount of landscaping little outdoor living space.

A little historic note, I have lived in a Planned Development in the city of Santa Clara, Vista Del Lago, located roughly at the northwest corner of Stevens Creek Boulevard and Saratoga Avenue (frontage on Buckingham Drive at Mauricia Avenue). That award winning PD, combines multi-family garden apartment living (now condominium) with patios, views of water features, and nice landscaping (walkways throughout that are open to visitors) as well as social amenities such as a swimming pool and clubhouse.

That complex also includes office buildings on one side of the property that enhances the overall project (aesthetically: same architectural style; functionally: you can conveniently walk to those businesses; and economically: the businesses contribute to the costs of maintaining the landscaping). The proposed development for 1075 Pomeroy includes only small patios and none of the other advantageous features of Planned Developments.

There may be a storm-water drainage problem with the new development. In the proposed development, the rainwater from the roof is directed to downspouts that in turn is directed to pop-up emitters via an underground pipe. The pop-up emitters are located in the backyard near the property line. That water is supposed to run from the pop-up emitters to the 5' side easement, labeled "(N) [new] 5' drainage easement" on the Tentative Map, that is graded to 1% along the sides of the project and then the water runs into the on-site catch basin located in the driveway at the front of the project.

This is a long way to go for the large amount of rainwater that will be coming off those large roofs on the project. I don't think the clay soils that are normally found in our city will readily absorb that amount of water. I expect there may be some flooding in the future along the Pomeroy Green property that is adjacent to those proposed drainage systems particularly in the the back alleyway for Pomeroy Green

building "O" that is located near that property line with the proposed development. That alleyway is lower in elevation than the elevation of the proposed backyards with their pop-up emitters and, therefore, I think the alleyway will be prone to flooding from storm-water from the new development.

It seems to me an underground pipe and catch basin system will be needed for the rainwater or, at the very least, a bioswale along the entire sides of the project. Pomeroy Green has an underground storm-water drainage system in its landscaped areas that works; why can't the developer for 1075 Pomeroy provide a similar system?

I think it will be possible to provide multi-family housing at 1075 Pomeroy that is acceptable to Pomeroy Green residents and the neighborhood but I think the current form proposed by the developer is not acceptable. I prefer the existing home remain until such time that my concerns are addressed.

Again, please write a letter in opposition to the proposed development on behalf of Pomeroy Green to the City of Santa Clara Planning Division by Wednesday morning and plan on attending the Planning Commission meeting to be held on Wednesday, April 30, at 7:00pm in the City Council Chambers, 1500 Warburton Avenue.

Thank you for considering my request.

Shaun Lacey

To: Planning
Subject: RE: PLANNING/File NO. PLN2013-10129, 1075 Pomeroy Avenue (APN:290-69-079)

From: Peggy Parkin [mailto:pparkin4559@comcast.net]
Sent: Tuesday, April 22, 2014 3:21 PM
To: Planning
Subject: PLANNING/File NO. PLN2013-10129, 1075 Pomeroy Avenue (APN:290-69-079)
Importance: High

April 22, 2014

Santa Clara Planning Commission
1500 Warburton Avenue
Santa Clara, CA

Re: Objections to rezoning 1075 Pomeroy Avenue from Low-Density Multiple Dwelling Residential to Planned Development

Dear Planning Commission Members:

My name is Peggy Parkin. I am a thirty-nine year resident owner of a Pomeroy Green townhouse. Several of our resident owners will express their technical objections to this proposed project. I am writing more from a personal viewpoint about the detrimental effect this proposed five unit multi-family structure will have on our community and the surrounding area.

There are three Pomeroy Green buildings (17 individually owned Units) within our community that experience the beauty of the large trees and extraordinary light that the existing 1075 Pomeroy Avenue property allows. 1075's curb appeal is quite lovely and beautiful to the neighborhood especially the property's design as viewed from the street. The destruction of the mature trees and rose bushes on the property would be extremely unfortunate.

Pomeroy Green was built on a former orchard by the famed developer, Joe Eichler, and architect, Claude Oakland, in the early 1960's. Visitors from as far away as Holland selected our property to tour in 2013. The proposed plans for 1075 show an unappealing structure that does not blend with the surrounding Eichler Townhouses (including Pomeroy West across the street), particularly in height; Pomeroy Green buildings are twenty feet in height and the new development would be twenty five feet tall. This proposed structure would decrease major natural light into our back yard areas and within our homes and does not harmonize with the existing architectural style.

We have a peaceful, quiet area here. We have senior citizens who live here. We have Pomeroy grammar school in very close proximity with children walking to and from school. We do not need more automobiles and traffic maneuvering in

and out within 3/10th of a mile or less from the Pomeroy Avenue/Benton Street corner intersection.

We do not need the noise this proposed facility and its occupants, automobiles would bring. We have people who work from home, whose home offices would be affected by extreme noise. Nor, do we need the air pollution from the proposed buildings' fireplaces.

Santa Clara has several large multi-family complexes presently in construction on the El Camino Real in close proximity to Pomeroy Avenue's corner and on the former Kaiser Hospital property on Kiely. That is agreeable and we, as a City, need this to accommodate our population growth. These properties, now under construction, are on appropriate zoned land and not demeaning to their surroundings.

I am wondering if you, the Commission, have had the opportunity to view 1075 Pomeroy? If you haven't, please take the time to do so and also look at the beautiful design of the surrounding properties as well. I feel that our property values at Pomeroy Green may decrease as a result of the development, and, importantly, units for sale in our complex are purchased rather quickly, are desirable and I am afraid this will drastically change with the proposed development.

I do not feel the original owners who now have passed away would approve of what is being proposed. They placed their heart and soul into their home and their property was and remains a desirable improvement in the neighborhood. I feel that these relatively new owners purchased the property with the intent of changing the zoning and making a large profit from the sale of the units.

1075 Pomeroy should remain as a single residence. I would hope the new owners would consider the effects their proposed complex would have on residents that have been there for so many years as well as how badly it will look in that specific location and how it will change the look of the residential area in general.

I ask the commissioners to carefully review this proposed project and rezoning request and do what is morally right, to deny the rezoning request.

Thank you for your time.

Sincerely,

Peggy Parkin
Pomeroy Green resident
Santa Clara, CA

Shaun Lacey

To: Planning
Subject: RE: Rezone of 1075 Pomeroy Ave. - PLN 2013-10129

From: diane@dianesdreamdestinations.biz [mailto:diane@dianesdreamdestinations.biz]
Sent: Tuesday, April 22, 2014 7:16 PM
To: Planning
Subject: Rezone of 1075 Pomeroy Ave. - PLN 2013-10129

Dear Planning Commissioners,

I would like this project to fit into our neighborhood.

I am sorry that the owner spent all that money on the plans, but Claude Oakland of the Eichler firm was a well-known architect, and his plans are on file here at Pomeroy Green and probably in the public records as well. Architecture aficionados from all over the world come to visit this complex.

The Pomeroy Green development was quite deluxe when it was new, with features such as 5 SKYLIGHTS, 4 BEDROOMS, 2.5 BATHROOMS, RADIANT HEATING, washer/dryer conveniently located on the upstairs bedroom level, and flow-through ventilation. The attached carports with 2 storage closets actually allow greater living space, not less, and still protect one from inclement weather. Cement block walls between units help reduce noise and the spread of fire from adjoining units.

Age has reduced Pomeroy Green's property values, but the owner can still build 3-4 NEW units on this property by using these plans. Besides looking new and clean, these Eichler-like units can have modern 3-prong grounded outlets, more efficient heating, dual-paned windows, instant hot water, and other sought-after features. So, they will certainly sell for more than ours, and they will be positively differentiated from all the developments currently going up all over Santa Clara. And no re-zoning will be necessary.

I, personally, would suggest to the board, that the residents of this Eichler-like complex have emergency access to our back walkways for heightened safety and security.

During construction, I would like to request that no power tools or hammers be used before 9am and that we get at least a day's notice about any production of dust so that we may be sure to close our window.

Thank you.

A

Sincerely,

Diane Harrison

3283 Benton St.

Santa Clara, CA 95051

408-554-5854 - Tuesdays, Thursdays, Fridays, Saturdays

Fax: 408-716-2723

diane@dianesdreamdestinations.biz

www.dianesdreamdestinations.biz

Shaun Lacey

To: Planning
Subject: RE: PLN2013-10129, 1075 Pomeroy Avenue, proposed rezoning and development

From: Ken Kratz [mailto:kskratz@yahoo.com]
Sent: Wednesday, April 23, 2014 3:17 AM
To: Planning
Cc: ken kratz
Subject: PLN2013-10129, 1075 Pomeroy Avenue, proposed rezoning and development

April 22, 2014
3283 Benton Street
Santa Clara, Ca. 95051

Planning Commission
City of Santa Clara
1500 Warburton Avenue
Santa Clara, Ca. 95050

Re: PLN2013-10129, 1075 Pomeroy Avenue, proposed rezoning and development

Dear Planning Commission:

Please deny the request to rezone the property at 1075 Pomeroy Avenue from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development) and require the applicant to resubmit plans that meet RD-18D regulations and require the new development to harmonize with the existing multi-family homes in the neighborhood, the Pomeroy Green Cooperative townhouses that surround the lot and Pomeroy West townhouses across the street.

I have many concerns regarding the proposed development. The development will adversely affect seventeen units at Pomeroy Green (buildings "F", "O", and "Q") as well as the entire neighborhood. In my opinion, the proposed zoning change will allow a project that does not harmonize with the existing neighborhood, is too large for that lot, and will create a lot of problems particularly for the multi-family units of Pomeroy Green Cooperative directly adjacent to the lot.

If the city allows a new development next to our buildings, Pomeroy Green buildings "Q", "O", and "F", I would prefer that it be developed similarly to Pomeroy Green--density, features, and aesthetics.

Please find the attached map and photographs of Pomeroy Green, the multi-family complex, that surrounds on three sides the proposed development.

The proposed development plans do not meet the Planned Development regulations. I have the following specific objections to this project:

1.. Not in harmony with the neighborhood.

The proposed development does not meet Planned Development regulation section 18.54.050, Design, first paragraph:

"The proposed development plan must be designed to provide an environment of a stable, desirable character not out of harmony with its surrounding neighborhood."

I think the architectural aesthetics of the new development, Mission Revival Style (orange/red color, ironwork looking details, mullioned double-hung windows, and tile roofs), will clash with the Modern architecture style of Pomeroy Green, that surrounds the proposed development on three sides, and Pomeroy West that is directly across the street from the proposed development (please find the attached photographs of Pomeroy Green building "Q").

Pomeroy Green and Pomeroy West are both excellent examples of Modern architecture (light colors--beige and light green, flat roofs, grouped parking, carports integrated with the housing, and large expanses of window glass). The proposed architectural style of the new development clashes so much with the architectural style of the two existing complexes that I think the whole neighborhood will become an eyesore.

Pomeroy Green and Pomeroy West, developed by Joe Eichler with architect Claude Oakland, are nationally and internationally recognized for their progressive design and Modern architecture. I recently hosted, with another Pomeroy Green resident, a group of architects from Holland who came specifically to tour our mufti-family complex.

If the city is interested in encouraging architectural tourism in the city, it would behoove them to consider the overall architectural distinction of these two complexes, Pomeroy Green and Pomeroy West, in the debate about the appropriate development of 1075 Pomeroy.

2. Building set backs and building height are not standard.

The current zoning, R3-18D (the current zoning for 1075 Pomeroy Avenue and the Pomeroy Green complex as well), has many requirements as to set backs (front, side, and back), building heights, landscaping area coverage (see #3 below), and building area coverage (see #3 below). The developer's proposal does not meet the minimum requirements for R3-18D zoning in any of these items of concern.

Essentially the proposed building will be two stories and be taller (25'-6" rather than the 25' maximum [25' is significantly higher than the existing 20' high Pomeroy Green buildings that surround the proposed development]) and closer to the property line (5' side setback rather than 10' minimum; 5' to 15' back setback rather than 15' minimum; and 15' front setback rather than the 20' minimum) than allowed by the current zoning. There will be second story bedroom and bathroom windows directly behind and facing the Pomeroy Green buildings' windows, especially close are those windows next to the Pomeroy Green building "Q".

I would like to see the new building be set back the required 10' from the side property lines as a minimum and present a blank face (no windows) along those side elevations, in the same way as the buildings at Pomeroy Green, and that some landscaping such as birch trees be planted in the same configuration and number as seen at Pomeroy Green (a few trees strategically placed to break up the blank wall for aesthetic reasons). The required set back will allow for more

landscaping and trees. These actions will provide privacy (acoustic as well as visual) to the units in Pomeroy Green buildings "Q" and "F" as well as the residents of the new development.

The rear setback should be a minimum of 20' rather than the 15' allowed per R3-18D zoning regulations in order to provide the 52' of separation between Pomeroy Green building "O" and the proposed building. The fifty-two feet of separation is what Pomeroy Green now enjoys between its buildings "B" and "C" on the long Pomeroy court. This amount of separation is needed to allow space for the planting of trees in order to provide a beautiful screen between the windows in the Pomeroy Green building "O" and the proposed building. The trees should be selected by the developer and the residents of Pomeroy Green building "O".

I'm also concerned that without the required setbacks, there may be a problem with smoke from the fireplaces, cooking odors, and sewer odors from the new homes that will enter the Pomeroy Green units. I would like to see those fireplaces be excluded and the required setbacks enforced to mitigate the other concerns.

Those new housing units are upwind (the prevailing wind is from the north and, at times, from the west and the south during storms--rarely is the wind from the east) and, since the Pomeroy Green buildings are to the north, south, and east of the proposed development, the polluted air will go directly towards the Pomeroy Green buildings.

If the required minimum setbacks per the R3-18D zoning regulations were applied to the development, I calculate the five housing units would only be 900 sq.ft. or less in size. Therefore, I think the developer wants the PD zoning to allow for larger units. Alternatively, the number of new units should be reduced, in order to harmonize with Pomeroy Green's building density.

I also anticipate the new buildings, due to the excessive height (25'-6" rather than the 20" of the Pomeroy Green buildings) and bulk (see objection #3 below) will block or reduce the cooling summertime breezes, particularly near ground level. Since the Pomeroy Green units are not air conditioned, those units may become uncomfortably hot during the summer.

The addition of central air conditioning units to mitigate the heat in the Pomeroy Green units will be difficult and expensive to install and expensive to run. The addition of room window air conditioners to the Pomeroy Green units will be unsightly and will create unwanted mechanical noise.

I would like to see flat roofs on the proposed buildings in the new development constructed at the same elevation as the Pomeroy Green buildings (20' above grade) because this will mitigate the problem of blocked breezes as mentioned above and will allow more light to penetrate to the ground.

This low flat roof has another benefit in that it will allow residents of Pomeroy Green and the residents of the new development to view more of the sky from their homes and the surrounding grounds. I think it is psychologically important to be able to view the sky, the changing weather patterns and changing light intensity, as a means to good mental health.

3.. Maximum building lot coverage and minimum landscape coverage are not standard.

According to R3-18D zoning regulations, the proposed building will cover too much of the lot, 41% of the lot, rather than the 35% allowed. The proposed development will only provide 30% landscape coverage rather than the 40% required. Unfortunately, the developer will be removing

one of the large ash trees that is located in the front of the lot due to the large footprint of the new building.

The fact that two-car garages are provided deep into the lot in the proposed development rather than providing group parking as is done at Pomeroy Green means more paving and less landscaping in the proposed development. This proposed design contributes to the unusual, and in my opinion, unattractive bulk of the buildings on that small lot.

I think the new buildings should be oriented parallel to Pomeroy Avenue in a fashion similar to what has been done with Pomeroy Green building "Q" on Benton Street. Building "Q" is parallel to the street and has grouped parking along the frontage. The proposed buildings need a larger lot than 1075 Pomeroy provides.

4. Does not meet the intent of the Planned Development.

In my opinion the overall intent of the PD regulations are to encourage imaginative designs, especially mixed use, that benefits the community as well as the residents of the project. This proposed development seems to only address the issue of getting the biggest residences, with features more amenable to single-family detached homes and their larger lots, onto the smallest lot possible while providing the least amount of landscaping and little outdoor living space.

A little historic note, I lived with my parents in a Planned Development in the city of Santa Clara, Vista Del Lago, located roughly at the northwest corner of Stevens Creek Boulevard and Saratoga Avenue (frontage on Buckingham Drive at Mauricia Avenue). That award winning PD, combines multi-family garden apartment living (now condominium) with patios, views of water features, and nice landscaping (walkways throughout that are open to visitors) as well as social amenities such as a swimming pool and clubhouse.

That complex also includes office buildings on one side of the property that enhances the overall project (aesthetically: same architectural style; functionally: you can conveniently walk to those businesses; and economically: the businesses contribute to the costs of maintaining the landscaping). The proposed development for 1075 Pomeroy includes only small patios and none of the other advantageous features of Planned Developments.

5. Storm water catchment system appears to be inadequate.

There may be a storm-water drainage problem with the new development. In the proposed development, the rainwater from the roof is directed to downspouts that in turn is directed to pop-up emitters via an underground pipe. The pop-up emitters are located in the backyard near the property line.

That water is supposed to run on the surface of the ground from the pop-up emitters to the 5' side easement, labeled "(N) [new] 5' drainage easement" on the Tentative Map, that is graded to 1% along the sides of the project. Then the water runs on the surface of the ground from the easement to to the on-site catch basin located in the driveway at the front of the project.

This is a long way for the water to travel and there will be a large amount of rainwater that will be coming off those large roofs on the project. I don't think the clay soils that are normally found in our city will absorb much of the water on its way to the catch basin.

I expect there may be some flooding in the future along the Pomeroy Green property that is adjacent to those proposed drainage systems particularly in the the back alleyway for Pomeroy Green building "O" that is located near that property line with the proposed development. That alleyway is lower in elevation than the elevation of the proposed backyards with their pop-up emitters and, therefore, I think the alleyway will be prone to flooding from storm-water from the new development.

It seems to me an underground pipe and catch basin system will be needed for the rainwater or, at the very least, a bioswale along the entire sides of the project. Pomeroy Green has an underground storm-water drainage system in its landscaped areas that works; why can't the developer for 1075 Pomeroy provide a similar system?

Conclusion:

I think it will be possible to provide multi-family housing at 1075 Pomeroy that is acceptable to Pomeroy Green residents and the neighborhood but I think the current design proposed by the developer is not acceptable. I prefer the existing home remain until such time that my concerns are addressed.

Again, please deny the request to rezone the property at 1075 Pomeroy Avenue from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development) and require the applicant to resubmit plans that meet RD-18D regulations and require the new development to harmonize with the existing multi-family homes in the neighborhood, the Pomeroy Green Cooperative townhouses that surround the lot and Pomeroy West townhouses across the street.

Thank you for considering my request.

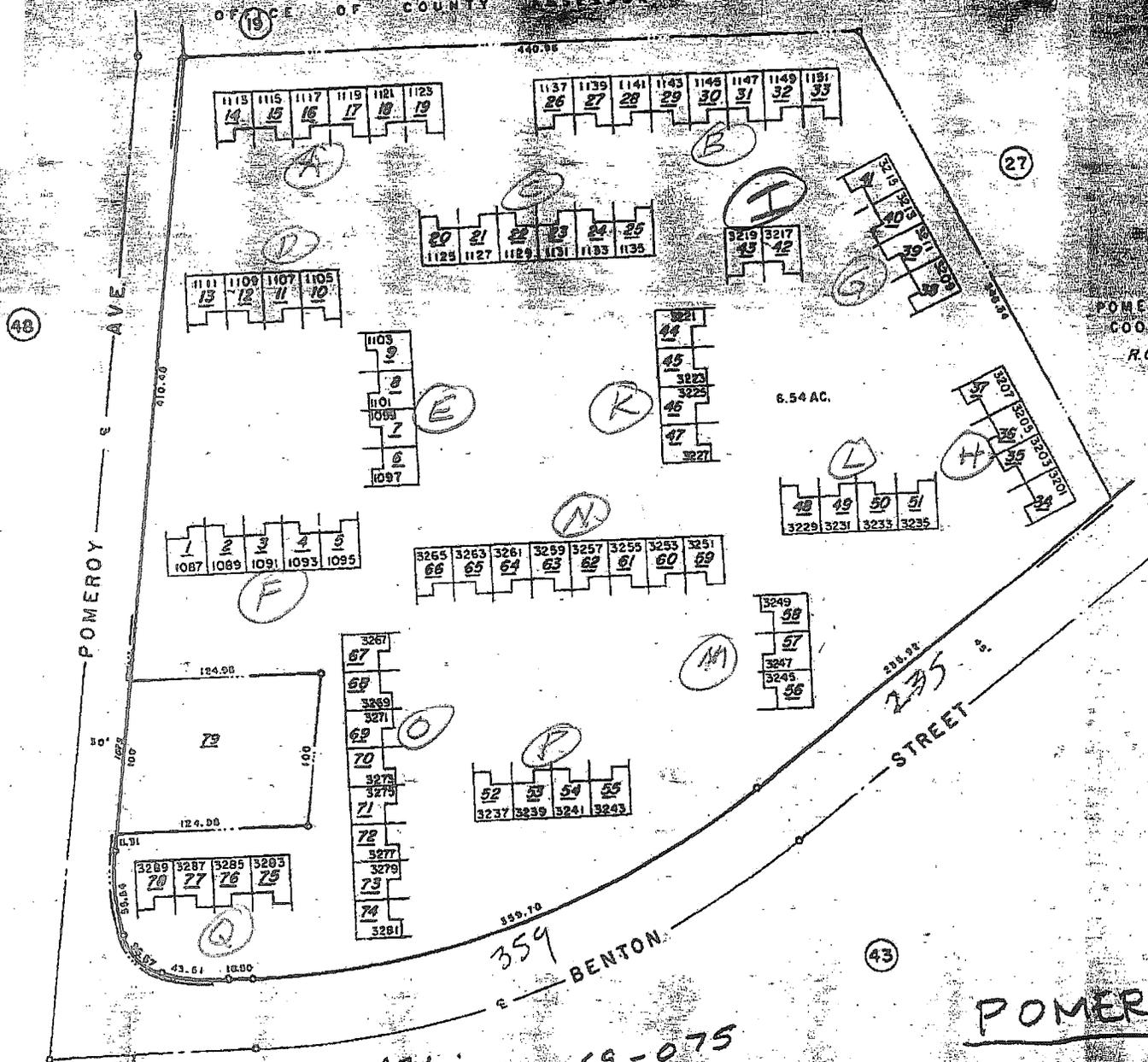
Sincerely yours,

Ken Kratz
Pomeroy Green shareholder

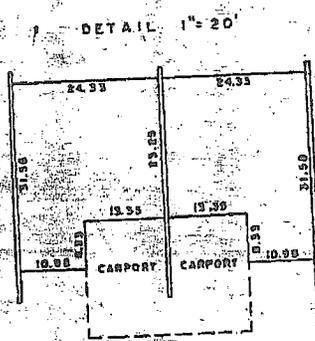
attachments: PG--map of complex
PG photograph, front
PG photograph, front and side
PG photograph, backyard

OFFICE OF COUNTY ASSESSOR - SANTA CLARA COUNTY, CALIF.

BOOK 290 69



POMEROY GREEN COOPERATIVE R.O.S. 125729

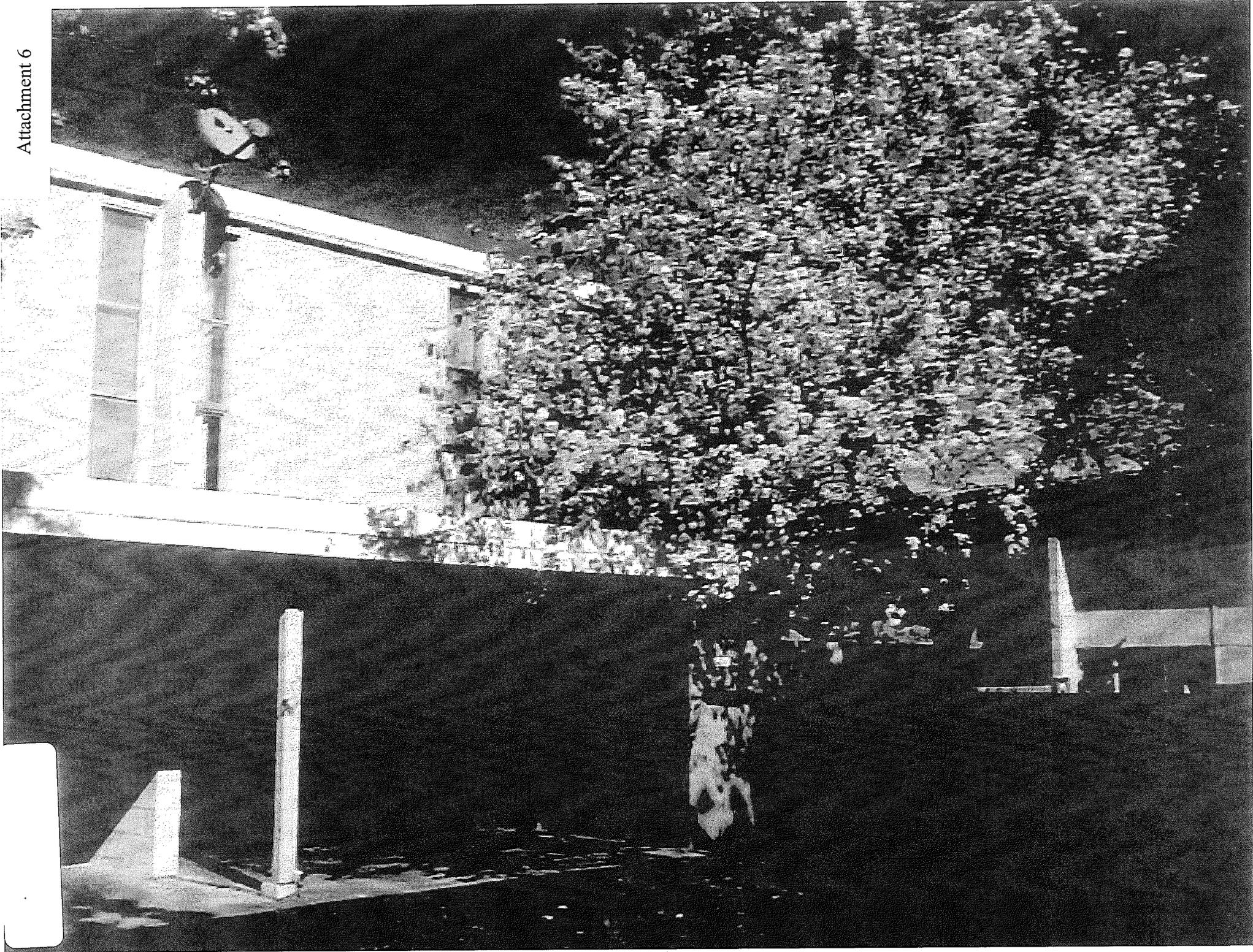


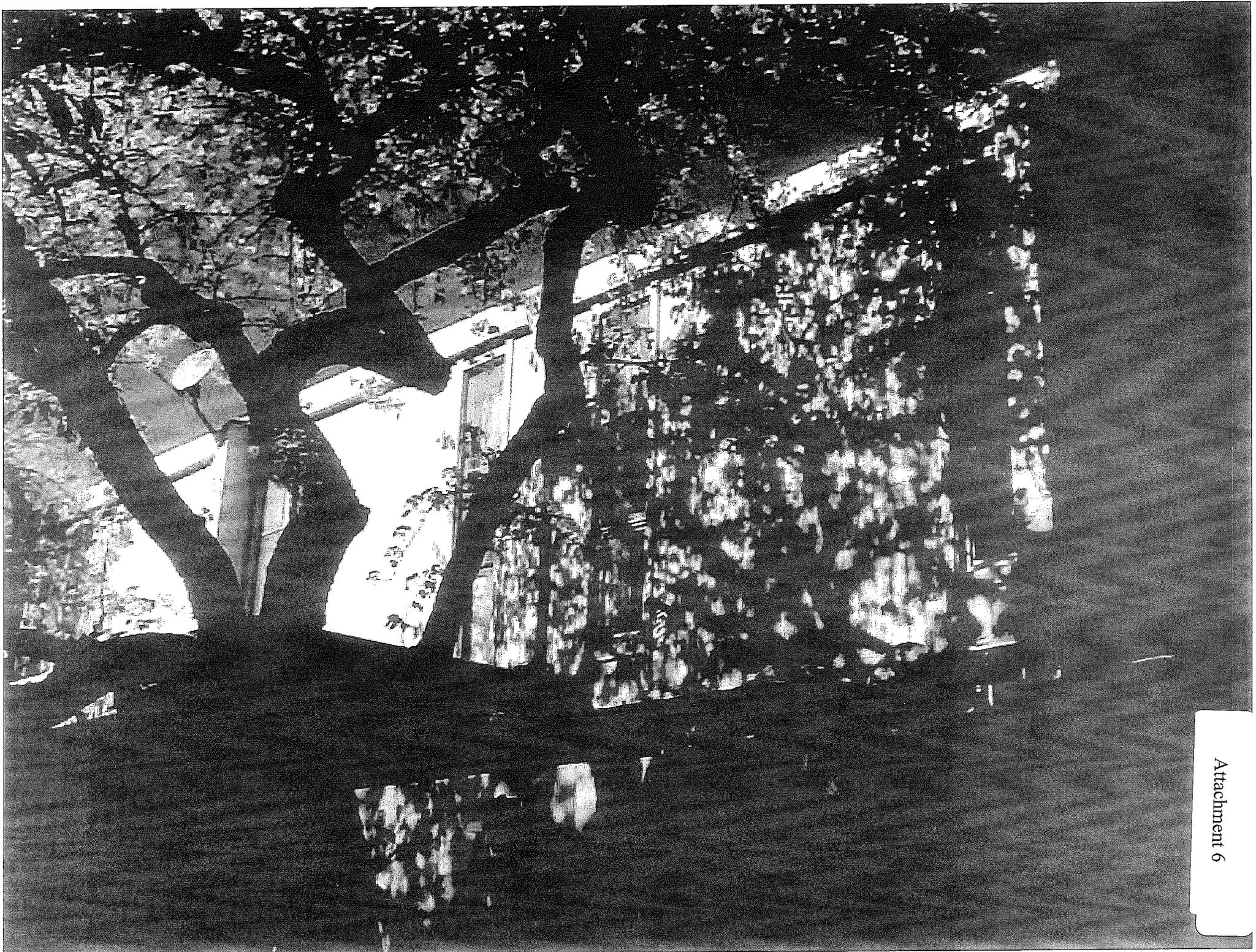
APN : 290-69-075
 Transfer
 Date 6-9-2009

POMEROY GREEN

LAWRENCE E. STONE - ASSESSOR
 Cadastral map for assessment purposes only
 Compiled under R. & T. Code, Sec. 327,
 Effective Roll Year 2008-2009





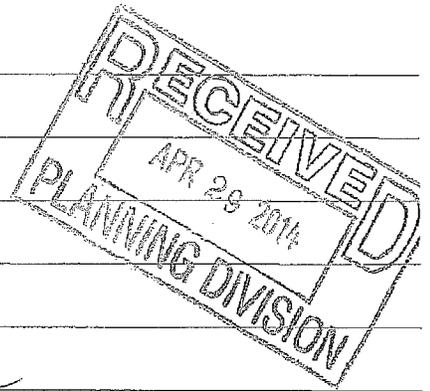


Attachment 6

04/28/2014

Attachment 6

City of Santa Clara
Planning Department
1500 Workerton Avenue
Santa Clara, CA 95050



Subject: Request by developer
Doug Merchant
to re-zone R3-18D TO PD.
PLN 2013-10129/1025
Pomeroy Ave. INTO
5 RESIDENTIAL UNITS

My name is Clarence A. Goldfinger,
my family has owned and occupied
973 Peninsula Drive, Santa Clara since
it was built in 1964.

Frank Pereira owned all the property
that became Peninsula Drive
prior to our moving to Santa Clara.
The Pereira family were our friends
and not door neighbors.

The above proposed rezoning is
located close to my home &
I see this property almost daily
as I travel on Pomeroy Blvd.
I am quite familiar with
the area.

Essentially, I do not object to
the approval of this re-zoning as
it should result, upon the successful
completion and marketing of these
5 residential units; in an
appreciation and potential increase
in Property tax revenue
for the City of Santa Clara

Respectfully yours

Clarence L. Neufinger

973 PERREIRA DRIVE

SANTA CLARA, CA 95051

408 247-3972

AU_DIGIT@N.S.A. .COM

POMEROY GREEN CORPORATION

3291 Benton Street
 Santa Clara, CA 95051
 408 241-6076

April 22, 2014

Santa Clara Planning Commission
 City Hall, 1500 Warburton
 Santa Clara, CA 95050

Re: Objections to rezoning 1075 Pomeroy Avenue from Single-family/low density residential to Planned Development

Dear members of the Planning Commission,

We are the Board of Directors of the Pomeroy Green Co-operative Corporation, the owner-occupied townhouse community that surrounds 1075 Pomeroy Avenue on three sides. We would like you to refuse to rezone that property (1075 Pomeroy) from its current single-family/low-density status. Here are our reasons:

- 1) The entire stretch of Pomeroy Avenue, from Pereira to El Camino, is single-family/low density. Why should this one property be rezoned to allow higher density and construction up to the property line? The plans for development of 1075 Pomeroy show all new structures abutting the property lines, and directly adjacent to eight existing low-density homes. The planned units are two stories high and will loom over our six-foot high fences; we don't want neighbors looking directly into our yards and bedrooms. This is out of character with our existing neighborhood. The homes directly affected are at 3269, 3271, 3273 and 3275 Benton St., and 3283, 3285, 3287 and 3289 Benton St.
- 2) Why should a single lot in a single-family/ low-density residential zone be rezoned as Planned Development, which allows high density and mixed use? Does it make sense to do this on a one-off basis in a low-density zone? Wouldn't you set a precedent that would allow any single-family home owner to redevelop their lot to mixed use? This is not in accordance with any long-term plans for our neighborhood. The General Plan for the City does not mention redevelopment of residential districts south of the Caltrain corridor, except for this remark:

4.2.2 Areas of Stability and Potential Development

"Most areas of the City are not expected to change substantially over the course of the Plan. Specifically, Santa Clara's established residential neighborhoods, with their distinctive character and sense of community, are not proposed for land use changes:

"General Plan policies support compatibility between new development and existing neighborhoods in terms of scale, height and land use. Current residents will benefit

from public and private investments resulting from the implementation of the Plan, including new and upgraded public facilities, transportation improvements and retail services planned in concert with new development."

Nothing in the General Plan justifies rezoning 1075 Pomeroy Avenue for Planned Development.

3) The City just spent millions of dollars on traffic-calming measures at the corner of Pomeroy and Benton, and at the Humbolt-Pomeroy crossing. Many schoolchildren cross the driveways of 1075 Pomeroy on their way to Pomeroy Elementary School or Santa Clara High School, and there are bicyclists, strollers, dog-walkers and skateboarders at all hours of the day. If you rezone this property we will have ten more cars driving in and out of our area. The plans call for construction of more driveways and the resulting removal of several street parking spaces. The street parking is already oversubscribed now. How is this a "transportation improvement," which is supposed to confer benefits on current residents?

4) Changing the zoning to Planned Development is too loose a designation for our low-density residential neighborhood. Planned Developments permit mixed use of property. What's to prevent this owner or subsequent ones from opening an unsuitable business in their home? Mixed use would allow a property owner to demolish their house and substitute a liquor store, for instance, or a pornography shop. If the purpose of rezoning is to allow higher density housing, then say so, but limit it to housing, not businesses.

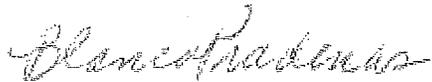
5) As you can see from Google Maps-Satellite and Street Views, the Pomeroy Green townhouses that surround this property, and the Pomeroy West buildings across the street from it, are all Eichler homes, designed and built by that culturally significant modern architect. Eichlers are famous for their open feel, for their efficient use of space, and their rectilinear design. Any new buildings at 1075 Pomeroy should blend in with the existing structures, to preserve the character of our Eichler neighborhood.

A "Planned Development Zone" allows demolition of existing structures in favor of high-density housing or mixed use. It allows the owner to build up to the property line, rather than preserving the buffer zones we have between properties in low-density housing. We purchased our houses in this neighborhood on the understanding that it was low-density, and would remain so.

The owners of 1075 Pomeroy are welcome to re-develop that property. They could probably modify the property to contain three townhouses and still fulfill the conditions of its current low-density zoning. But our Board of Directors objects to the City's rezoning that one small piece of land in our low-density neighborhood, so that the owners can cram as many units into it as possible, without regard for the privacy of the people who already live here, or to the safety and character of the neighborhood.

For all these reasons, we hope you will refuse to rezone 1075 Pomeroy Avenue.

Respectfully yours,



Blanca Pradenas, President (1115 Pomeroy Avenue)

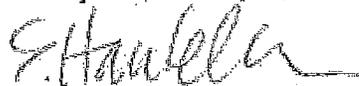


Stephen Austin, Treasurer (3267 Benton Street)

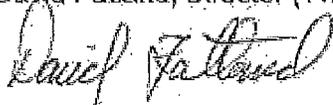


Lara Ruffolo, Secretary (1151 Pomeroy Avenue)

Evahey Hantelman, Director (3269 Benton Street)



David Fallard, Director (1123 Pomeroy Avenue)



July 15, 2014

Mr. Shaun Lacey
Planning Division, City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

Dear Mr. Lacey:

I am writing to protest the plans to develop and re-zone the property at 1075 Pomeroy as presented to the community on May 12th and again on July 8th, and to request that the current R3-18D zoning be respected and maintained. Though the style changes are welcome aesthetically, the design remains tone deaf to environmental context. The developer's plan for five large homes without appropriate set-backs, building buffers, height restrictions, and open space percentages will negatively impact the adjacent Pomeroy Green homeowners directly, and will hurt the neighborhood as a whole. There are 78 homes in Pomeroy Green and 138 in the companion development of Pomeroy West across the street where I am a long-time homeowner.

As property values increased in the area, Eichler commissioned designs for higher density living without sacrificing his ideals of livability and planned communities featuring integrated parks and community centers. The homes were designed for privacy, with line-of-sight buffer spaces between windows, and with plenty of natural light. There is no central air, but instead we have radiant heat and depend on air-flow, generous eaves in some cases, and shading trees for cooling. Deciduous trees allow for summer cooling and winter sunlight. Our homes were far ahead of their time and are quiet, efficient and comfortable. They are a good place to raise a family and generations of kids have grown up here.

The developer's plan would change all that for those Pomeroy Green homes directly impacted, stealing both livability and home values, for which the entire complex would suffer. And for the community at large, as well as for the

schools in the immediate area – Pomeroy Elementary, Santa Clara High School, and the charter school down the street – the increased traffic will create problems with safety, parking, neighborhood walkability, air quality, and noise. The livability of the new homes, though with internal amenities, provide no considerations for children’s play areas, nor landscaped space for anyone or for heat dissipation, and no real guest parking. The existing neighborhood would have to absorb those hits. As to privacy, a screening stand of cypress might block vision between upstairs bedrooms, but at the expense of light and air.

My understanding is that re-zoning is a privilege based on giving back something to the community. This is not affordable housing, nor are these homes, to the best of my knowledge, designed for energy efficiency or sustainability. This appears short-sighted and opportunistic, taking without giving for the benefit of one at the expense of many. A far better plan for four single-family homes seems within reach. I hope the City will reject the proposal as it currently stands as not in compliance with zoning ordinances or our General Plan.

Sincerely,

Cindy Alderson
Secretary
Pomeroy West HOA Board of Directors
1104 Pomeroy Ave., Santa Clara 95051
408-247-1949

Shaun Lacey

From: Ken Kratz <kskratz@yahoo.com>
Sent: Monday, July 21, 2014 7:30 PM
To: Shaun Lacey
Cc: Ken Kratz
Subject: 1075 Pomeroy Avenue development, noise issues

July 21, 2014
3283 Benton Street
Santa Clara, Ca. 95051

Mr. Shaun Lacey
Assistant City Planner
1500 Warburton Avenue
City of Santa Clara, Ca. 95050

re: 1075 Pomeroy Avenue development, noise issues

Dear Mr. Lacey:

I'm concerned that noise from the garages of the proposed development for 1075 Pomeroy will negatively impact the quality of life for the residents of Pomeroy Green and the residents of the proposed development. Please tell me what measures the developer is taking to mitigate noise?

Those garages are proposed to be located around the periphery of the 1075 lot. Noise from those garages will go through the garages' rear doors and rear windows and into adjacent spaces and dwelling units.

I'm concerned that noise from those garages will enter the backyards and units of the Pomeroy Green buildings that surround that lot, particularly the four units in building "Q" (3283 Benton- 3285 Benton Street) due to proximity.

As you are aware our Pomeroy Green units have a small backyard, living/dining room, and two bedrooms at the rear of our two story units. We enjoy low noise levels at this time because our carports are on the opposite side of our backyards and because the current single family home on the 1075 property follows conventional planning practice in that their garage is located near the city street and their backyard is in the rear of the lot.

I'm also concerned about the impact of noise to our Pomeroy Green park located at the back of building "F" (1087 Pomeroy Avenue-1095 Pomeroy Avenue). This park is our main park and is located directly north of the 1075 lot. The developer plans to build a garage and one open guest parking space on that side of the lot and those proposed improvements are setback only five feet (5') from the park.

Noise will also enter the patios and units located in the proposed development though they are impacted less than Pomeroy Green's units because the proposed garages do not directly face the dwelling units in the proposed development.

At the last neighborhood meeting held on July 8, 2014, I requested that the garage doors (man doors) and windows located in the rear of the proposed garages be eliminated in order to reduce noise transmission. The developer's architect did not respond to this request.

I'm concerned about not only vehicular noise from the garages due to startup and running of motor vehicles but also noise from other activities that can occur in those garages. Other activities may include major car repair, machine shop work, metal working, and wood working to name just a few.

At Pomeroy Green those types of noise generating activities are for the most part prohibited. Only minor vehicle maintenance is allowed in the carports; the vehicle must be in operable condition at the end of the day and residents may not use jack stands, ramps, or other devices as a safety matter. This policy works well at Pomeroy Green.

I'm also concerned about noise from the two open guest parking spaces that are proposed for the development. During the last neighborhood meeting, the developer's architect indicated he would provide a wall at the back of the open parking spaces (between the parking spaces and Pomeroy Green) in order to reduce noise transmission but I'm wondering if that will be enough to prevent noise from going over the proposed wall.

Will an enclosure for those parking spaces reduce the noise levels further? If so, I request those enclosures be provided.

I'm also concerned that the drawings for the proposed development do not indicate the installation of sound insulation in the walls of the proposed garages. This would benefit Pomeroy Green residents as well as the new residents of the proposed development.

Of course there are other ways to reduce or eliminate noise from the garages and parking spaces and I hope you and the developer are considering all means to that end. You mentioned at the last neighborhood meeting that it is possible for a development to include an underground component; perhaps this would solve the noise issue at 1075? Is that idea being considered by the developer?

I think it is reasonable to request that changes be made to the plans so that noise is not transmitted to Pomeroy Green as well as the patios and homes of the proposed development. Again, please tell me what measures the developer is taking to mitigate noise and its transmission.

Thank you for reviewing my concerns.

Sincerely,

Ken Kratz
Pomeroy Green shareholder

July 13, 2014

Cynthia M Berg
1092 Pomeroy Ave
Santa Clara, CA 95051

Mr Shaun Lacey
Assistant City Planner
1500 Warburton Ave
Santa Clara CA 95050

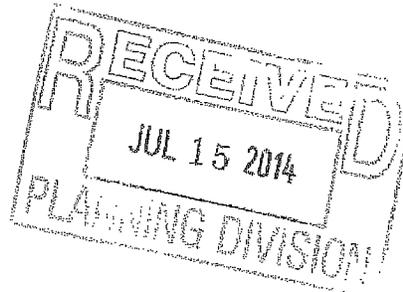
Dear Mr Lacey

Regarding development of 1075 Pomeroy:

I DO NOT believe that zoning should be changed to accommodate the whims/desires of someone who wishes to densely develop a property in order to make money. Zoning was put in place for a reason. This change will affect the pomeroy green property owners to a large degree by interfering with their privacy.

Regards,

Cynthia M Berg

A handwritten signature in black ink, appearing to read "Cynthia M Berg", with a long horizontal line extending to the right.

July 15, 2014

Mr. Shaun Lacey
Planning Division, City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

Dear Mr. Lacey:

I am writing to protest the plans to develop and re-zone the property at 1075 Pomeroy as presented to the community on May 12th and again on July 8th, and to request that the current R3-18D zoning be respected and maintained. Though the style changes are welcome aesthetically, the design remains tone deaf to environmental context. The developer's plan for five large homes without appropriate set-backs, building buffers, height restrictions, and open space percentages will negatively impact the adjacent Pomeroy Green homeowners directly, and will hurt the neighborhood as a whole. There are 78 homes in Pomeroy Green and 138 in the companion development of Pomeroy West across the street where I am a long-time homeowner.

As property values increased in the area, Eichler commissioned designs for higher density living without sacrificing his ideals of livability and planned communities featuring integrated parks and community centers. The homes were designed for privacy, with line-of-sight buffer spaces between windows, and with plenty of natural light. There is no central air, but instead we have radiant heat and depend on air-flow, generous eaves in some cases, and shading trees for cooling. Deciduous trees allow for summer cooling and winter sunlight. Our homes were far ahead of their time and are quiet, efficient and comfortable. They are a good place to raise a family and generations of kids have grown up here.

The developer's plan would change all that for those Pomeroy Green homes directly impacted, stealing both livability and home values, for which the entire complex would suffer. And for the community at large, as well as for the

schools in the immediate area – Pomeroy Elementary, Santa Clara High School, and the charter school down the street – the increased traffic will create problems with safety, parking, neighborhood walkability, air quality, and noise. The livability of the new homes, though with internal amenities, provide no considerations for children’s play areas, nor landscaped space for anyone or for heat dissipation, and no real guest parking. The existing neighborhood would have to absorb those hits. As to privacy, a screening stand of cypress might block vision between upstairs bedrooms, but at the expense of light and air.

My understanding is that re-zoning is a privilege based on giving back something to the community. This is not affordable housing, nor are these homes, to the best of my knowledge, designed for energy efficiency or sustainability. This appears short-sighted and opportunistic, taking without giving for the benefit of one at the expense of many. A far better plan for four single-family homes seems within reach. I hope the City will reject the proposal as it currently stands as not in compliance with zoning ordinances or our General Plan.

Sincerely,

Cindy Alderson
Secretary
Pomeroy West HOA Board of Directors

Shaun Lacey

From: Margaret Healy <margaret.healy@gmail.com>
Sent: Monday, July 14, 2014 4:08 PM
To: Shaun Lacey
Subject: Proposed development at 1075 Pomeroy

Dear Mr. Lacey

I am writing to you to express my concern regarding the proposed development at 1075 Pomeroy. I have owned 1072 Pomeroy since 1989 and find the project under discussion at 1075 Pomeroy much too big for that site. It does not conform to the current zoning regulations and the building is too voluminous for that site. Too many units, too tall, and not enough setback.

I strongly urge you to not approve this project.

Margaret Healy
1072 Pomeroy

Shaun Lacey

From: Ken Kratz <kskratz@yahoo.com>
Sent: Friday, July 11, 2014 2:48 PM
To: Shaun Lacey
Cc: Ken Kratz
Subject: 1075 Pomeroy Avenue, proposed rezoning and development, PLN2013-10129
Attachments: Pomeroy Green buildings (bldg. O, on left, opposite of blank wall of building Q, on right, with birch tree.jpg)

July 11, 2014
3283 Benton Street
Santa Clara, Ca. 95051

Mr. Shaun Lacey
Assistant City Planner
1500 Warburton Avenue
City of Santa Clara, Ca. 95050

Dear Mr. Lacey:

Thank you for attending the public meeting held last Tuesday at the library regarding the proposed development of 1075 Pomeroy Avenue. I appreciate your and the developer's efforts to hold these types of meetings with the neighborhood residents.

I am still disappointed the developer intends to rezone the property to Planned Development. Though the developer has changed the aesthetics of the building and made a few other changes to scale back the project, I still have the same type of objections at this time as I had during the my first review back in May and I desire that the project conform to the current R3-18 D zoning. I hope you and the developer will consider my following comments that I think will improve the project.

The project is still too big for that site. It does not conform to the current zoning regulations for that site. The building is so voluminous for that site that it is out of scale with the buildings and site planning in the neighborhood and therefore is not in harmony with the neighborhood.

There are too many units, not enough setback, it is too tall, and, I suspect since the numbers were not provided at the meeting, too much building coverage and too little landscape area. Please provide the data on the building coverage and landscape area and confirm that the R3-18D regulations allow only four units on that site.

Conformance to the landscape area requirements is of particular concern. We need the minimum landscape coverage in order to keep the city cooler in the summer time (i.e., less pavement and buildings and more open area for improved ventilation and cooling breezes that reduce the need for air conditioning).

The Pomeroy Green park located behind building "F" (behind units 1087- 1095 Pomeroy) in particular is still impacted in the modified plans due to the lack of the minimum setback for the proposed building. That park is our main outdoor recreation for Pomeroy Green residents while at home and I visit it often.

The proposed building setback should be increased from the five feet to the required ten foot minimum at that location in order to provide a modicum of privacy, quiet ambiance, sunlight, and ventilation. I think there will be kitchen odors and barbecue odors as well as cigarette smoke that will be unable to ventilate properly for that park (sources from users of the park as well as the residents of the proposed building). I calculated that the park will be mostly in shade throughout the winter and will be impacted the rest of the year as well.

The setback of the Pomeroy Green buildings along Pomeroy Avenue range from about twenty feet (20') to twenty-five feet eight inches (25'-8") from the back of the city sidewalk and the setback of the Pomeroy Green fence near building "F" just north of 1075 Pomeroy is set back thirty-three feet (33') from the back of the city sidewalk. The fifteen feet of setback that the developer proposes in that location of the Pomeroy Green fence will place the proposed building eighteen feet (18') closer to the street than the adjacent Pomeroy Green fence--I think this will be an eyesore.

I appreciate the developer's efforts to provide some privacy between the proposed building and Pomeroy Green's building "Q" (units 3283 through 3289 Benton Street) where I live by providing for trees between those buildings; however, I would prefer to have a blank wall with a few deciduous trees, like white birch trees for example, planted in front of the blank wall for aesthetic reasons and in order to soften the reflection of the sunlight during the summer months.

This type of privacy solution (visual and acoustic privacy provided by the blank wall with a few deciduous trees), is what we have now at my Pomeroy Green complex and it works well (please see the attached photo). Privacy is maintained between buildings, welcomed sun is reflected into the facing dwelling units, and acoustical and visual privacy is provided.

The solution provided by the developer in this situation, a solid line of evergreen trees between my building and the proposed building, will greatly reduce the amount of light into my living room on the ground floor of my unit and will not significantly reduce noise between the opposing buildings. At this time I enjoy a clear view of the bright sky from my living room and my unit is not disturbed by noise from directly adjacent neighbors.

In light of these issues, I do not agree with the developer that this project will improve the neighborhood nor the quality of life of the residents who occupy the Pomeroy Green units surrounding the proposed project. The proposed development at 1075 Pomeroy needs to conform to the R3-18D regulations, the current zoning for that property, like the rest of the properties that surround it.

I understand from the comments made by the architect that the modified plans will go forward to the Planning Commission after a few modifications and after some additional information is provided on the plans. I look forward to reviewing those finished conceptual plans. I request that I receive the completed plans, including the information about the building coverage and the landscape area on that site, as soon as they become available.

Thank you for reviewing my concerns.

Sincerely,

Ken Kratz
Pomeroy Green shareholder

Shaun Lacey

From: Sara Crider (scrider) <scrider@cisco.com>
Sent: Saturday, June 21, 2014 9:00 PM
To: Shaun Lacey
Subject: RE: 1075 Pomeroy Avenue

Hi,

Although I was unable to attend the meeting about the site at 1075 Pomeroy that was held earlier (in May?), I did receive a note from our board of directors (Pomeroy Green) that said the developer was going to revisit their plans. Also, that City Planning were saying the rezoning request was not likely to be approved.

Today I got a letter saying there's another meeting about the development and listing the specifications of the development. They sound exactly like the previous design. It doesn't seem to me like the developer is making any modifications based on the community's feedback or an alternative that would meet current city zoning.

I'm still opposed to having 5 units of the sizes and configuration they have planned. And, I'm opposed to rezoning to allow them smaller lot line widths.

In addition to my comments below, when I looked at the driveway/parking plans my only thought was "how the heck will people avoid hitting each other or the corners of their neighbors houses!". And, I think 2 guest parking spots at the back of the lot to be shared among 5 units is ridiculous. How will they determine who can use them and when? Also, although there are garages, most people end up using those as storage spaces – where will they park then?

I made a VERY rough plan of 4 units that had current lots line and 4 guest parking units which was shown to them in the previous meeting. I understand someone else did a version too. Since they are still proposing 5 units, obviously they ignored our suggestions and are just concerned about getting the most number of units on the property to increase their profit.

I know you sent my previous email to the commission (or plan to) but I just wanted to reiterate my opposition after receiving this latest letter that still is not addressing our concerns.

Regards,
SARA Crider

From: Shaun Lacey [<mailto:SLacey@SantaClaraCA.gov>]
Sent: Monday, April 21, 2014 11:46 AM
To: Sara Crider (scrider)
Subject: RE: 1075 Pomeroy Avenue

Hello,

Thank you for your letter. We will share it with the Planning Commission prior to the meeting. This application is likely to be continued to the May 14, 2014 Planning Commission meeting due to a notification conflict.

Shaun

From: Planning
Sent: Monday, April 21, 2014 10:46 AM
To: Shaun Lacey
Subject: FW: 1075 Pomeroy Avenue

And another...

Megan Zimmershead | Office Specialist IV
Main: (408)615-2450; Direct: (408)615-2463

From: Sara Crider (scrider) [<mailto:scrider@cisico.com>]
Sent: Monday, April 21, 2014 8:48 AM
To: Planning
Subject: 1075 Pomeroy Avenue

To whom it may concern,

I am writing to voice my opposition to the change in zoning for the property located at 1075 Pomeroy Avenue.

I believe the density proposed is too much for the size of the lot and the lot lines are much too small given the proximity to the neighboring buildings.

The buildings will be so close that air flow for 2 of the Pomeroy Green (PG) buildings (the one east of 1075 and the one to the south) will be impacted. Given that those units have no air conditioning and cannot install HVAC (due to the Eichler construction), their residents will suffer from hotter temperatures in the summer when the west/northwest flowing breeze is blocked by the 1075 buildings.

Additionally, the proposed placement of the units gives their windows a direct view into the first and second story windows of the existing PG units to the east and south of them. If you review the Pomeroy Green development and the West Pomeroy development you will note that all the buildings are positioned such that blank side walls face the windowed walls of adjacent buildings, thus allowing residents in both buildings to have privacy. Although 1075 is designed to give its residents privacy among themselves, the same consideration has not been given to the Pomeroy Green residents. Even 1075 has no privacy with the Pomeroy Green units behind/to the side of them.

I am not opposed to construction of units that meet the current zoning but strongly feel the design submitted for the new zoning will have a heavy negative impact on the 11 units and families of Pomeroy Green that are adjacent to 1075. I hope that you do not approve the rezoning.

Regards,
Sara Crider
3265 Pomeroy Green
Santa Clara, CA 95051

The information contained in this email may be privileged, confidential and exempt from disclosure under applicable law. The information is intended only for the use of the individual or entity to which it is addressed. If you are not the intended recipient or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this communication is strictly prohibited. If you have received this message in error, or are not the named recipient(s), please notify the sender immediately by reply email and delete this message from your computer. Thank you

Shaun Lacey

From: Peggy Parkin <pparkin4559@comcast.net>
Sent: Monday, May 12, 2014 9:46 PM
To: Shaun Lacey
Cc: Peggy
Subject: Pomroy Green Address

Hi Shaun,

Thank you for the Neighborhood Outreach Meeting this evening.

My address for mailing meeting Notification is:

1095 Pomeroy Avenue
Santa Clara, CA 95051
408-984-2873

There are Seventeen individual Units (Three Pomeroy Green buildings) that are directly adjacent to the proposed 1745 Pomeroy Avenue project (within 300 feet).

Building F - Pomeroy Court (5 Units)
1087-1095 Pomeroy Avenue 95051

Building O - Benton Street Court (8 Units)
3267-3281 Benton Street 95051

Building Q - Benton Street (4 Units)
3283-3289 Benton Street 95051
(corner of Benton and Pomeroy)

In closing when it was stated by the property owner (1745) that his units would be ownership and answered in the affirmative that they could be rented. Pomeroy Green is ownership and for a Unit to be rented it has to have Board approval and only for a year's time. Also, this proposed project's extra street parking will impact greatly those from Pomeroy Green who are required to park on the street. This particular Builder certainly needs to show more finesse when speaking of one's homes he hopes to build in such close proximity to. He began from the beginning degrading our Eichler architecture.

We have had such privacy for Fifty One (51) years, meaning we didn't even need to put up first floor level Drapery for the two rear sliding glass doors and if this proposed project goes through, we will. Eichler sliding glass doors and windows are over sized, thus allowing in great light. We do hope the Planning Commission takes the time to view what is being proposed here and the impact prior to making a decision.

Thank you again for your effort.

Sincerely,

Peggy
Peggy Parkin

Dear Planning Commission, Mayor, and City Council members,

As three long time Santa Clara residents who live, shop, and vote here, we would like to voice our objection to the current planned development of 1075 Pomeroy Ave.

Our biggest objection is the unnecessary change to the character of the neighborhood. As you walk around our neighborhood, there are single family homes with front and back yards and 2 large multi-dwelling complexes (Pomeroy Green and Pomeroy West) with outdoor living spaces and park-like areas throughout the properties. The planned development seeks to build 5 units on a small lot with no open spaces except for driveways and to exceed the height limits on current zoning. They would prefer to rezone the lot to bring the buildings almost to the fence line and subsequently impact the backyards of the existing homeowners in the surrounding units.

While we do not insist that only a single family dwelling needs to be put on the lot, we believe that only 3 or 4 units will fit the character of the neighborhood. The developer claims he won't make enough money if he puts less than 5 units on the property, but we feel that the additional 1 to 2 units does not benefit the community, but in fact hurts it. It will detract from the character of the neighborhood, potentially decreasing the value of the 78 units of Pomeroy Green and decreasing the quality of life for the existing homeowners.

The homes in Pomeroy Green are owner occupied, therefore residents are very concerned and invested in our neighborhood. We are not a bunch of rental units without appreciation for our surroundings. We care about what is going to impact our lives.

We know the city cares for the feelings and opinions of the neighborhoods as seen in the areas around Santa Clara University and the Old Quad neighborhood, restricting housing additions and protecting historical houses.

While a recent development has been approved at the Alameda and Harrison (6 units an 0.4 acres), that will fit more closely with the character of that neighborhood. There is already a 14 unit complex next door and it is an industrial neighborhood.

If this development is allowed to go through unchanged, it will set a precedent for other non-resident developers to turn other lots in the neighborhood to the "mac-mansion" plan and turn our family friendly Santa Clara neighborhood into an overcrowded district.

Thank you for your attention.

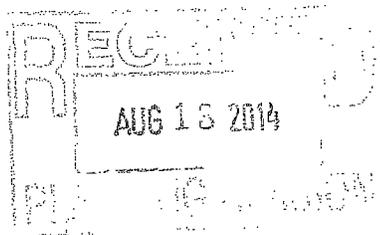
David Fatland
Cindy Fatland
Alesha Fatland

David Fatland
Cindy Fatland
Alesha Fatland

Nicholas H. Rossi
1091 Pomeroy Ave.
Santa Clara, California 95051
Telephone: (408) 892-0621

August 11, 2014

Mr. Shaun Lacey
Assistant to the Planner
Santa Clara City Hall
1500 Warburton Avenue
Santa Clara, CA 95050



Re: 1075 Pomeroy Development

Dear Mr. Lacey:

I recently received notice of the Planning Commission meeting set for Wednesday, August 20, 2014, concerning this matter.

I am opposed to the re-zoning that they are requesting. I don't know why they need to put five houses on the spot where there is now only one house. I think this would be too densely populated for our neighborhood. I understand that if they would put three houses on that property instead of five, they wouldn't need to apply for a re-zoning. I think there's a reason why neighborhoods are zoned a certain way, and I don't see any reason to change it.

To allow a rezoning in this case would set a bad precedent. Our neighborhood now consists of single family houses and town houses. If other home owners in the neighborhood started asking for permission to tear their houses down and replace them by multi-unit, it would change the character of the neighborhood, and not for the better. I understand the property values would probably go down, it would lead to more congestion, and it would be harder to find parking.

Therefore, I am opposed to the re-zoning application at the aforementioned parce.

Sincerely,

Nicholas H. Rossi
Nicholas H. Rossi

Shaun Lacey

From: Ken Kratz <kskratz@yahoo.com>
Sent: Wednesday, August 13, 2014 4:53 PM
To: Shaun Lacey
Cc: Ken Kratz
Subject: 1075 Pomeroy development--letter to the Planning Commission
Attachments: plan view of Pomeroy Green with the 1075 lot and PG common area park labeled.pdf; Neighborhood photo, PG building north of 1075.jpg; Neighborhood photo of home at 1075.jpg; Neighborhood photo, PG building south of 1075.jpg; Pomeroy Green--windowless wall photo.jpg; Pomeroy Green--integrated carports and grouped parking spaces.jpg; Pomeroy Green--common area park looking west (with 1075 property in background).jpg; Pomeroy Green--common area park looking east (with 1075 property on right and PG build. on left).jpg; Pomeroy Green, back alleyway.jpg

August 13, 2014
3283 Benton Street
Santa Clara, Ca. 95051

Planning Commission
City of Santa Clara
1500 Warburton Avenue
Santa Clara, Ca.. 95050

Re: 1075 Pomeroy Avenue, proposed rezoning and development, PLN2013-10129

Dear Planning Commission:

Please deny the request to rezone the property at 1075 Pomeroy Avenue from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development) and require the applicant to resubmit plans that meet R3-18D regulations and require the new development to harmonize with the existing multi-family homes in the neighborhood, the Pomeroy Green Cooperative townhouses that surround the lot and Pomeroy West townhouses across the street.

Though the aesthetics of the proposed buildings have improved as shown on the revised plans dated July that were recently submitted by the developer, I still have many of the same concerns about the proposed development that I expressed in my letter to you dated April 22, 2014. The proposed project is too big for the lot, has too many dwelling units for the lot, does not have enough landscape, and is out of scale with the surrounding neighborhood.

That proposed project will reduce sunlight, reduce ventilation, compromise privacy, increase noise, and increase traffic in the surrounding neighborhood. The Pomeroy Green dwelling units that surround the 1075 lot are particularly negatively impacted. In my opinion, because the proposed building is too big for the lot, the proposed project does not harmonize with the existing neighborhood. Please find the attached photos of the existing neighborhood and the location map showing the adjacent Pomeroy Green buildings.

I think this project's only chance to harmonize with the neighborhood will be when it is redesigned to conform with the rather generous regulations of the current zoning, R3-18D zoning; the project should meet the maximum building height, minimum setbacks, minimum open landscape area, maximum building lot coverage, and maximum dwelling units allowed.

I would be delighted if the proposed development provided the same design features as the adjacent Pomeroy Green complex though those features are not required by the current zoning. One of those features is the windowless exterior walls on the ends/sides of the buildings with beautiful landscaping along those walls that face windows of the adjacent buildings. This feature creates privacy between buildings (see attached photo),

Another feature of Pomeroy Green is the integration of the carports into the buildings and the provision of grouped and landscaped parking spaces/areas for second cars rather than providing garages for each unit. That carport feature and landscaped parking areas allow more views through the landscape and thereby more of an open feeling in the neighborhood as well as provide additional landscaping to filter the air (see attached photos).

I have the following specific objections to the proposed project at 1075 Pomeroy that describe how this proposed project is not in harmony with the surrounding neighborhood:

1. Does not meet the intent of the Planned Development zoning.

In my opinion the overall intent of the Planned Development regulations are to encourage imaginative designs, especially mixed use, that benefits the community as well as the residents of the project. This proposed development seems to only address the issue of getting the biggest residences, with features more amenable to single-family detached homes and their larger lots, onto the smallest lot possible while providing the least amount of landscaping and little outdoor living space.

A little historic note: I lived with my parents in a Planned Development in the city of Santa Clara, Vista Del Lago, located roughly at the northwest corner of Stevens Creek Boulevard and Saratoga Avenue (frontage on Buckingham Drive at Mauricia Avenue). That award winning PD, combines modest multi-family garden apartment living (now condominium) with patios, views of water features, and nice landscaping (walkways throughout that are open to visitors) as well as social amenities such as a swimming pool and clubhouse.

That complex also includes office buildings on one side of the property that enhances the overall project (aesthetically: same architectural style; functionally: you can conveniently walk to those businesses; and economically: the businesses contribute to the costs of maintaining the landscaping).

The proposed development for 1075 Pomeroy includes only small patios and none of the other advantageous features of Planned Developments.

2. Building set backs and building height are not standard.

The current zoning for the 1075 Pomeroy property, R3-18D zoning (the current zoning for the Pomeroy Green and Pomeroy West complexes as well), has many requirements as to set backs (front, side, and back), building heights, landscaping area coverage (see paragraph #3 below), and building area coverage (see paragraph #3 below). The developer's proposal does not meet the minimum requirements for R3-18D zoning in any of these items of concern.

Essentially the proposed building will be two stories and will be taller (28' high in portions of the roof) than the 25' maximum allowed per the current zoning regulations. The 25' height limit is significantly higher than the existing 19' high Pomeroy Green and Pomeroy West buildings that surround the proposed development.

The proposed buildings will be closer to the property lines than allowed by the current zoning (a 5' side setback at the north property line rather than 10' minimum required; a 15' front setback rather than the 20' minimum required). There will be second-story bedroom and bathroom windows directly facing the Pomeroy Green common area park (see attached photo) thereby negatively impacting the privacy of park users as well as the new residents of the proposed development.

I would like to see the proposed building be set back the required 10' from the north side property line as a minimum to preserve some privacy in the park and to reduce noise intensity to and from the park and to allow room for the planting of some substantial trees not to exceed the building height in order to increase privacy, provide some noise absorption, and to filter the air. The required setback will reduce the shadow cast by the proposed building into the public street, into the Pomeroy Green common area park, and into the adjacent Pomeroy Green dwelling units.

Ideally, these advantages from the required setback could be further enhanced by following the design features of the Pomeroy Green buildings; though, those features are not part of the R3-18D regulations. The design features at Pomeroy Green that I would like to see applied to the proposed development are the construction of windowless exterior walls, as I mentioned earlier, along the side elevations with a few trees strategically placed along those walls to break up the wall visually for aesthetic reasons.

Also, I wish the developer would orient his buildings parallel to Pomeroy Avenue in a fashion similar to Pomeroy Green's building "Q" on Benton Street. Building "Q" is parallel to the street and has grouped parking along the frontage and windowless walls along the ends of the building. If the proposed building is oriented in this fashion and the square footage of the proposed units were the same as Pomeroy Green's dwelling units (1,493 sq.ft.), the developer would be able to put three units on the lot. If the units were reduced in size (they are rather large--see paragraph #3 below), perhaps four units could be oriented parallel to Pomeroy Avenue.

If those Pomeroy Green design features were provided in the proposed development, they would enhance the privacy and noise absorptiou not only for the benefit of the Pomeroy Green common area park users and the residents of the surrounding units in the Pomeroy Green buildings "Q" and "F" but also would benefit the the residents of the proposed development.

Another feature of Pomeroy Green is its generous distance between the fronts and backs of opposing dwelling units (the windows are at the front and back of the units). I suggest that the rear setback of the proposed building be a minimum of 20' rather than the 15' allowed per R3-18D zoning regulations in order to provide the fifty-two (52') of separation between Pomeroy Green building "O" and the proposed building.

The fifty-two feet of separation is what Pomeroy Green now enjoys between its buildings "B" and "C" on the long Pomeroy court. This amount of separation is needed to allow space for noise to dissipate (noise intensity diminishes at the square of the distance). The landscaping in that area should be selected by the developer and the residents of Pomeroy Green building "O".

I'm also concerned that, without the required setbacks, there may be a problem with fireplace smoke, cooking odors, and sewer odors from the new homes that will enter the Pomeroy Green common area park. I request that those proposed fireplaces be excluded from the project and that the required setbacks be enforced to mitigate the other concerns listed above.

If the required minimum setbacks per the R3-18D zoning regulations were applied to the development, I calculate the five housing units would only be 900 sq.ft. or less in size. Therefore, I think the developer wants the PD zoning to allow for larger units. The number of proposed units should be reduced, in order to harmonize with Pomeroy Green's building density.

I'm also concerned that the proposed development, due to its proximity to the north property line (5' setback) where the Pomeroy Green common area park is located, may restrict the future development of the common area park in the future if it becomes desirable to do so in the future. I am still researching the building codes for relevant information as to the types of construction that may be denied to Pomeroy Green in that situation.

I also anticipate that, due to the excessive height (28' in portions of the proposed roof rather than the 20' high roof of the Pomeroy Green buildings) and bulk of the proposed buildings, they will block or significantly reduce the cooling summertime breezes, particularly near ground level. Since the Pomeroy Green units are not air conditioned, those units may become uncomfortably hot during the summer.

The addition of central air conditioning units to mitigate the heat in the Pomeroy Green units will be difficult and expensive to install and expensive to run. The addition of room window air conditioners to the Pomeroy Green units will be unsightly and will create unwanted mechanical noise.

Though not required by R3-18D zoning regulations, I would like to see flat roofs on the proposed buildings be constructed at the same elevation as the Pomeroy Green buildings (19' above grade) because this will mitigate the problem of blocked breezes as mentioned above and will allow more light to penetrate to the ground.

This low flat roof has another benefit in that it will allow residents of Pomeroy Green and the residents of the proposed development to view more of the sky from their homes and the surrounding grounds. I think it is psychologically important to be able to view the sky, the changing weather patterns and changing light intensity, as a means to good mental health.

3. Maximum building lot coverage and minimum landscape coverage are not standard.

According to R3-18D zoning regulations, the proposed building will cover too much of the lot, 41% of the lot, rather than the 35% allowed. The proposed development will only provide 30% landscape coverage rather than the 40% required. Unfortunately, the developer will be removing one of the large ash trees that is located in the front of the lot due to the large footprint of the proposed building.

The fact that two-car garages are provided deep into the lot in the proposed development rather than providing group parking, as is done at Pomeroy Green, means more paving and less landscaping in the proposed development. This proposed design contributes to the unusual, and in my opinion, unattractive bulk of the buildings on that small lot.

Another contributing factor to the large size of the proposed development is the square footage of the proposed dwelling units. The developer plans to provide very large units for that project (two 1,878 sq.ft. units, two 1,772 sq.ft. units, and one 1,308 sq.ft. unit). If the developer were to provide smaller units like the ones at Pomeroy Green (1,493 sq.ft.), he could more easily provide the required landscaping area.

The minimum open landscape area should be provided to insure that the proposed development and the surrounding neighborhood remains cool in summer. The landscaping may reduce the need for air conditioning in the proposed buildings and the buildings that surround the 1075 lot. Also, the required landscaping if placed next to exterior walls in the new project will provide some welcomed insulation to the home during the winter; it will help reduce home heating costs in the winter and be less of a burden on utilities to provide that service.

4. Project exceeds the maximum number of unit allowed per R3-18D zoning regulations.

I have confirmed with the city planning department that, according to R3-18D, the maximum number of dwelling units allowed on a lot the size of 1075 Pomeroy is four (4) units. The developer wants to place five (5) units on the lot. That extra dwelling unit and the proposed sizes of the dwelling units in the proposed project (two 1,878 sq.ft. units; two 1,772 sq.ft. units; and one 1,308 sq.ft. unit) make the building footprint too big. The project is out-of-scale with the surrounding neighborhood; perhaps the proposed units should be more modest in size.

Also, the extra unit the developer is requesting will increase traffic and noise in the neighborhood. The number of trips generated will be increased.

5. The inclusion of garages that are deep within the lot of 1075 presents unusual problems particularly the generation of noise, dust, and odors. Those problems will be generated from all kinds of activities in those proposed garages (vehicle operation, car repair, wood working, metal working, machine shop work). For the most part, Pomeroy Green does not allow those types of sustained activities by its residents.

Those problems are not contained within the garages of the proposed development but will escape from the windows and man-doors planned for the backside of those garages. The backsides of those garages face our Pomeroy Green units and our Pomeroy Green common area park. The developer needs to take measures to mitigate these types of problems and guarantee that the problems will not occur in the proposed development. Perhaps the construction of solid masonry walls with the installation of sound absorbing insulation in the garages will mitigate the problem.

6. Storm water catchment system appears to be inadequate.

There may be a storm-water drainage problem with the proposed development. In the proposed development, the rainwater from the roofs are directed to downspouts that in turn is directed to pop-up emitters via an underground pipe. Pop-up emitters are located in the backyard of the proposed development near the rear property line.

That water is supposed to run on the surface of the ground from the pop-up emitters to the 5' side easement, labeled "(N) [new] 5' drainage easement" on the Tentative Map, that is graded to 1% along the sides of the project. Then the water runs on the surface of the ground from the easement to the on-site catch basin located in the driveway at the front of the project.

This is a long way for the water to travel and there will be a large amount of rainwater that will be coming off those large roofs on the project. I don't think the clay soils that are normally found in our city will absorb much of the water on its way to the catch basin.

Although the proposed drainage system has been approved by the city engineering department according to the developer, I don't think the minimum standard is sufficient in this case for several reasons--the surface soil will become disturbed and there is a low back alley way on the adjacent Pomeroy Green property.

The developer plans to landscape with plantings along the sides of the buildings and there are small outdoor spaces where some gardening may take place; those activities are surely going to disturb the surface drainage as the tree roots surface and the new residents plant gardens or install other landscaping features.

Therefore, I expect there may be some flooding in the future along the Pomeroy Green property that is adjacent to those proposed drainage systems particularly in the the back alleyway for Pomeroy Green building "O" that is located near that property line with the proposed development (see attached photo). That alleyway is lower in elevation than the elevation of the proposed backyards with their pop-up emitters and, therefore, I think the alleyway will be prone to flooding from storm-water from the new development.

It seems to me an underground pipe and catch basin system will be needed for the rainwater or, at the very least, a bioswale along the entire sides of the project. Pomeroy Green has an underground storm-water drainage system in its landscaped areas that works; why can't the developer for 1075 Pomeroy provide a similar system?

Conclusion:

As you can see, this proposed project will negatively impact not only the surrounding dwelling units of Pomeroy Green but also the surrounding neighborhood. I think it will be possible to provide multi-family housing at 1075 Pomeroy that is acceptable to Pomeroy Green residents and the neighborhood but I think the current design proposed by the developer is not acceptable. I prefer the existing home (see attached photo) remain until such time that my concerns are addressed.

Again, please deny the request to rezone the property at 1075 Pomeroy Avenue from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development) and require the applicant to resubmit plans that meet R3-18D regulations and require the proposed development to harmonize with the existing multi-family homes in the neighborhood, the Pomeroy Green Cooperative townhouses that surround the lot and Pomeroy West townhouses across the street.

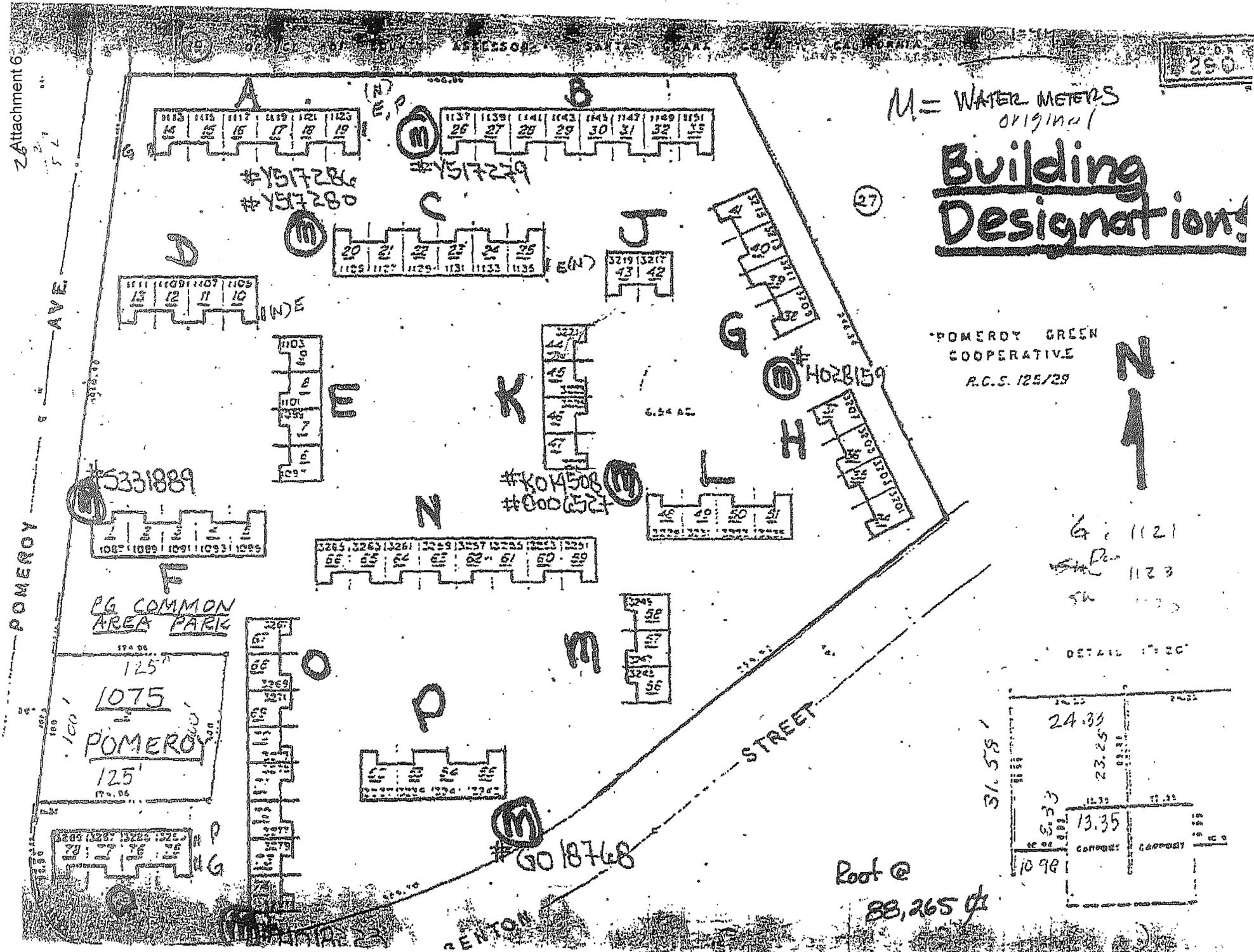
Thank you for considering my request.

Sincerely yours,

Ken Kratz
Pomeroy Green shareholder

attachments:

1. Pomeroy Green--map of complex with 1075 lot & PG common area park labeled
2. Pomeroy Avenue neighborhood photos, three photos
3. Pomeroy Green--windowless wall photo
4. Pomeroy Green--integrated carport & grouped parking photo
5. Pomeroy Green--common area park photos, two photos
6. Pomeroy Green--back alleyway



M = WATER METERS
original

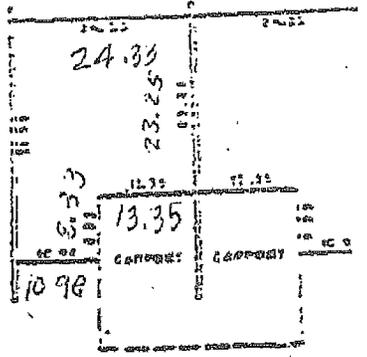
Building Designations

POMEROY GREEN
COOPERATIVE
P.C.S. 125/28

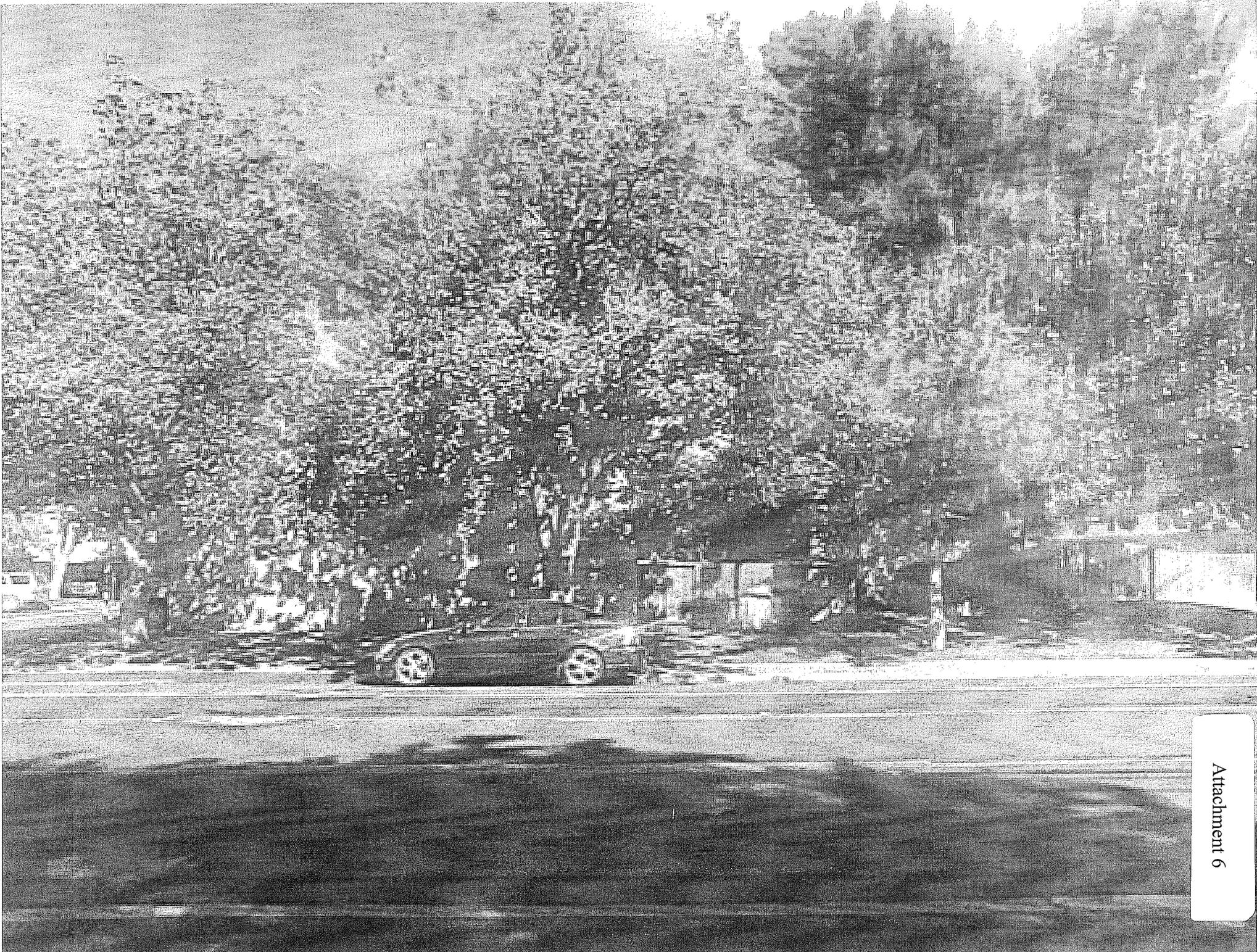


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Star 1123
SW 1125

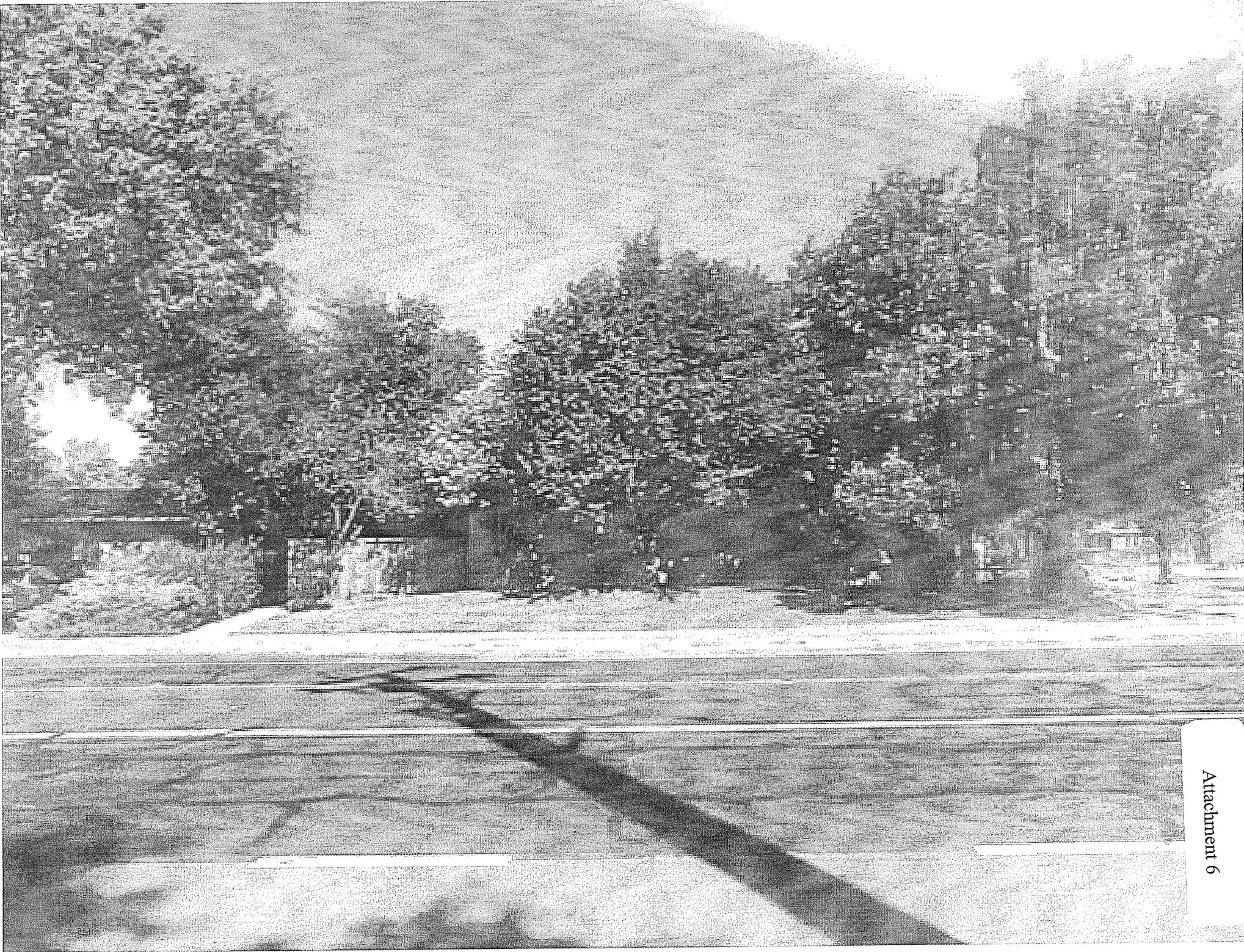
DETAIL 1:20



Roof @
88,265 sq ft





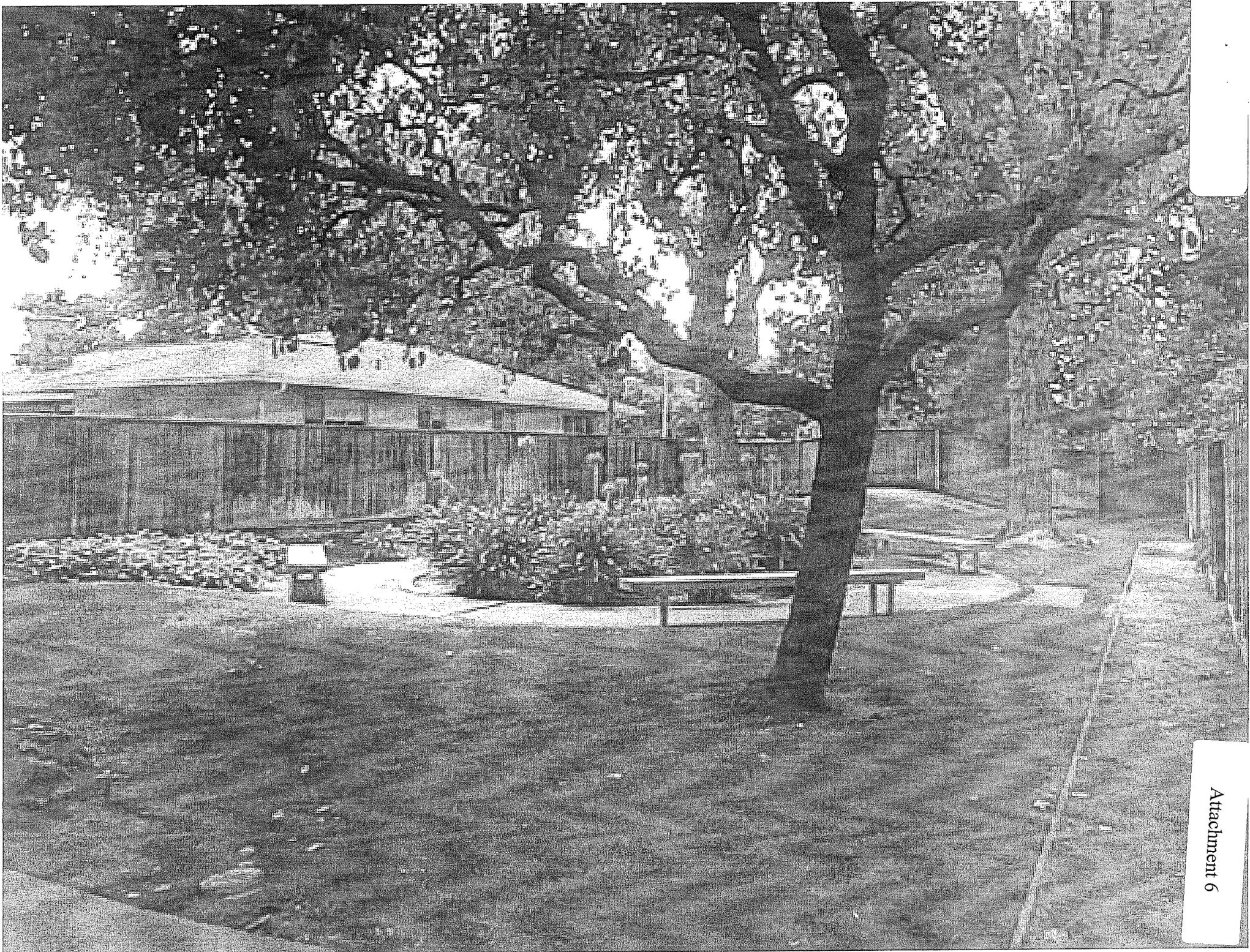




Attachment 6

Attachment 6





Attachment 6



Attachment 6



February 4, 2015
3283 Benton Street
Santa Clara, Ca. 95051

The Honorable Jamie Mathews, Mayor of Santa Clara
and Members of the Santa Clara City Council
Santa Clara City Hall
1500 Warburton Avenue
Santa Clara, Ca. 95050

re: 1075 Pomeroy Avenue, minutes of the Planning Commission meeting

Dear Mayor Mathews and Members of the City Council:

I want to bring to your attention an omission in the minutes of the Planning Commission meeting held on August 20, 2014 in regard to what I said in opposition to the applicant's request to rezone the 1075 Pomeroy Avenue property.

In the Public Hearing section of those minutes it mentions "Mr. Kratz stated that the project does not comply with the General Plan, should not be exempt under CEQA, and needs an EIR." That is not entirely what I said and leaves out an important explanatory item: the project does not meet the R3-18D zoning regulations and, therefore, the project is not exempt from the requirements of the California Environmental Quality Act regarding in-fill projects.

What I specifically stated was:

"Because the project fails to to meet the current R3-18D zoning regulations that regulate building setbacks, building height, building coverage, open landscape area, and the number of dwelling units, the project is not exempt form the regulations of the California Environmental Quality Act.; therefore, I ask you (the Planning Commission) to require the developer to meet all the Act's regulations including the drafting of an Environmental Impact Report for this project."

Furthermore, I said at that meeting:

"The project conflicts with the General Plan. Neighborhood integrity goals and residential zoning classification standards are not being met."

For an in-fill project, such as the 1075 Pomeroy Avenue project, to be exempt from the requirements of the California Environmental Quality Act (CEQA), it must meet certain criteria. Those criteria are:

- be consistent with the general plan designation,
- be consistent with general plan policies,
- be consistent with the zoning designation and regulations.

The rezoning and buildings proposed for the 1075 Pomeroy Avenue property are not consistent with those CEQA criteria and, therefore, the proposed rezoning and proposed buildings are not exempt from the CEQA requirements. I further elaborated on these topics in my August 20, 2014 letter to the Planning Commission.

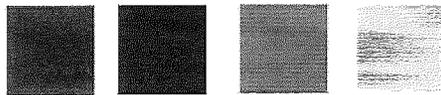
Thank you for taking the time to re-review the Planning Commission meeting minutes as well as applicable laws and regulations that I have mentioned herein and, again, please deny the developer's request to rezone the 1075 Pomeroy Avenue property from R3-18D to Planned Development. I think enforcement of the current R3-18D zoning regulations will provide a better project for the city.

Sincerely,

Ken Kratz
Pomeroy Green shareholder



building colors



trim

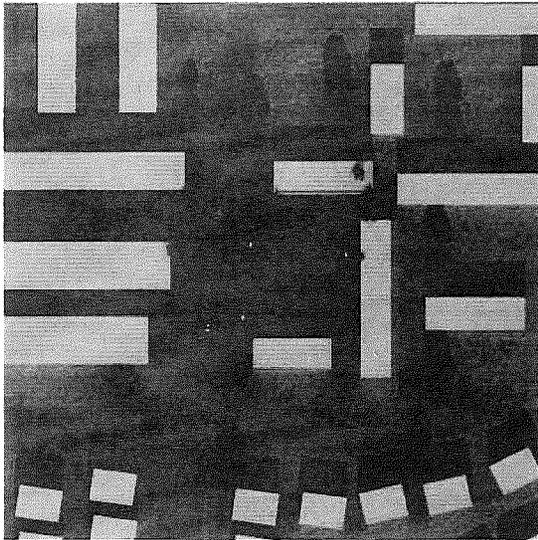


roof

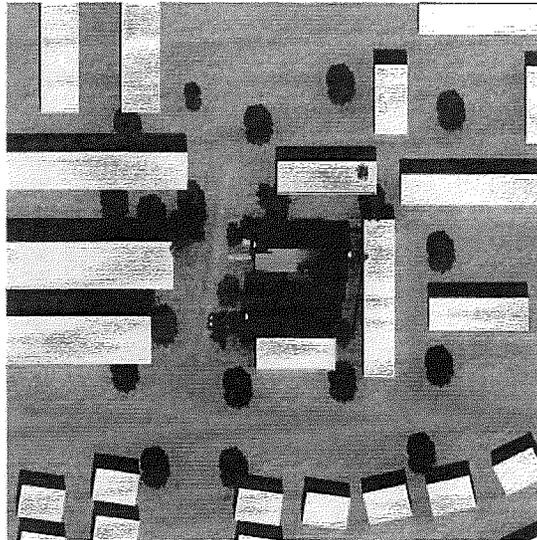


doors

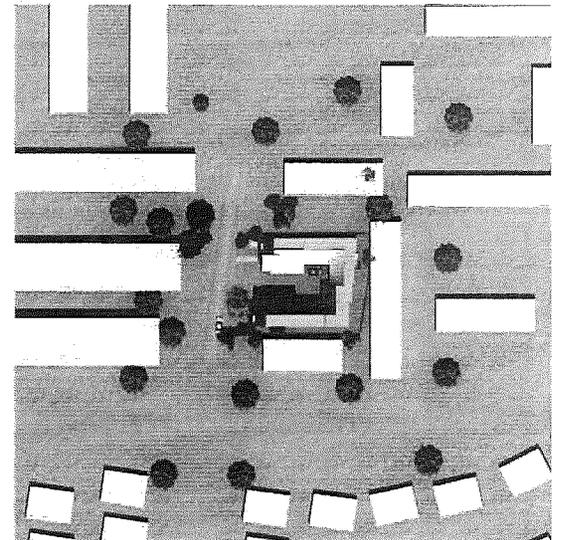




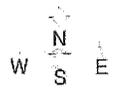
December 21st at 12:00 PM

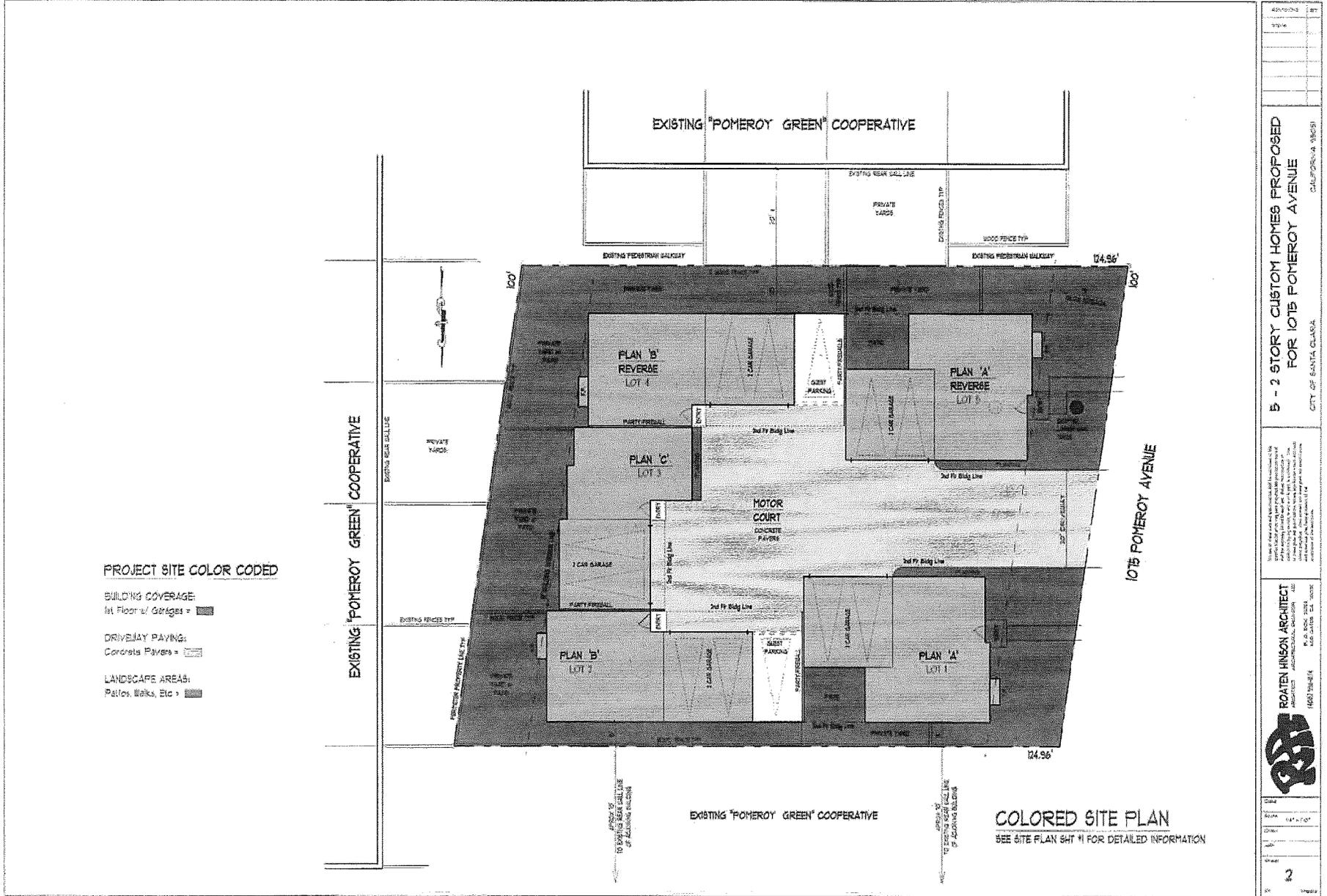


March / September 21st at 12:00 PM
Shadow studies for 1075 Pomeroy Avenue



June 21st at 12:00 PM





PROJECT SITE COLOR CODED

BUILDING COVERAGE:
1st Floor w/ Garages = [shaded box]

DRIVEJAY PAVING:
Concrete Pavement = [shaded box]

LANDSCAPE AREAS:
Patios, Walks, Etc = [shaded box]

COLORED SITE PLAN
SEE SITE PLAN SHET #1 FOR DETAILED INFORMATION

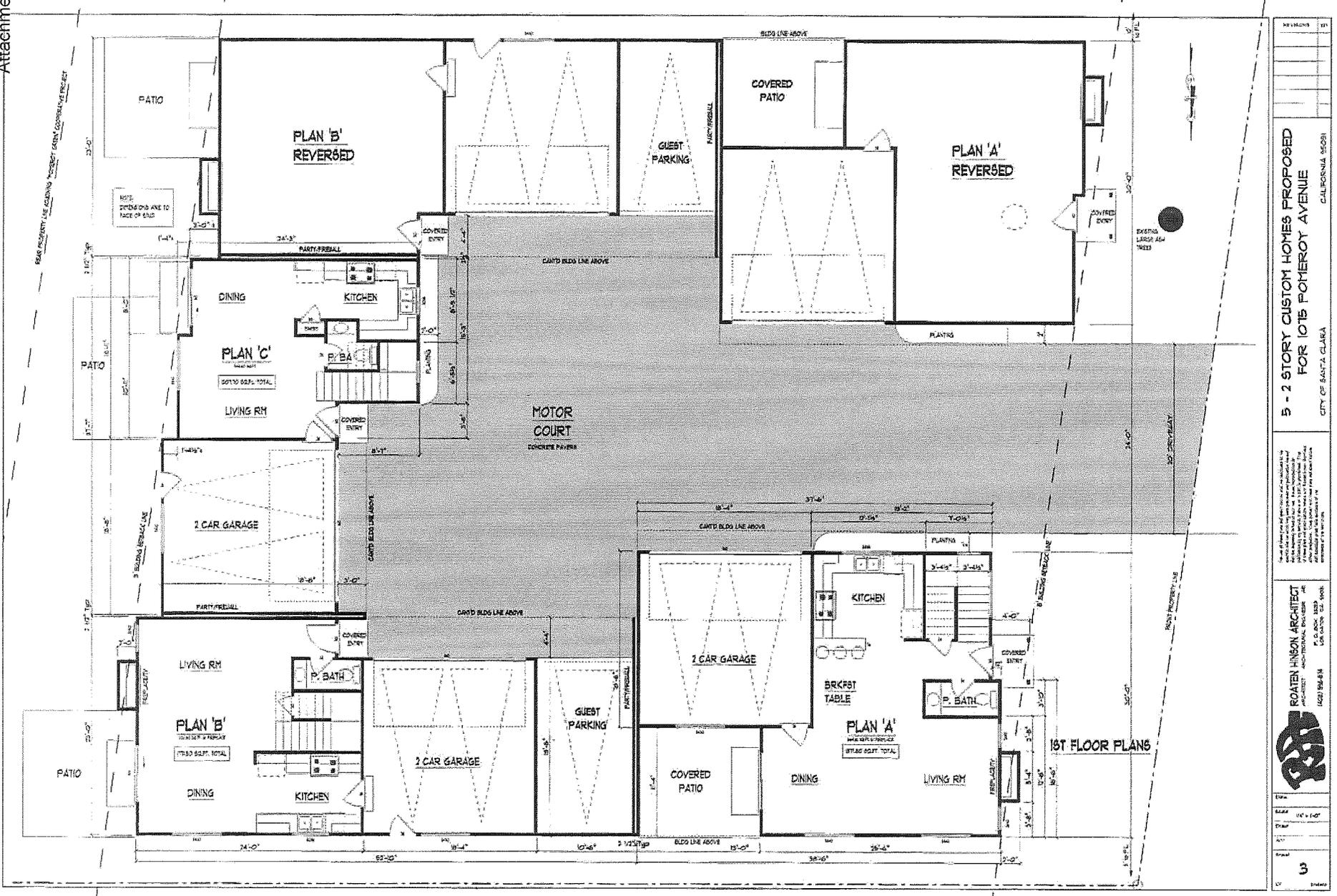
DATE	10/11/2024
SCALE	1/4" = 1'-0"
PROJECT	B - 2 STORY CUSTOM HOMES PROPOSED FOR 1075 POMEROY AVENUE
CLIENT	ROATEN UNICOI ARCHITECT
ARCHITECT	1607 7th St, Santa Clara, CA 95050
PROJECT NO.	1607 7th St
DATE	10/11/2024
BY	[Signature]
CHECKED BY	[Signature]
APPROVED BY	[Signature]
DATE	10/11/2024

B - 2 STORY CUSTOM HOMES PROPOSED FOR 1075 POMEROY AVENUE
CITY OF SANTA CLARA, CALIFORNIA (SBCS)

I, the undersigned, being a duly licensed and bonded Architect under the laws of the State of California, do hereby certify that I am the author of the design and content of the above described plans and specifications, and that I am a duly licensed and bonded Architect under the laws of the State of California.

ROATEN UNICOI ARCHITECT
ARCHITECTS
1607 7th St
SANTA CLARA, CA 95050
TEL: 408.291.1000
WWW.ROATENUNICOI.COM





5 - 2 STORY CUSTOM HOMES PROPOSED
 FOR 1015 POMEROY AVENUE
 CITY OF SANTA CLARA CALIFORNIA 95051

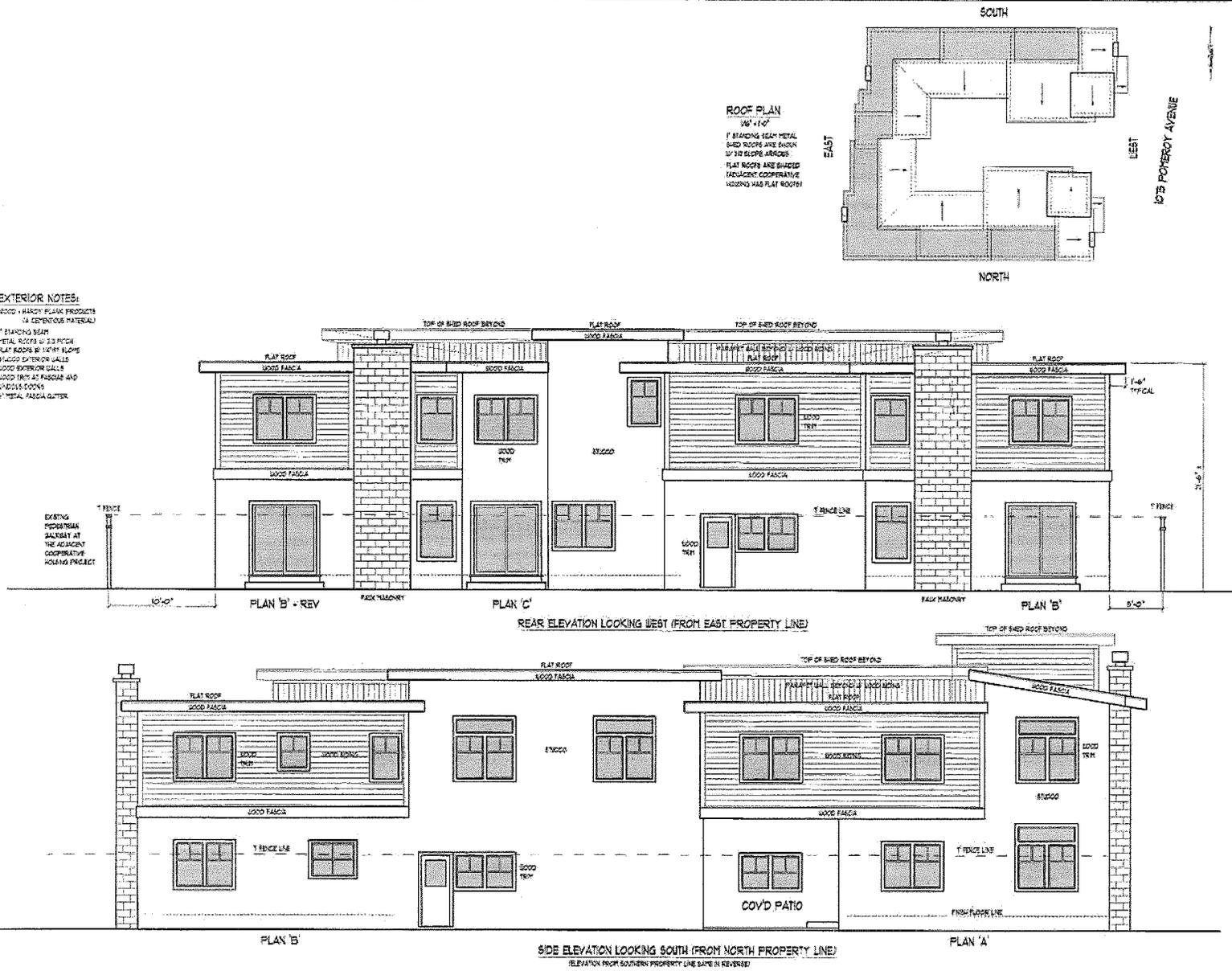
These plans were prepared by the architect for the applicant and are not to be construed as a contract. The applicant is responsible for obtaining all necessary permits and approvals from the City of Santa Clara. The architect is not responsible for any delays or costs incurred by the applicant in obtaining such permits and approvals.

ROBERT LINCOLN ARCHITECT
 ARCHITECT
 1400 BRADEN
 LOS GATOS, CA 95030
 P.O. BOX 3838
 LOS GATOS, CA 95030



Date:	04-14-2017
Scale:	1/8" = 1'-0"
Drawn:	
Checked:	
Project:	
Sheet:	03

EXTERIOR NOTES:
 WOOD - HARDY PLANK PRODUCTS
 (A. CERTAINTELD MATERIAL)
 1" STANDING SEAM METAL
 METAL ROOFS @ 1/2" PITCH
 FLAT ROOFS @ 1/8" PITCH
 STUCCO EXTERIOR WALLS
 WOOD TRIMS AT FASCIA AND
 WINDOW DOORS
 3" METAL FASCIA GUTTER



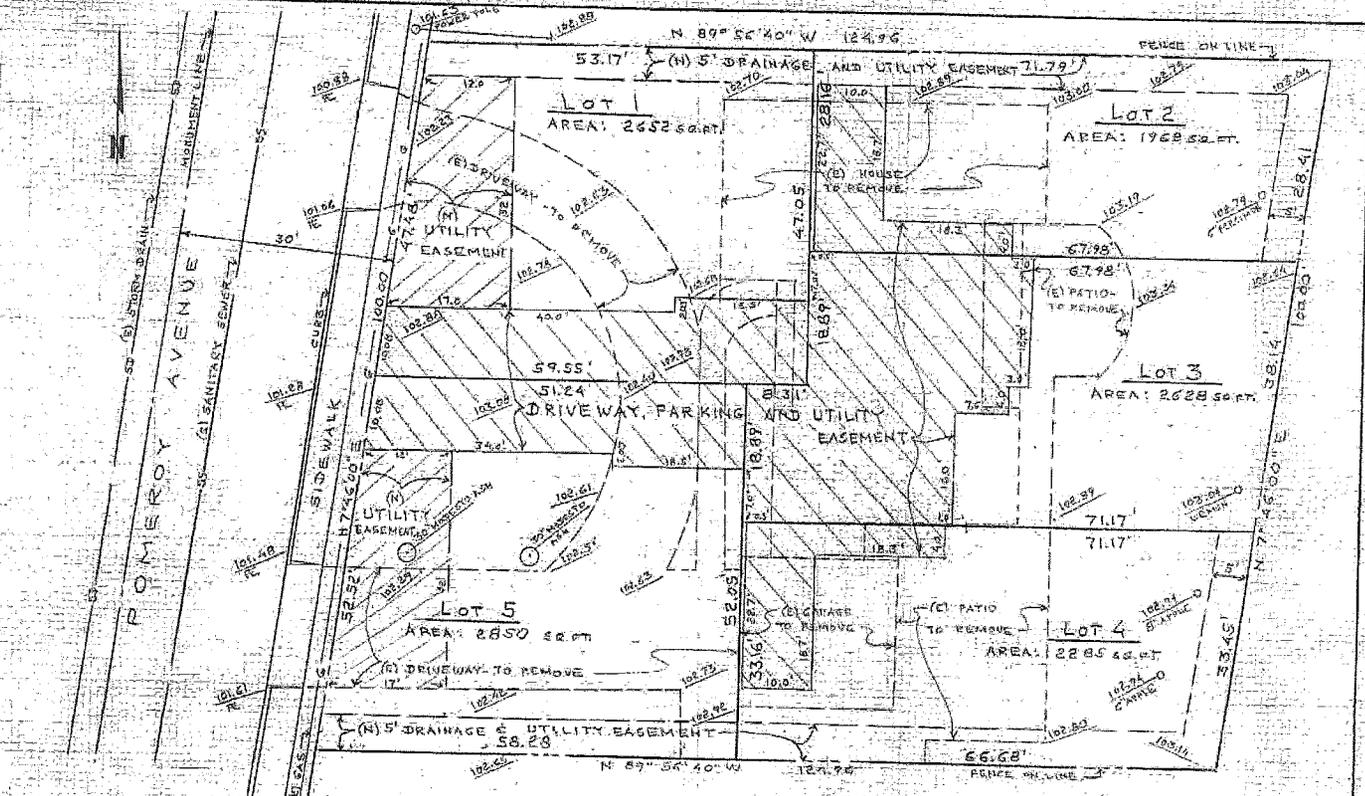
REVISIONS	BY

B - 2 STORY CUSTOM HOMES PROPOSED FOR 1015 POMEROY AVENUE
 CALIFORNIA, 94301
 CITY OF SANTA CLARA

I hereby certify that the above is a true and correct copy of the original drawings as submitted to the City of Santa Clara for review and approval. I am a duly licensed professional architect in the State of California. My license number is 12345. I have prepared these drawings in accordance with the requirements of the California Building Code and the City of Santa Clara. I have also prepared these drawings in accordance with the requirements of the City of Santa Clara. I have also prepared these drawings in accordance with the requirements of the City of Santa Clara.

ROAHEE JINSON ARCHITECT
 ARCHITECT
 1621 15th St
 Santa Clara, CA 95050
 (408) 254-1521

Date: _____
 Scale: 1/4" = 1'-0"
 Sheet: 6
 Title: _____



OWNER & SUBDIVIDER:
 DARYOUGH MARHAMAT
 627 SLEEPER AVE
 MOUNTAIN VIEW, CA 94040
 PH. (408) 895-6465

CIVIL ENGINEER & LAND SURVEYOR:
 A.C. & H. CIVIL ENGINEERS
 2443 ASH ST. SU. 'H'
 PALO ALTO, CA 94306
 PH. (650) 327-3900

ASSESSOR'S PARCEL NUMBER:
 290-69-079

EXISTING USE:
 SINGLE FAMILY RESIDENCE

PROPOSE USE:
 5 LOTS SUBDIVISION (12383 sq. ft.)

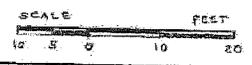
ZONE:
 R-3

ADDRESS:
 1075 POMEROY AVE
 SANTA CLARA, CA
 95051

PROPERTY:
 PORTION OF LOT 6 (124.76x100.00)
 MAP OF THE SUBDIVISION OF THE
 PROPERTY OF M. POMEROY, BEING
 OF THE QUITO RANCHO
 RECORDED SEPTEMBER 8, 1883
 IN BOOK "A" OF MAPS, AT PAGE 94 1/2

ALL UTILITIES ARE EXISTING
 EXISTING STRUCTURE TO BE REMOVED

A. P. N. 290-69-1 to 78 (R.O.S. 125 / 29)

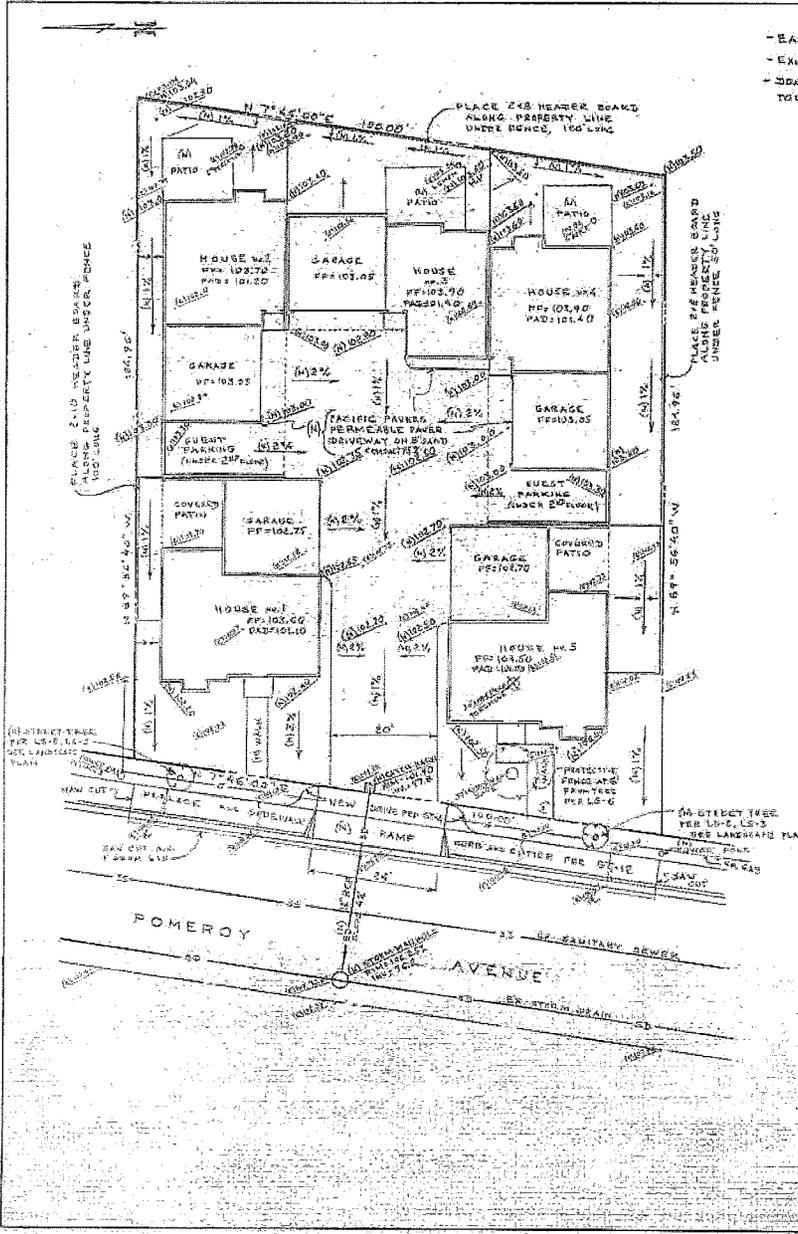


SHEET 1 OF 1

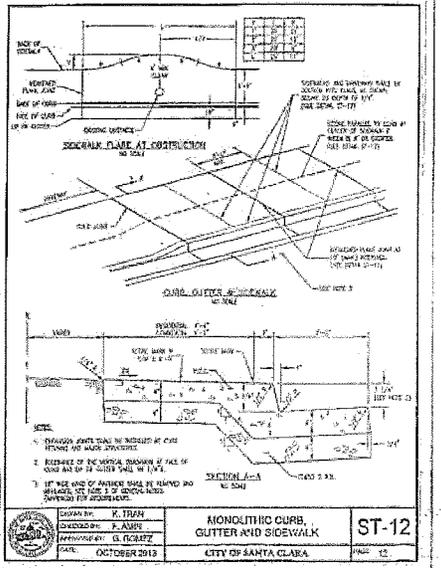
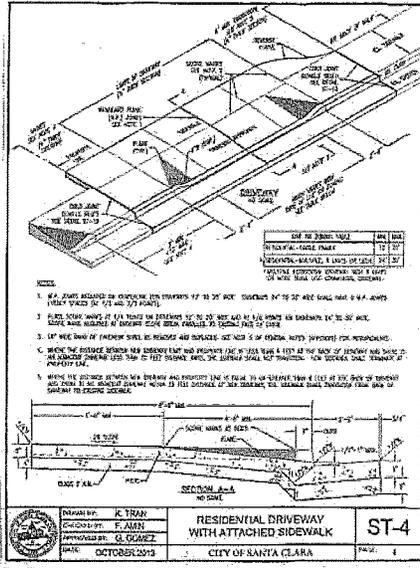
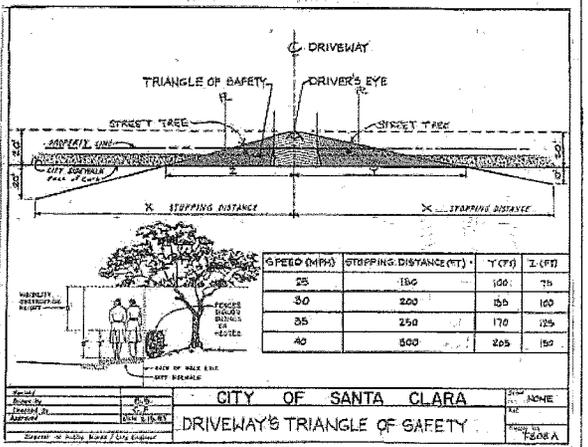
TENTATIVE MAP

A.C. & H. CIVIL ENGINEERS
 PALO ALTO 2443 ASH ST. SU. 'H' SAN JOSE
 (650) 327-3900 (408) 294-4000

DRAWN BY SCALE: 1"=10' DATE: 07-20-21	FOR: MARHAMAT 1075 POMEROY AVE, SANTA CLARA	DRAWING NO. 13-132
---	--	-----------------------



- EARTHWORK QUANTITY = 285 CUBIC YARDS OFF HAIL
- EXISTING HOUSE, DRIVEWAY, PATIO WILL BE REMOVED
- DOWNSPOTS AT BACK AND FRONT CORNERS DISCHARGE TO LANDSCAPE AREAS, WITH POP UP DRAINERS.

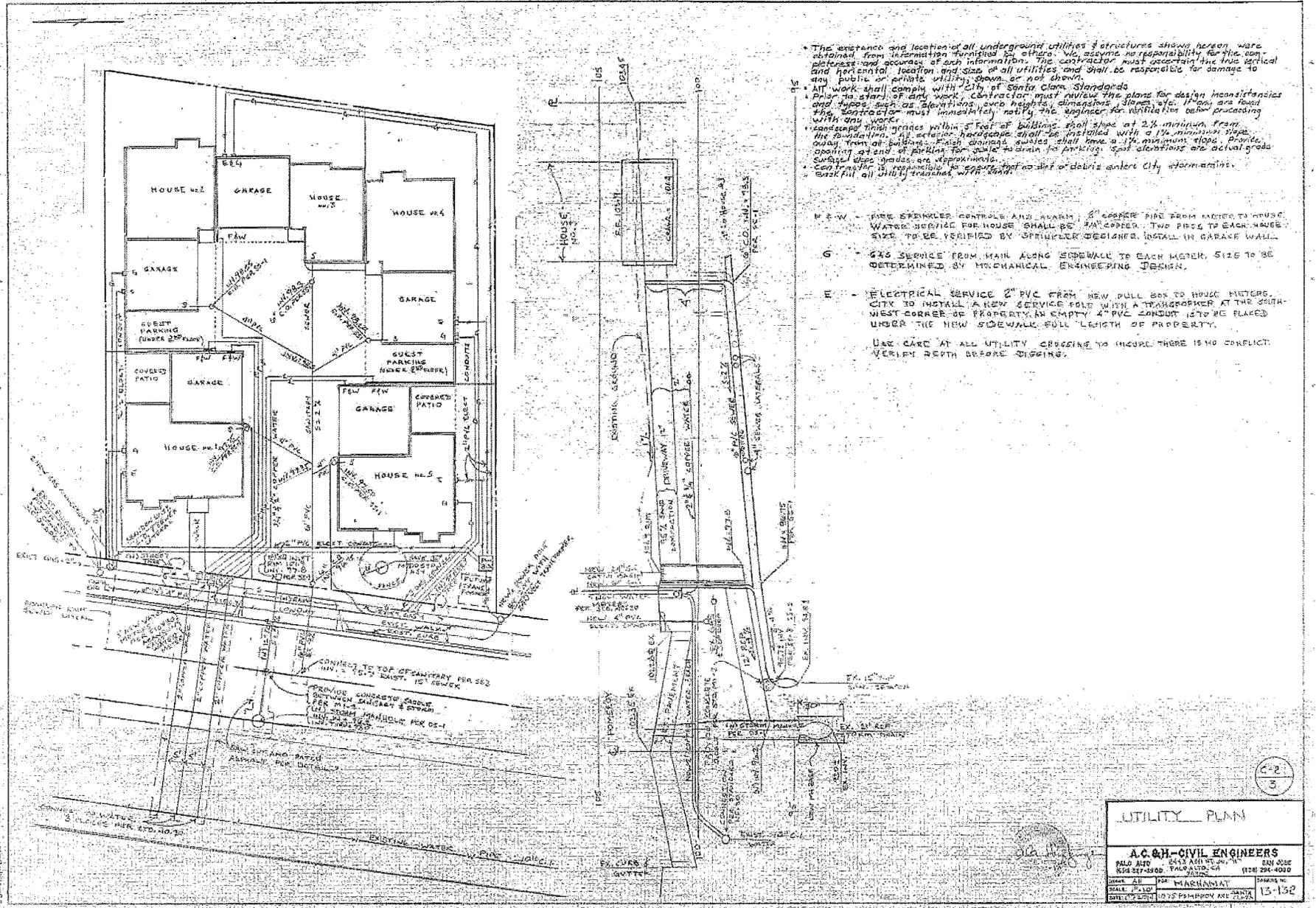


GRADING & DRAINAGE PLAN

A.C.&H.-CIVIL ENGINEERS

1500 11TH AVENUE, SUITE 100, SAN JOSE, CA 95128
408 254-4000

DATE: OCTOBER 2019
SCALE: AS SHOWN
SHEET NO: 13-132



* The existence and location of all underground utilities & structures shown herein were obtained from information furnished by others. We assume no responsibility for the completeness and accuracy of such information. The contractor must ascertain the true vertical and horizontal location and class of all utilities and shall be responsible for damage to any public or private utility, shown or not shown.

* All work shall comply with City of Santa Clara Standards.

* Prior to start of any work, contractor must review the plans for design inconsistencies and types such as elevations, curb heights, dimensions, slopes, etc. If any are found the contractor must immediately notify the engineer for verification before proceeding with any work.

* Landscaping within 5 feet of building shall slope at 2% minimum from the foundation. An exterior drainage shall be installed with a 1% minimum slope away from all buildings. Each drainage shall have a 1/4" minimum slope. Provide opening at end of parking for water to drain to parking. Spot elevations are actual grade. Surface elevations are approximate.

* Contractor is responsible to ensure that no dirt or debris enters City stormwater.

* Backfill all utility trenches with sand.

- F - W - FIRE SINKLER CONTROLS AND ALARM, 1/2" COPPER PIPE FROM METERS TO HOUSE. WATER SERVICE FOR HOUSE SHALL BE 1/2" COPPER, TWO PIGS TO EACH METER. SIZE TO BE VERIFIED BY SPRINKLER DESIGNER. INSTALL IN GARAGE WALL.
 - G - GAS SERVICE FROM MAIN ALONG SIDEWALK TO EACH METER. SIZE TO BE DETERMINED BY MECHANICAL ENGINEERING DESIGN.
 - E - ELECTRICAL SERVICE 2" PVC FROM NEW PULL BOX TO HOUSE METERS. CITY TO INSTALL A NEW SERVICE POLE WITH A TRANSFORMER AT THE SOUTH WEST CORNER OF PROPERTY. AN EMPTY 4" PVC CONDUIT IS TO BE PLACED UNDER THE NEW SIDEWALK FULL LENGTH OF PROPERTY.
- USE CARE AT ALL UTILITY CROSSING TO INSURE THERE IS NO CONFLICT. VERIFY DEPTH BEFORE DIGGING.

UTILITY PLAN			
A.C.&H-CIVIL ENGINEERS			
PAULO ALTO	6415 AUSTIN BLVD., #10	SAN JOSE	95128-4002
SHARON BROWN	2000 N. 1ST ST.	SAN JOSE	95131-1000
SCALE: AS SHOWN	DATE: 07/20/07	PROJECT: MARRINWAY	DRAWING NO: 13-152

*** ALL TREES EXCEPT PALMS**

4 ALL TREES EXCEPT PALMS

1. ALL TREES EXCEPT PALMS

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9. ALL TREES EXCEPT PALMS
10. ALL TREES EXCEPT PALMS

DESIGNED BY: K. TRAM
CHECKED BY: F. ALMI
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 58

4 ALL TREES EXCEPT PALMS

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DESIGNED BY: K. TRAM
CHECKED BY: F. ALMI
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 59

TREE PROTECTION

1. ALL TREES EXCEPT PALMS

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10. ALL TREES EXCEPT PALMS

DESIGNED BY: K. TRAM
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APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 62

CONCRETE SADDLE UPPER PIPE INSTALLATION

1. ALL TREES EXCEPT PALMS

| MINIMUM |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

DESIGNED BY: K. TRAM
CHECKED BY: F. ALMI
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 61

4" x 6" SANITARY SEWER CLEAN-OUT

1. ALL TREES EXCEPT PALMS

1. ALL TREES EXCEPT PALMS
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10. ALL TREES EXCEPT PALMS

DESIGNED BY: K. TRAM
CHECKED BY: F. ALMI
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 57

4" x 6" SANITARY SEWER LATERAL CONNECTION

1. ALL TREES EXCEPT PALMS

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2. ALL TREES EXCEPT PALMS
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9. ALL TREES EXCEPT PALMS
10. ALL TREES EXCEPT PALMS

DESIGNED BY: K. TRAM
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APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 58

4" x 6" SANITARY SEWER LATERAL CONNECTION TO EXISTING MAIN

1. ALL TREES EXCEPT PALMS

1. ALL TREES EXCEPT PALMS
2. ALL TREES EXCEPT PALMS
3. ALL TREES EXCEPT PALMS
4. ALL TREES EXCEPT PALMS
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6. ALL TREES EXCEPT PALMS
7. ALL TREES EXCEPT PALMS
8. ALL TREES EXCEPT PALMS
9. ALL TREES EXCEPT PALMS
10. ALL TREES EXCEPT PALMS

DESIGNED BY: K. TRAM
CHECKED BY: F. ALMI
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 59

CITY STANDARD DETAILS

30

NO.	DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL
1	Excavation	100	cu yd	1.50	150.00
2	Concrete Saddle	1	each	100.00	100.00
3	Upper Pipe	10	lin ft	10.00	100.00
4	Manhole	1	each	50.00	50.00
5	Backfill	100	cu yd	1.00	100.00
6	Final Grade	100	sq ft	0.50	50.00
7	Permit Fee	1	each	100.00	100.00
8	Construction Fee	1	each	100.00	100.00
9	Inspection Fee	1	each	100.00	100.00
10	Asphalt Paving	100	sq ft	1.00	100.00
11	Grass Seeding	100	sq ft	0.50	50.00
12	Final Clean-up	1	each	100.00	100.00
13	Permit Fee	1	each	100.00	100.00
14	Construction Fee	1	each	100.00	100.00
15	Inspection Fee	1	each	100.00	100.00
16	Asphalt Paving	100	sq ft	1.00	100.00
17	Grass Seeding	100	sq ft	0.50	50.00
18	Final Clean-up	1	each	100.00	100.00

DESIGNED BY: K. TRAM
CHECKED BY: F. ALMI
APPROVED BY: G. GOMEZ
DATE: OCTOBER 2013
CITY OF SANTA CLARA
PAGE: 61

CITY STANDARD DETAILS

A.C.B. - CIVIL ENGINEERS

PHILIP A. BROWN
1400 25th STREET
SANTA CLARA, CA 95050
TEL: (408) 254-4000
FAX: (408) 254-4001
WWW.ACB-ENGINEERS.COM

DATE: 01-15-2013 10:55 PM

PROOF OF PUBLICATION

Santa Clara Weekly

P.O. Box 580, Santa Clara, California 95052

IN THE

City of Santa Clara,

State of California,

County of Santa Clara

CITY OF SANTA CLARA

NOTICE OF CITY COUNCIL PUBLIC HEARING

TUESDAY, FEBRUARY 10, 2015

1075 POMEROY AVENUE

State of California, }
County of Santa Clara } SS.

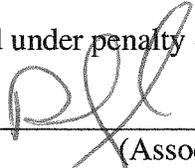
The undersigned, being first duly sworn, deposes and says: That at all times hereinafter mentioned affiant was and still is a citizen of the United States, over the age of eighteen years, and not a party to nor interested in the above entitled proceeding; and was at and during all said times and still is publisher of the Santa Clara Weekly, a newspaper of general circulation printed and published weekly in the County of Santa Clara, State of California, and said Santa Clara Weekly is and was at all times hereinmentioned a newspaper of general circulation as that term is defined by sections 6000 and following, of the government code of the State of California, and, as provided by said sections, is published for the dissemination of local or telegraphic news and intelligence of a general character, having a bonafide subscription list of paying subscribers, and is not devoted to the interest or published for the entertainment or instruction of a particular class, profession, trade, calling, race or denomination, or for the entertainment and instruction of any number of such classes, professions, trades, callings, races or denominations; that at all times said newspaper has been established, printed and published in the said County of Santa Clara and State of California at regular intervals for more than one year proceeding the first publication of the notice herein mentioned; that said notice was set in type not smaller than non-parell, describing and expessing in general terms the purport and character of the notice intended to be given; that the clipping of which the annexed is a true printed copy, was published and printed in said newspaper on the following dates to wit:

Pub: 1/28/2015

Dated at Santa Clara, California

This 28TH day of JANUARY, 2015

I declared under penalty of perjury that the foregoing is true and correct.

Signed:  _____
(Assoc.) Publisher of the Santa Clara Weekly

The Santa Clara Weekly was adjudicated a newspaper of general circulation in and for the County of Santa Clara on September 3, 1974 (Case No. 314617). The Santa Clara Weekly was adjudicated a newspaper of general circulation within the City of Santa Clara on April 2, 1976 (Case No. 347776).

**CITY OF SANTA CLARA NOTICE OF
CITY COUNCIL PUBLIC HEARING
Tuesday, February 10, 2015**

You are hereby notified that on **Tuesday, February 10, 2015** at the hour of 7:00 p.m. in the City Council Chambers of City Hall, 1500 Warburton Avenue, Santa Clara, CA, the City Council will consider the matter described below. **File Number:** PLN2013-10129 Rezone from R3-18D (Low Density Multiple Dwelling) to PD (Planned Development) and Tentative Map to construct five dwelling units. **Project Location:** 1075 Pomeroy Avenue, a 12,383 square-foot project site near the intersection of Pomeroy Avenue and Benton Street (APN: 290-69-079). **Applicant/Owner:** Dory Marhamat. At these meetings you may be heard on this matter if you so desire. If you challenge this land use decision in court, you may be limited to raising only those issues you or someone else raised at these public hearings or in written correspondence delivered to the City at or prior to the close of the public hearings. The City's Project Clearance Committee and Subdivision Clearance Committee have evaluated the potential environmental impacts of these projects. The results of this evaluation are a part of the minutes of the Committee's and are available in the project file in the Planning Division office. Should you have any questions, please call the Planning Division office at (408) 615-2450. Written comments on this item are encouraged to be submitted to the Planning Division, City Hall, 1500 Warburton Avenue, Santa Clara 95050, by Wednesday morning of the week prior to the meeting so they can be included in the City Council Members' packets.

AMERICANS WITH DISABILITIES ACT (ADA) In accordance with the Americans with Disabilities Act of 1990, the City of Santa Clara will ensure that all existing facilities will be made accessible to the maximum extent feasible. Reasonable modifications in policies, procedures and/or practices will be made as necessary to ensure full and equal access and enjoyment of all programs and activities for all individuals with a disability. Individuals with severe allergies, environmental illness, multiple chemical sensitivity or related disabilities should contact the City's ADA office (408) 615-3000, to discuss meeting accessibility. In order to allow participation by such individuals, please do not wear scented products to meetings at City facilities.

Pub.: 1/28/2015

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 9.A

City of Santa Clara, California



Date: January 27, 2015

To: City Manager for Council Action

From: Director of Water and Sewer Utilities

Subject: Award of Contract for SCADA Support Building Project (WA 30259)

Contractor: Guerra Construction Group
Address: 984 Memorex Drive
 Santa Clara, CA 95050

Bid Amount: \$1,117,400

EXECUTIVE SUMMARY:

The SCADA Support Building Project (Project) consists of the construction of a new facility that will provide a secure control room for the Supervisory Control and Data Acquisition (SCADA) system that assists the City of Santa Clara's Water and Sewer Utilities in operating and maintaining the City's potable water, recycled water and sewer collections systems. The Project Plans and Specifications were approved and authorized for bid by the City Council on November 25, 2014.

On January 8, 2015, bids were opened for construction of the Project. Three (3) bids were received, ranging from \$1,117,400 to \$1,451,000 (see bid summary below). The lowest bid of \$1,117,400 submitted by Guerra Construction Group is approximately 40% above the Engineer's Estimate of \$798,560. Guerra Construction Group's bid was higher than the engineer's estimate because a second radio tower was added as an addendum to the project that was not included in the original engineer's estimate and the original engineer's estimate for the two generators was conservative. The bid was reviewed for compliance with the terms and conditions of the Bid Documents and any necessary minor corrections were made. Guerra Construction Group has been determined to be the lowest responsive and responsible bidder. Therefore, staff recommends awarding the contract to Guerra Construction Group.

BID SUMMARY

ENGINEER'S ESTIMATE: \$798,560

<u>CONTRACTOR</u>	<u>TOTAL BID</u>	<u>% FROM ENGINEER'S ESTIMATE</u>
Guerra Construction Group	\$1,117,400	40% above
B Side Inc.	\$1,158,400	45% above
Flint Builders, Inc.	\$1,451,000	82% above

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The award of this contract will allow for the construction of a critical utility infrastructure facility. Awarding the contract to the lowest responsive and responsible bidder will keep the Project on the expedited and compressed time schedule.

ECONOMIC/FISCAL IMPACT:

The cost of the contract is \$1,117,400 plus a ten percent contingency for potential change orders in the amount of \$112,000 for a total cost of \$1,229,400. This Project is currently budgeted in existing capital projects in the water and sewer Utilities; Distribution System Replacement/Restoration (592-1423-80300-7054) and SCADA Replacement (594-1514-80300-1914). Staff recommends that additional funds be transferred to SCADA Replacement Project fund in the amount of \$600,000 to cover the additional amount needed for this award, staff costs, and miscellaneous project costs. Sufficient funds are available for transfer from the Unallocated Sewer Capital Account (594-1514-80300-1900).

RECOMMENDATION:

That the City Council:

1. Approve additional appropriation and transfer of \$600,000 from the Unallocated Sewer Account (594-1514-80010-1900) to the SCADA Replacement Project (594-1514-80300-1914);
2. Award the contract for the SCADA Support Building Project (WA 30259) to the lowest responsive and responsible bidder, Guerra Construction Group, in the amount of \$1,117,400; and
3. Authorize the City Manager or his designee to execute change orders up to 10% of the original contract price, or \$112,000, for a total not-to-exceed amount of \$1,229,400.



Christopher L. de Groot
Director of Water and Sewer Utilities

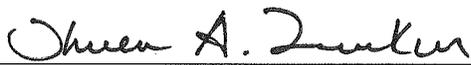
Certified as to Availability of Funds: *OK.LF*

592-1423-80300-7054	\$614,700.00
594-1514-80300-1900	\$600,000.00
594-1514-80300-1914	\$14,700.00



Gary Ameling
Director of Finance

APPROVED:



for Julio J. Fuentes
City Manager

FIVE COUNCIL VOTES

Documents related to this report: None

PROOF OF PUBLICATION

Santa Clara Weekly

P.O. Box 580, Santa Clara, California 95052

IN THE

City of Santa Clara,
State of California,
County of Santa Clara

**CITY OF SANTA CLARA NOTICE INVITING BIDS
SCADA SUPPORT BUILDING PROJECT
INVITATION NO. WA-30259**

State of California, }
County of Santa Clara } SS.

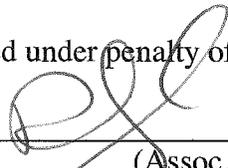
The undersigned, being first duly sworn, deposes and says: That at all times hereinafter mentioned affiant was and still is a citizen of the United States, over the age of eighteen years, and not a party to nor interested in the above entitled proceeding; and was at and during all said times and still is publisher of the Santa Clara Weekly, a newspaper of general circulation printed and published weekly in the County of Santa Clara, State of California, and said Santa Clara Weekly is and was at all times hereinmentioned a newspaper of general circulation as that term is defined by sections 6000 and following, of the government code of the State of California, and, as provided by said sections, is published for the dissemination of local or telegraphic news and intelligence of a general character, having a bonafide subscription list of paying subscribers, and is not devoted to the interest or published for the entertainment or instruction of a particular class, profession, trade, calling, race or denomination, or for the entertainment and instruction of any number of such classes, professions, trades, callings, races or denominations; that at all times said newspaper has been established, printed and published in the said County of Santa Clara and State of California at regular intervals for more than one year proceeding the first publication of the notice herein mentioned; that said notice was set in type not smaller than non-parell, describing and expressing in general terms the purport and character of the notice intended to be given; that the clipping of which the annexed is a true printed copy, was published and printed in said newspaper on the following dates to wit:

Pub: 11/26/2014

Dated at Santa Clara, California

This 26TH day of NOVEMBER, 2014

I declared under penalty of perjury that the foregoing is true and correct.

Signed:  _____
(Assoc.) Publisher of the Santa Clara Weekly

The Santa Clara Weekly was adjudicated a newspaper of general circulation in and for the County of Santa Clara on September 3, 1974 (Case No. 314617). The Santa Clara Weekly was adjudicated a newspaper of general circulation within the City of Santa Clara on April 2, 1976 (Case No. 347776).

CITY OF SANTA CLARA NOTICE INVITING BIDS

1. NOTICE. The City of Santa Clara, California, a chartered California municipal corporation, ("City") hereby gives notice that it will accept bids for construction of the following public work:

**SCADA SUPPORT BUILDING PROJECT
INVITATION NO. WA 30259**

2. BID SUBMISSION. City will receive sealed Bids in the Office of the City Clerk, 1500 Warburton Avenue, Santa Clara, California 95050, until **3:00 p.m.**, as determined by the atomic clock above the help window of the City Clerk's Office and the City Clerk, on **December 17, 2014**. Bids will be opened shortly thereafter on that same day. The opening will be in accordance with procedures set forth in Document 00250, Bid Contents, Evaluation, Selection, and Award.

3. CONTACT INFORMATION. Bidders may obtain further information from:

Project Engineer: Nina Hawk
Email: nhawk@santaclaraca.gov
Telephone: 1+(408) 615-2018
Fax: 1+(408) 247-0784
Mailing address: City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

4. STATEMENT OF QUALIFICATIONS. Each Bidder shall be required to submit a Statement of Qualifications in accordance with Document 00200, Instructions to Bidders, and Document 00450, Statement of Qualifications for Construction Work.

5. DESCRIPTION OF WORK. The Work shall consist of providing a complete precast concrete building to house servers and associated equipment to support City's new Supervisory Control and Data Acquisition (SCADA) system, which will monitor and control the City's water and sewer facilities, including, but not limited to, twenty-eight (28) domestic water wells, four (4) storage tank and booster pump stations, two (2) water import connections, three (3) sewage collection pump stations, and four (4) sewer lift stations.

6. CONTRACT TIME. The Work shall reach Substantial Completion within one hundred seventy (170) Calendar Days from the date when the Contract Time commences to run. The Work shall reach Final Completion within two hundred (200) Calendar Days from the date when the Contract Time commences to run. See Document 00050; References and Definitions, for definitions of Substantial Completion and Final Completion.

7. REQUIRED CONTRACTOR'S LICENSE(S). A California "A" contractor's license is required to bid this contract. Joint ventures must secure a joint venture license prior to award of this Contract.

8. PREVAILING WAGE LAWS. The successful Bidder must comply with all prevailing wage laws applicable to the Project, and related requirements contained in the Contract Documents.

9. INSTRUCTIONS. Bidders shall refer to Document 00200, Instructions to Bidders, for required documents and items to be submitted in sealed envelopes for deposit into the Bid box, located at the City Clerk's office, and applicable times for submission.

10. SUBSTITUTIONS OF SECURITIES. City will permit the successful Bidder to substitute securities for retention monies withheld to ensure performance of Contract, as set forth in Document 00680, Escrow Agreement for Security Deposits in Lieu of Retention, in accordance with California Public Contract Code, Section 22300. By this reference, Document 00680, Escrow Agreement for Security Deposits in Lieu of Retention, is incorporated in full in this Document 00100, Notice Inviting Bids.

11. PRE-BID CONFERENCE AND SITE VISIT. City will conduct a **Mandatory Pre-bid Conference and Site Visit at 10:00 a.m. on December 9, 2014 at 1705 Martin Avenue, Santa Clara, CA.** Bidders are required to attend the Pre-Bid Conference and Site Visit, which will last approximately 2 hours.

12. BIDDING DOCUMENTS. Bidders may examine Bidding Documents at the office of: **Prints Charles Reprographics**, 1643 S. Main Street, Milpitas, CA 95035 and at www.printscharlesrepro.com (PLAN VAULT); **City of Santa Clara Water & Sewer Utilities**, 1500 Warburton Avenue, Santa Clara, CA 95050; **Asian Inc.**, 1167 Mission Street, 4th Floor, San Francisco, CA 94103; **Builders Exchange of Alameda County**, 3055 Alvarado Street, San Leandro, CA 94577; **Builders Exchange of Santa Clara County**, 400 Reed Street, Santa Clara, CA 95050; **Central Coast Builders Association**, 20 Quail Run Circle, Ste A, Salinas, CA 93907; **Contra Costa Builders Exchange**, 2440 Stanwell Drive, Concord, CA 94520; **iSqFt**, 4500 Lake Forest Drive, Cincinnati, OH 45242; **McGraw-Hill Construction Dodge**, 4300 Beltway Place, Suite 180, Arlington, TX 76018 and at www.construction.com/projectcenter/; **Peninsula Builders Exchange**, 735 Industrial Way, San Carlos, CA 94070; **Placer County Contractors Association**, 10656 Industrial Ave., Ste 160, Roseville, CA 95678; **Reed Construction Data**, 30 Technology Parkway South, Suite 100, Norcross, GA 30092; **Sacramento Builders Exchange**, 1331 "T" Street, Sacramento, CA 95814; **Sacramento Builders Exchange**, 151 N. Sunrise Avenue #511, Roseville, CA 95661; **San Francisco Builders Exchange**, 850 South Van Ness Avenue, San Francisco, CA 94110; **Stockton Builders Exchange**, 7500 Northwest Lane, Stockton, CA 95210.

13. PROCUREMENT OF BIDDING DOCUMENTS.

Bidding Documents may be viewed at no cost or purchased for a **NON-REFUNDABLE FEE of one hundred and twelve dollars (\$112.00)** via the internet at www.printscharlesrepro.com (PLAN VAULT). Bidding Documents may also be purchased by calling Prints Charles Reprographics at 1+(408) 240-3330. Please make checks payable to Prints Charles Reprographics not the City of Santa Clara. Bidders requesting that Bidding Documents be mailed/shipped to them will be charged the full costs of shipping. Bidding Documents and Plan Holder lists may also be viewed at the web site noted above.

Addenda, if any, will be provided free of charge to all registered plan holders, and to all Builders Exchanges listed above.

The successful bidder will be provided with up to five (5) complete sets of Plans and Specifications, for construction use, after the award of Contract. The successful bidder will be responsible for all costs for additional sets for its firm and its subcontractors, beyond those provided by the City.

14. BID PREPARATION COST. Bidders are solely responsible for the cost of preparing their Bids.

15. RESERVATION OF RIGHTS. City specifically reserves the right, in its sole discretion, to reject any or all Bids, or re-bid, or to waive inconsequential deviations from Bid requirements not involving time, price, or quality of the Work.

City of Santa Clara, Santa Clara, California.
Pub.: 11/26/2014

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 13.A



City of Santa Clara, California



Date: January 14, 2015

To: City Manager for Council Action

From: City Librarian

Subject: Acceptance and Appropriation of an Innovation Grant from Pacific Library Partnership for Fiscal Year 2014/15 in the Amount of \$10,000.00 for Central Studio – An Artist's Space

EXECUTIVE SUMMARY:

The Library will be transforming a portion of our space into an artist's studio. By providing the space and materials, we can help foster the arts in our community. Our studio has already begun to take shape in a dedicated portion of the Library near our graphic novel wall. Although the graphic novel section is immensely popular, a lack of space and seating made it crowded and uninviting. We have cleared away old shelving and ordered furniture as well as an easel and two drafting tables. With the addition of this grant, we will provide modern art supplies such as digital tablets and laptops, as well as the standard necessities of drawing pads, pencils and erasers.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The Central Studio will create a vibrant community of artists and art enthusiasts by transforming an underutilized area into a dedicated space for artistic creativity in the library. We will expose patrons to new artistic avenues through our digital tools and workshops and provide a venue for local artists to teach and hone their craft. The graphic novels which inspired this project are a unique mode of expression, uniting visual art with traditional storytelling. We hope to accomplish the same vision with this project, proving that libraries are not just places to read, they are places to create. This project will open doors to new community partners as we will work with a wide range of local artists and art communities. We also hope to reach out to other libraries by documenting our best practices to share through a presentation at California Library Association Annual Conference.

There are no disadvantages.

ECONOMIC/FISCAL IMPACT:

A total grant award of \$10,000 was issued by the Pacific Library Partnership for the Library's Central Studio – An Artist's Space (112-1241-55580-(G)PLP12). There is no negative impact on the City's General Fund.

City Manager for Council Action

Subject: Acceptance and Appropriation of an Innovation Grant from Pacific Library Partnership for Fiscal Year 2014/15 in the Amount of \$10,000.00 for Central Studio – An Artist’s Space

January 2, 2015

Page 2

RECOMMENDATION:

That the Council:

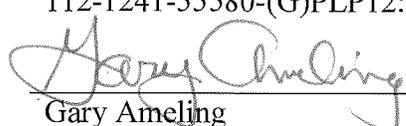
1. Accept estimated revenue of \$10,000.00 in Innovation Grant funds from Pacific Library Partnership in 112-1241-55580-(G)PLP12 for “Central Studio – An Artists’ Space”, and
2. Approve appropriation of the \$10,000 in Innovation Grant funds, as follows:
 - a. \$5,000 to 112-1241-87870-(G)PLP12 for contractual services for workshops and classes;
 - b. \$2,000 to 112-1241-87710-(G)PLP12 for advertising and promotion;
 - c. \$3,000 to 112-1241-87500-(G)PLP12 for supplies related to the grant.



Hilary Keith
City Librarian

APPROVED:


Julio, J. Fuentes
City Manager

Omni
Certified as to Availability of Funds:
112-1241-55580-(G)PLP12: \$ 10,000.00


Gary Ameling
Director of Finance/
Assistant City Manager

FIVE COUNCIL VOTES

Meeting Date: 02-10-15

AGENDA REPORT

Agenda Item # 13B

City of Santa Clara, California



Date: February 3, 2015

To: City Manager for Council Action

From: Director of Planning and Inspection

Subject: For the Property at 746 Madison Street: Approve Adding the Property to the City's List of Architecturally or Historically Significant Properties (PLN2014-10712)

EXECUTIVE SUMMARY:

The owners of 746 Madison Street have requested that the subject property be added onto the City's Architecturally or Historically Significant Properties List. The purpose of the request is due to the owners' interest in applying for a Mills Act Contract in the future. A historic property evaluation was prepared and concludes that the property retains sufficient integrity and is eligible for listing on the City's Architecturally or Historically Significant Properties List. Attached is the applicants' statement of justification and a State Department of Parks and Recreation (DPR) form evaluating the significance of the structure.

The Historical and Landmarks Commission reviewed and supported the request for historic listing at its meeting of December 4, 2014. The staff report and an excerpt of the minutes from that meeting are attached.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

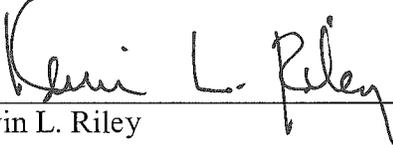
Approval of the request would add the property onto the City's List of Architecturally or Historically Significant Properties, and enable eligibility for a Mills Act Contract in the future. The purpose of a Mills Act Contract is to offer owners of historically significant properties an economic incentive to maintain and preserve the historic physical integrity of their properties, which thereby also increases the aesthetic and economic health of the surrounding neighborhood and the City.

ECONOMIC/FISCAL IMPACT:

The fiscal impact would be a negligible decrease of property tax revenue to the City.

RECOMMENDATION:

That the Council Adopt a Resolution to Add the property at 746 Madison Street to the City's List of Architecturally or Historically Significant Properties (PLN2014-10712);



Kevin L. Riley
Director of Planning and Inspection

APPROVED:



by Julio J. Fuentes
City Manager

Documents Related to this Report:

- 1) *City Council Resolution*
- 2) *Statement of Justification*
- 3) *Historical and Landmarks Commission Staff Report without attachments, December 4, 2014*
- 4) *Historical and Landmarks Commission Excerpt of Minutes, December 4, 2014*
- 5) *DPR Form for 746 Madison Street*

RESOLUTION NO.

**A RESOLUTION OF THE CITY OF SANTA CLARA,
CALIFORNIA TO ADD THE PROPERTY LOCATED AT
746 MADISON STREET, SANTA CLARA, TO THE CITY'S
LIST OF ARCHITECTURALLY OR HISTORICALLY
SIGNIFICANT PROPERTIES**

PLN2014-10712 (Historic Designation Application)

BE IT RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

WHEREAS, Sigrid Jacobsen and Mike Neunfinger (“Applicants”) filed an application to add their property located at 746 Madison Street (APN: 269-26-050) onto the List of Architecturally or Historically Significant Properties in the City of Santa Clara (“Project Site”);

WHEREAS, the Project Site has been maintained as a residential property developed with a single-family dwelling, as shown on the Department of Parks and Recreation Form (DPR), attached as Exhibit “DPR Form”;

WHEREAS, the Project Site is currently zoned Single Family Residential (R1-6L);

WHEREAS, the General Plan land use designation for the Project Site is Very Low Density Residential;

WHEREAS, designation of the Project Site to the City’s List of Architecturally or Historically Significant Properties would allow the property owner(s) to apply for a Mills Act Contract in the future;

WHEREAS, the Project is Categorically Exempt from formal environmental review pursuant to Section 21084.1 of the Public Resources Code § 21000 *et seq.*;

WHEREAS, on December 4, 2014, the Historical and Landmarks Commission held a duly noticed public meeting to consider the application, during which time the Historical and

Landmarks Commission invited and considered any and all verbal and written testimony and evidence offered in favor of and in opposition to the proposed application.

WHEREAS, on February 10, 2015, the City Council held a duly noticed public hearing to consider the application, during which the City Council invited and considered any and all verbal and written testimony and evidence offered in favor of and in opposition to the proposed rezoning.

NOW THEREFORE, BE IT FURTHER RESOLVED BY THE CITY OF SANTA CLARA AS FOLLOWS:

1. That the City Council hereby finds that the above Recitals are true and correct and by this reference makes them a part hereof.

2. That the City Council hereby adds the Project Site, shown on Exhibit "DPR Form," attached hereto and incorporated by this reference, to the City's List of Architecturally or Historically Significant Properties.

3. That pursuant to the State Secretary of the Interior's Standards for Historic Preservation, the City Council determines that the following findings exist in support of the property's addition to the City's List of Architecturally or Historically Significant Properties:

A. The property is associated with an important individual or group who contributed in a significant way to the political, social and/or cultural life of the community, in that the property is associated with an individual(s) who made significant contributions to both the social and civil life of the City of Santa Clara.

B. The site, building or property has character, interest, integrity and reflects the heritage and cultural development of the City, in that the residence retains visible characteristics of the Italianate architectural style, a dominant style at the time of its original construction.

C. The building has a direct association with broad patterns of local history, including development and settlement patterns, early or important transportation routes or social, political, or economic trends and activities, in that the building is located in an area of Santa Clara's "Old Quad," which had its blocks divided into large parcels and mostly settled by the 1860s, by arrivals who established small farms on their property.

4. That based on the findings set forth in the Resolution and the evidence in the City Staff report, that the City Council adds the Project Site to the City's List of Architecturally or Historically Significant Properties as set forth herein.

5. Constitutionality, severability. If any section, subsection, sentence, clause, phrase, or word of this resolution is for any reason held by a court of competent jurisdiction to be unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of the resolution. The City of Santa Clara, California, hereby declares that it would have passed this resolution and each section, subsection, sentence, clause, phrase, and word thereof, irrespective of the fact that any one or more section(s), subsection(s), sentence(s), clause(s), phrase(s), or word(s) be declared invalid.

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6. Effective date. This resolution shall become effective immediately.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE COPY OF A RESOLUTION PASSED AND ADOPTED BY THE CITY OF SANTA CLARA, CALIFORNIA, AT A REGULAR MEETING THEREOF HELD ON THE ___ DAY OF _____, 2015, BY THE FOLLOWING VOTE:

AYES: COUNCILORS:

NOES: COUNCILORS:

ABSENT: COUNCILORS:

ABSTAINED: COUNCILORS:

ATTEST:

ROD DIRIDON, JR.
CITY CLERK
CITY OF SANTA CLARA

Attachments Incorporated by Reference:

1. Exhibit "DPR Form"

Shaun Lacey

From: Sigrid Jacobsen & Mike Neunfinger <sigridmike@hotmail.com>
Sent: Wednesday, November 19, 2014 12:31 PM
To: Shaun Lacey
Subject: Reason for HRI addition - 746 Madison Street

We bought the home at 746 Madison Street in May of this year with the intent to move into it as the primary residence for our family within 2 years. We have lived a block away on Homestead Road for 10 years and are Old Quad residents who love and value the historical charm and character of our neighborhood. We have also seen examples of poorly preserved homes and properties and hope that adding our home to the HRI will reduce the future chances of insensitive remodels. We have enjoyed observing the process of neighbors restore historical homes and are excited to begin this adventure with the home at 746 Madison. One of the features we most love about this house is that it has been minimally updated in the last 50 years. As we learn more about the history of this house, we will use the information to guide our decisions as we restore the home and improve the comfort level to meet today's standards. We have invested considerably this year to ensure the electrical is safe and plumbing is functional for occupancy. All work was permitted and done by professionals with high standards. We will apply the same care and standards to all future projects. The house is in need of a lot of TLC and we are committed to making the investments for our future home.

This block of Madison street includes many homes on the historical registry and adding number 746 will ensure that not only the home, but also the street, will maintain its charm and period atmosphere. We understand the value of maintaining historical character for the sake of the home, the street and Old Quad neighborhood.



Historical & Landmarks Commission Staff Report – December 4, 2014

Agenda Item # 8.C.

File: PLN2014-10712
Location: 746 Madison Street, a 9,120 square foot parcel (APN: 269-26-050).
 Property is zoned Single-Family (R1-6L).
Applicant/Owner: Sigrid Jacobsen
Request: **Historic Designation** of a single-family residential home.
CEQA Determination: Historical Resources under Public Resources Code Section 21084.1
Project Planner: Shaun Lacey, AICP, Assistant Planner II

Recommendation: **Recommend that the Commission determine whether the structure located at 746 Madison Street is eligible for listing on the City's Architecturally or Historically Significant Properties List**

PROJECT DESCRIPTION

The owner of the subject property is requesting that the structure at 746 Madison Street be reviewed for its historical significance and be added to the City's inventory of Architecturally or Historically Significant Properties. The basis of the request is due to the applicant's interest in acquiring a Mills Act agreement in the future.

Staff is seeking the Historical and Landmarks Commission's assessment and recommendation of the property. Following the Commission's determination, staff will refer their recommendation to the City Council for final determination.

ANALYSIS

A DPR 523A Form was prepared by Lorie Garcia of Beyond Buildings and is attached for review. The property includes a one-story house, constructed in 1901, that replaced the original two-story house that was built sometime around 1866. The house was designed with elements of a Colonial Revival architectural style.

The DPR evaluation found that the integrity of the residence is largely intact, and based on its compliance with the Local Significance Criteria, appears to be eligible for listing on the Architecturally or Historically Significant Properties List.

STAFF FINDINGS AND RECOMMENDATIONS

Based upon the DPR analysis, staff recommends that the Commission determine the appropriateness of adding the property to the City's Architecturally or Historically Significant Properties List.

DOCUMENTS RELATED TO THIS REPORT:

Historic Resources Inventory Form (Exhibit "DPR Form")
 Letter of Intent

7. CONSENT CALENDAR

Consent Calendar items may be enacted, approved or adopted, based upon the findings prepared and provided in the written staff report, by one motion unless requested to be removed by anyone for discussion or explanation. If any member of the Historical and Landmarks Commission, staff, the applicant or a member of the public wishes to comment on a Consent Calendar item, or would like the item to be heard on the regular agenda, please notify Planning staff, or request this action at the Historical and Landmarks Commission meeting when the Chair calls for these requests during the Consent Calendar review.

7.A. File No.(s): **PLN2014-10701**
Location: 1510 Harrison Street, a 0.19-acre parcel located at the intersection of Harrison Street and Jefferson Street (APN: 269-13-003); Project site is zoned R3-36D (Medium-Density Multiple-Family Dwelling)
Applicant/Owner: Rasteen, LLC
Request: **Design Review** of window and door changes and re-roof
CEQA Determination: Categorically Exempt per CEQA Section 15301 – Existing Facilities
Project Planner: Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation: Recommend approval

Motion/Action: Motion was made by Luckinbill, seconded by Mahan to approve the Consent Calendar. (7-0-0-0)

*******END OF CONSENT CALENDAR*******

8. PUBLIC MEETING ITEMS

8.A. No.(s): **PLN2014-1010712**
Location: 746 Madison Street, a 9,120 square foot parcel (APN: 269-26-050). Property is zoned Single-Family (R1-6L).
Applicant/Owner: Sigrid Jacobsen
Request: **Historic Designation** of a single-family residential home.
CEQA Determination: Historical Resources under the Provisions of Public Resources Code section 21084.1
Project Planner: Shaun Lacey, AICP, Assistant Planner II
Staff Recommendation: Recommend that the Commission determine whether the structure located at 746 Madison Street is eligible for listing on the City's Architecturally or Historically Significant Properties

Notice: The notice of public meeting for this item was posted within 300 feet of the site and was mailed to property owners within 300 feet.

Discussion: Mr. Lacey introduced the project to the Commission. Honorary City Historian Lorie Garcia spoke in favor of adding the property onto the City's List of Architecturally or Historically Significant Properties and clarified some comments in the staff report and DPR form that she prepared on behalf of the property owners. There were no public speakers.

The Commission discussed the proposal and noted its unanimous support for the property to be added onto the City's list of Architecturally or Historically Significant Properties.

Motion/Action: Motion was made by Luckinbill, seconded by Estes to recommend that the City Council add the property to the City's list of Architectural or Historically Significant Properties (7-0-0-0).

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary# _____
 HRI# _____
 Trinomial _____
 NRHP Status Code _____

Other Listings Review Code _____ Reviewer _____ Date _____

Page 1 of 14 *Resource Name or #: (Assigned by recorder) *Spear/Morrison House*

P1. Other Identifier: *None*

*P2. Location: Not for Publication Unrestricted *a. County Santa Clara

and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad San Jose West Date 1980 photo revised T 7S; R 1W; unsectioned; Mt. Diablo B.M.

c. Address 746 Madison Street City Santa Clara Zip 95050

d. UTM: (Give more than one for large and/or linear resources) Zone _____, _____ mE/ _____ mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

Assessor's Parcel Number: 269-26-050

West side of Madison Street between Lexington and Santa Clara Streets

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

746 Madison Street is located in the urban setting of a block of houses with tree lined streets that was primarily developed in the first quarter of the twentieth century. The homes have similar setbacks from the street with urban sized front yards. The lots have varying widths, ranging from 69' to 45' with most being 50.' Like the surrounding blocks, the streetscape is a pleasant one which evokes the sense of an early twentieth century neighborhood. The primary building on the site is a 1451 sq. ft., single-family, one-story house, originally constructed as a 2-story home circa 1866 and re-constructed in 1901 following a fire that destroyed the 2nd story. As a result, it exhibits elements of the Colonial Revival architectural style while retaining visible characteristics of its Italianate origin.

(Continued on page 2, form 523L)

*P3b. Resource Attributes: (List attributes and codes) *HP2 Single – Family Property*

*P4. Resources Present: Building Structure Object Site District Element of District Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



*P5b. Description of Photo: (view, date, accession #)

Front façade (view toward southwest) Photo No: 100_1209, 09/2014

*P6. Date Constructed/Age and Source:

Historic Prehistoric Both

Ca. 1866/1901

Sanborn maps; Polk City & County Directories, Assessor's Records, Poll Lists, Census Records

*P7. Owner and Address:

*Neunfinger M. & Jacobsen Trust
 746 Madison Street
 Santa Clara, CA 95050*

*P8. Recorded by: (Name, affiliation, and address)

*Lorie Garcia
 Beyond Buildings
 P.O. Box 121
 Santa Clara, California 95052*

*P9. Date Recorded: *October 7, 2014*

*P10. Survey Type: (Describe) *Intensive*

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") *None*

*Attachments: NONE Location Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
HRI #
Trinomial

Page 2 of 14

*Resource Name or # (Assigned by recorder) *Spear/Morrison House*

*Recorded by: Lorie Garcia

*Date 10/07/2014

Continuation Update

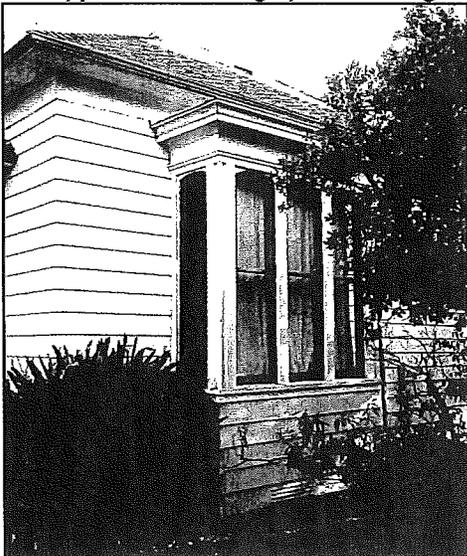
(Continued from page 1, Form 523A, P3a. Description)

The house is situated on a lot located in the center of the 700 block of Madison Street, between Lexington and Santa Clara Streets. Fronting roughly east onto Madison Street, it is set back from the street on its 60' x 152', 9,120 sq. ft., lot, allowing for a cultivated lawn, large trees and narrow planting beds with ornamental shrubbery. Large street trees shade this front of the property. A straight concrete walkway, leads from the Madison Street sidewalk to the front entry. A narrow, dirt, side yard with shrubbery is located on the north side. A driveway, which opens onto Madison Street, is located on the south side of the house and leads to a detached garage with a long extension that is set to the rear of the house. Large trees located between the house and the driveway shade the building's south elevation. The large rear yard includes several large trees, narrow concrete walkways, bricks and a detached, wooden, shed/workroom, which is set to the rear of the house on the north property line.

The plan of this wooden single family residence is rectangular with a combination medium-pitched, hipped and gabled roof. The roof is sheathed with composition shingles. The moderate roof overhang on the main body of the house has boxed eaves. On the rear wing, the eaves have exposed rafter tails. A front facing gable is full pedimental form with molded cornice, with a small, louvered, attic vent centered on the front gable face. This gable shelters a full length, slanted bay, which projects with a broad angle minimizing the distance of the projection. A second bay projects from the south side elevation, near the rear of the main body of the house. This bay, which appears to date from the original construction, is full length, rectangular in shape, with a belt cornice and fascia and siding sheathing the bay below the windows. A gable roofed rear wing, which shows signs of two extensions to the north, projects from the main body of the house. The house is set over a partial basement, which elevates the living area approximately 2 feet above the ground. Wide, horizontal, vinyl siding sheathes the house, shrouding the original horizontal wood siding.

The main entrance is on the front (east) façade. It is accessed by 5 concrete/tiled steps, which lead to a medium sized shed-roofed porch. The steps have supplemental wrought-iron railings, which were not part of the original building. At the open edge of the porch, the roof rests on one wrought-iron (new) column. A wrought-iron railing connects the column to the house and the column to the outermost step railing. A similar wrought-iron column supports the inner roof corner. The front (main) door is constructed of wood with 2 small wood panels over a fixed window in the top half, and a decorative wood panel in the bottom half. This entry door is offset on the porch. A secondary entry is on the rear (west) facade centered in the original section. It is sheltered by a shed roof overhang supported by 4 knee braces. The rear entry door is wooden with a rectangular 2 light window, Two concrete steps leading to a concrete stoop provide access to the rear door. The basement entry is located near the rear of the rear wing's south side elevation.

Supplemental Photograph or Drawing



Fenestration is simple, rectangular in form, vertically oriented, paired and single double-hung wooden windows. The windows of the main body of the house are framed with wide boards and have a projecting sill. Those of the rear wing have a narrow board framing it underneath in place of a sill. The front wall of the front facing bay contains a large square fixed window surmounted by a narrow rectangular, horizontally orientated, fixed window. The fenestration of the bay's slanted sides consists of narrow one-over-one double-hung windows. Fenestration of the rectangular bay on the south side elevation consists of tall, narrow, rectangular, 1/1 double-hung windows. Those of the front wall consist of a ribbon of three windows; each side contains a single window. The top sash of each window has a frame with an arched upper edge.

Set to the rear of the house, on the north property line, is a small, rectangular gable roofed, shed/workshop structure. This wood building of board and batten construction appears to date to the original construction of the house.

Description of Photo: (view, date, accession #)

South side elevation. (view toward north) showing Italianate bay existing from initial construction, Photo No: 100_1232, 09/2014.

(Continued on page 3, Form 523L)

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary #
 HRI #
 Trinomial

Page 3 of 14

*Resource Name or # (Assigned by recorder) *Spear/Morrison House*

*Recorded by: Lorie Garcia

*Date 10/07/2014

Continuation Update

(Continued from page 2, Form 523L)

The rectangular, wood-framed garage is set on the south property line at the end of the long driveway from Madison Street. The street-facing low-pitched, gable roof is covered in composition shingles and has a large flat extension protruding from the gable front. Attached to the rear of the garage and extending to the west property line, is a narrower wood building. Horizontal siding sheathes both structures. On the garage's north side elevation is a wooden man-door, constructed with 2 long, vertical panels over 2 shorter ones and a 6-light wood framed window. Entry into the attached building is by a 5 panel wooden door set into the building's north elevation. Two wood framed 6-light windows are also set into this elevation.

The property is in reasonably good condition and although it has been altered with the addition of vinyl siding, tiled front porch and steps, addition of wrought-iron columns and railings and expansion of the rear wing, it still retains its historic integrity in its massing, form, land use and stylistic features.

State of California c The Resources Agency	Primary #
DEPARTMENT OF PARKS AND RECREATION	HRI #
BUILDING, STRUCTURE, AND OBJECT RECORD	

Page 4 of 14 *NRHP Status Code *N/A*
 *Resource Name or # (Assigned by recorder) *Spear/Morrison House*

- B1. Historic Name: *Old Spear Dwelling*
 B2. Common Name: *None*
 B3. Original Use: *Single family residential* B4. Present Use: *Single family residential*
 *B5. Architectural Style: *Italianate/Colonial Revival*
 *B6. Construction History: (Construction date, alterations, and date of alterations)

Based on the 1866 Property Owner's list and the 1869 Poll List, the building appears to be constructed circa 1866. It appears in the same location on the 1891 Sanborn Map as a 2 story dwelling. On the same map a small detached shed building is shown near the back of the house. It still exists today. Following a 1901 fire, which destroyed the second story, the house was rebuilt as a 1-story dwelling. As shown on the 1901 Sanborn Map, alterations made at this time consisted of some changes to the exterior form, including the addition of a front facing bay window, Also on that map, a long shed building is shown on the rear (west) property line (now removed). Prior to 1915, the rear wing was widened, and again after 1950. In the 1970s (estimated) vinyl siding was applied to the exterior surface and the porch was tiled with wrought-iron supports replacing the original wooded ones. At some time after 1950 (date unknown), a front facing detached garage with a long rear addition was added adjacent to the south property line.

- *B7. Moved? No Yes Unknown Date: _____ Original Location: _____
 *B8. Related Features:

Detached garage facing Madison Street, located to rear of the house on south property line. Small detached shed near rear of the house.

- B9a. Architect: *not known* b. Builder: *not known*
 *B10. Significance: Theme *Architecture and Shelter* Area *Santa Clara Old Quad*
 Period of Significance *1880-1935* Property Type *Residential* Applicable Criteria *none*
 (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The parcel located at 746 Madison Street is a portion of a larger tract of land that had been identified as Block 3 South, Range 5 West, of the original survey of the City of Santa Clara. This survey, done July 1866 by J. J. Bowen and recorded on August 22 of that same year, forms the basis for the part of Santa Clara known as the "Old Quad."

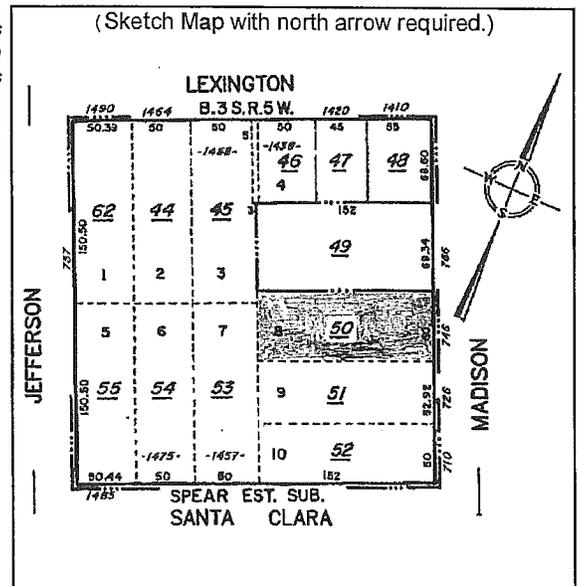
Framed by Lexington, Madison, Santa Clara and Jefferson Streets, by 1866 Block 3S, Range 5W had been subdivided into two Town Lots. According to the list of property owners and their improvements, which accompanied the 1866 survey, Lot 1 was a 42826 sq. ft. tract, owned by Silas Belknap, a 46 year-old farmer from Kentucky. He had a frame house, a barn and an orchard on his property. The owner of Lot 2, also a 42826 sq. ft. tract, was 57 year-old William Morrow, a minister and physician, originally from New Jersey, who resided here with his

(Continued on page 5, Form 523L)

- B11. Additional Resource Attributes: (List attributes and codes) *HP2 – Single Family Property*
 *B12. References: *Garcia, Lorie, "Santa Clara: From Mission to Municipality," 1997; Garcia Lorie, Geoff Goodfellow and George Giacomini, "A Place of Promise: The City of Santa Clara 1852-2002," 2002; Map of the Town of Santa Clara, drawn by C. E. Moore, 1893; Polk and Husted City Directories, 1906-1964; Poll List – Santa Clara Election District, 1868; San Jose Mercury Herald 8/30/1915, 4/22/1916, 10/16/1917, 10/06/1919, 6/12/1921, 9/08/1921; Sanborn Fire Insurance Maps 1891, 1901, 1915, 1930, 1950; Santa Clara Journal 9/09/1921; The Evening News, San Jose, California, 11/9/1887, 1/11/1890, 7/21/1891, 8/30/1898, 5/09/1901; United States Federal Census, 1860, 1870, 1880, 1900, 1910, 1920, 1930, 1940.*

- B13. Remarks:
 *B14. Evaluator: *Lorie Garcia*
 *Date of Evaluation: *October 7, 2014*

(This space reserved for official comments.)



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Continuation Update

(Continued from page 4, Form 523B, B10. Significance)

wife, Harriet. The improvements on his lot were a frame house, a orchard and vineyard and, according to the 1868 Poll List, his residence was located on Madison near Santa Clara Street. The subject property, fronting on Madison, is located on a portion of Lot 2.

As shown on the Plat map of Santa Clara, drawn between 1873 and 1875, the configuration of Block 3S, R5W was the same as shown nine years earlier on the 1866 survey. Although the previous owner of Lot 1 had moved to Tulare County, Lot 2 was still owned and occupied by William Morrow and his wife, Harriet.

By 1880, both Lots 1 and 2 had been purchased by the 69 year-old farmer, Louis Spear. Originally from New York, he and his wife, Eliza had moved to Santa Clara from Napa. Although he owned extensive property in the Town of Santa Clara and in both Santa Cruz and Mendocino Counties, according to the 1880 Census, Louis and his 66 year-old wife were residing on this property.. (Their home, believed to be the prior home of William Morrow, was located at 746 Madison Street, later Lot 8 of the Spear estate Subdivision).

Louis Spear had passed away by late 1887, as evidenced by a petition filed on November 9th of that year by his surviving wife, Eliza, testifying as to the value of his estate and who were his heirs. Controversy over these items continued until January, 1890, when G. C. Jenkins, administrator of Louis Spear's estate, filed a petition with the court "asking that the administration be closed and the entire estate set apart for the widow, Eliza Spear." This petition was granted. Eighteen months later, on July 20, 1891, Eliza Spear "an old and respected resident of Santa Clara," passed away and on November 6th her will was admitted to probate.

The December 1893 Map of the Town of Santa Clara drawn by C. E. Moore, the official Santa Clara Surveyor, illustrates the 10 lots into which the B3S R5W Spear property had been subdivided. Not included in this subdivision was the 68' 11" by 152' parcel which was already owned by Mrs. A. Brooks. However, while this block was now officially subdivided, several factors would result in numerous delays in settling Eliza Spear's estate before the sale of the lots could occur. Finally, In April 1896, Edwin A. Wilcox, administrator of Eliza Spear's estate petitioned "for leave to sell the real estate of the estate," and the following month the order of sale was granted. Problems with the estate still existed, however, and it wasn't until two years later that finally sales of the Spear estate subdivision lots would occur, On August 30, 1898, the following notice of the sale of the first two lots appeared in The Evening News, "Estate of Eliza Spear, to M. J. Glennon - Lot 8, Spear estate subdivision of B3S, R5W, town of Santa Clara; also L 9, same subdivision, \$900." (Lot 8 is the lot upon which the subject residence at 746 Madison Street is located.) By the end of the year all ten lots had been sold.

Five of the Spear estate subdivision's ten lots appeared to be purchased as investment properties and would change hands within the following two years. By the time the 1901 Sanborn Fire Insurance map was drawn, it shows that new houses had been constructed on six of the 10 lots. Lot 8, however, had an existing residence on it. at the time of its purchase; the two-story home known as the "old Spear dwelling," Shortly after his acquisition of Lot 8 from the Spear estate, M. J. Glennon, a major real estate developer who owned several parcels of land in the Town of Santa Clara, rented the house on Lot 8 to A. (Amasa) J. (John) Morrison and his family.

A. J. Morrison, also known as John A. Morrison, had immigrated from Canada a decade earlier and become a naturalized citizen shortly thereafter. He arrived in Santa Clara in 1889, where first, he opened a cigar store, and then established a blacksmith shop at 1041 Washington Street (the corner of Washington and Franklin Streets). The 40 year-old A. J. Morrison, moved into the home with his 25 year-old wife, Mamie, his 16 year-old daughter, Eva, and 14 year-old son, Lee (from his first marriage) and their son Roy, age 2. Unfortunately, less than 2 years later, on April 21, 1901, a fire broke out in the home causing considerable damage to the structure. That day's issue of The Evening News covered the story describing it as follows:

"DWELLING BURNED. FIRE IN SANTA CLARA DOES MUCH DAMAGE."

"A Sunday afternoon fire badly damaged the old Spear dwelling at 746 Madison Street, Santa Clara, owned by M. J. Glennon and occupied by John A. Morrison and family.

The little four-year-old boy of Mr. Morrison was in one of the bedrooms up stairs, and it is supposed that while playing with matches, he set fire to some of the bed clothing. The flames spread rapidly. The family was at dinner when the fire was

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discovered and the entire second story was in flames when the alarm was sounded.

A storm wind made the fire appear very dangerous, but the fire ladders fought the flames and soon had them under control. The second story was badly gutted, the frame only remaining. The first story was damaged by smoke and water. The total loss is estimated at \$1400, which is partly covered by insurance, to the amount of \$1000 in a company represented by Rood Brothers."

Two weeks later, on May 9th, The Evening News reported the sale of Lot 8 by M. J. Glennon to A. J. Morrison for \$650. When A. J. Morrison rebuilt the home he now owned, he did so as a single-story house. As the first story was restorable it was maintained, a new roof was constructed and, as the 1901 Sanborn Fire Insurance map shows, the existing story acquired a new, "modern," front facing bay and some slight alterations to its floor plan.

As the decade passed, Eva Morrison married and moved away. By 1910, the Morrison family residing at 746 Madison consisted of A.J., Mamie, Lee and Roy. Lee, now, 24, was employed as a Timekeeper at the Pacific Manufacturing Company and Mamie was working as a typewriter at the Santa Clara Journal. Roy was in school. Besides his business, A. J. was very active in the Santa Clara Lodge No. 52, I.O.O.F. and Mamie in the Rebekah Lodge, the I.O.O.F. woman's component, especially in the Rebekah Lodge's, Clara Sewing Circle. Also, it is obvious that over the years A. J. Morrison had maintained connection with his Canadian roots, as Santa Clara was all abuzz when, on August 30, 1915, C. McNeil, the Secretary of the Governor-General of Canada paid a visit to his "old schoolmate," at Amasa's Madison street home.

The advent of World War I, brought new civic involvement for the A. J. Morrison family. On April 21, 1917, the Home Guards of Santa Clara was formed and A. J. Morrison was among the many community leaders who immediately joined. Then 19 year-old Rpy Morrison along with his friend Victor Regnart, enlisted in the Navy ("the Mosquito Fleet") and in mid- October received notice to report to the San Pedro Naval Station for training. A July 1918 notice in the paper, informed people that he had arrived safely in France. Roy Morrison would not return home until October 1919, after spending "many strenuous months overseas." When the Federal Census was taken on January 8, 1920, it showed all the Morrissions, A. J., Mamie, Lee and Roy living together at 746 Madison Street. A. J., now 61 years-old, still was operating his blacksmith shop but Mamie was now longer working. Lee was now a watchman at the cannery and Rpy was working for the Railroad as a machinisit.

On June 4, 1921, Roy Morrison married Florence Anderson, the daughter of Mr. and Mrs. James Anderson, prominent Cupertino residents. News of the nuptials, which appeared in both The Evening News and the San Jose Mercury Herald, described the bride as "a popular member of the younger set and a talented musician," pointing out that she was a gifted pianist and graduate of the Worcester School of Music, doing post-graduate work since that time. Roy was called "one of our sterling chaps." After noting he was the son of Mr. and Mrs. A. J. Morrison of Santa Clara the story went on to say that "he is a vocalist of ability" and "has always given freely of his talent to social and charitable affairs." Coverage of the wedding pointed out that, Roy "was one of the first of the Santa Clara boys to enlist in the navy during the war and served "many months with the mine laying fleet in the North sea and after the armistice held the position of storekeeper on the great transport, Imperator." The article ended with pointing out that Roy was a valued employee of the Pratt-Low Preserving Company, "held in high esteem by both employers and co-workers."

Three months later, on September 5, 1921, 63 year-old, Amasa J. Morrison unexpectedly passed away. His obituary described what had occurred as follows: "He was engaged in cutting the lawn at his home when he went into the house and sat down on a chair and started to read the morning paper when he passed away before medical help could be summoned." The inquest held the following day, found that his "death was due to internal hemorrhage." Three days later, services for this "well-known resident of Santa Clara," were conducted at their family home at 746 Madison Street, as was the usual practice at that time. Reverend J. W. Webb, pastor of the Christian church conducted the home services and members of the Santa Clara Lodge No. 52 I.O.O.F. conducted the services at the grave site in the Santa Clara cemetery (today's Mission City Memorial Park). Among the prominent Santa Clara residents who acted as pall-bearers were his close friends F. S. Grandin Bray and L. V. Garrigus.

Following her husband's death, Mamie Morrison continued residing at 746 Madison Street until 1927. After that time, she rented the house to a series of short-term occupants. In 1927, an elderly couple of immigrants from France, Henry and Nellie Boivin, rented the

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home. In 1928, it was occupied by Eklemr T. Craig, a dirver, and his wife, Julia, and in 1929, William J. Baker, an engineer, and his wife, Mattie, lived here. The home stood vacant in 1930, then Mamie Morrison reurned for a portion of 1931. In 1932 -1933, Albert W. Mckinney, a mechanical engineer, and his wife, Jessie, occupied the property. They were followed by William H. Young, a clerk for W, P.. Kiely, who lived in the residence with his wife, Mattie, in 1934 and 1935.. Mamie Morrison passed away on February 13, 1935, and was buried next to her husband in the Santa Clara Cemetery (MCMP). Following her death, the property at 746 Madison (valued at \$3,000 in 1940) was purchased by Albert Staats.

Albert Staats had been born in Illinois like his father, and had a German Immigrant mother. They came to Santa Clara in 1901 when Albert was 12 years-old, and settled into a home at 1757 Market Street. His wife,Christine nee Jacobs, had also been born in Illinois. Both of her parents had immigrated from Germany. The Jacobs family arrived in Santa Clara in 1898 when she was 5 years-old. Interestingly, her family had settled into a home at 741 Madison Street, the house across the street from the subject property. Prior to his marriage, Albert Staats worked as a wagon driver for a wood and coal company and then found employment at the Pacific Manufacturinc Company. He would continue to be employed at the PM Mill for the rest of his working years.

Albert and Christine were married in the mid-1920s. In 1926, their first child was born, a son they named William. Two years later, their daughter Patircia was bom.. In late 1935, the Staats family, Albert, age 45, Chritine, age 41, William, age 9, and 7 year old Patricia, moved from where they had been living in San Jose, into their newly purchased residence at 746 Madison Street. Members of the family would continue to own this home and reside here for the following 75+ years.

Except for his time of service in the navy during WWII, William, who was employed as an Assistant Clerk at the Bank of America in Santa Clara, lived here until 1955. In the late1960s, Albert Staats passed away and Patricia, who never married and had become a school teacher, teaching Kindergarten first at Horace Mann Elementary School in downtown San Jose and later in the Alum Rock School District, lived here with her mother, Christine. Following Christine's death Patricia continued residing at 746 Madison Street until she passed away in 2011. The House sat vacant until May 2014, when it was purchased by Mike Neunfinger and Sigrid Jacobsen.

The building and site at 746 Madison Street have been occupied by a number of residents over the 130+ years of its existence, but none of these families appear to be significant to the history of the region, Nation or State. Neither are there events associated with the building which have made a significant contribution to the broad patterns of history or cultural heritage. It would therefore appear that the building would not be eligible for the National Register based on criteria A or B. While it would not appear to be eligible individually for the National Register under Criterion C, the building does contribute to a potentially eligible district.

The property does not appear to be eligible for the California Register of Historical Resources based on Criteria 1 or 3. However as it is associated with the lives of the Spear and Morrison families, persons important to local history, it does appear to be eligible for the California Register under criteria 2, at a local level..

In 2004, The City of Santa Clara adopted Criteria for Local Significance. Under these criteria, "any building, site, or property in the city that is 50 years old or older and meets certain criteria of architectural, cultural, historical, geographical or archaeological significance is potentially eligible," to be a "Qualified Historic Resource."

Criterion A: Historical or Cultural Significance

No.3. A The property is associated with an important individual or group, who contributed in a significant way to the political, social, and/or cultural life of the community.

This property is associated with A. J. Morrison, an important member of the group of immigrants from Canada, who made significant contributions to both the social and civic life in the Town of Santa Clara.

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No.5. A building's direct association with broad patterns of local area history, including development and settlement patterns, early or important transportation routes or social, political, or economic trends and activities. Included is the recognition of urban street pattern and infrastructure.

As the land was developed within the town limits, early in the formation of the Town of Santa Clara, the blocks of land were divided into large parcels, which were settled by new residents who developed their parcels as small farms. The building at 746 Madison Street is believed to be was one of those constructed circa 1866, as the residence on one such small farm parcel.

Criterion B: Architectural significance

No.1. The property characterizes an architectural style associated with a particular era and/or ethnic group.

This residence retains visible characteristics of the Italianate architectural style, a dominant style at the time of its original construction. When it was partially restored in 1901, following a disastrous fire that destroyed its second story, the reconstruction utilized the neo-classical elements of the Colonial Revival architectural style, which had become the most popular architectural style at the turn-of the twentieth century.

Criterion C: Geographic significance

1. A neighborhood, group or unique area directly associated with broad patterns of local area history.

The neighborhood in which the subject property is located is in an area of Santa Clara's "Old Quad," which had its blocks divided into large parcels and mostly settled by the 1860s, by arrivals who established small farms on their property. By the 1890s, death had claimed many of the original settlers and, as the area re-developed at the turn-of-the-century, to meet the escalating need for additional housing the original properties were divided into several smaller lots and sold to new owners who then constructed new homes on the new lots.

2. A building's continuity and compatibility with adjacent buildings and/or visual contribution to a group of similar buildings.

The majority of the residential structures on the block where this home is located, maintain their original configuration and integrity from the time of their construction, in the last part of the nineteenth and first part of the twentieth century. Built circa 1866, and partially re-constructed in 1901, the home at 746 Madison Street is compatible with the neighboring properties. Taken as a whole, the block's street face remains that of a well maintained early twentieth century neighborhood in Santa Clara.

Definition of Integrity

Integrity refers to a property's ability to convey its significance. Significance is conveyed by the retention of a resource's visual and physical characteristics and its surroundings. The National Register criteria recognize seven aspects to integrity. The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, a property will always possess several, and usually most, of these aspects. The modern test of integrity according to the Office of Historic Preservation is to stand on the sidewalk and ask yourself the following question: "Does the resource display enough of what made it significant for its historical period that it can be easily grasped by the average passerby?"

Properties must have sufficient integrity in addition to meeting the criterion for significance in order to be considered a qualified historic resource.

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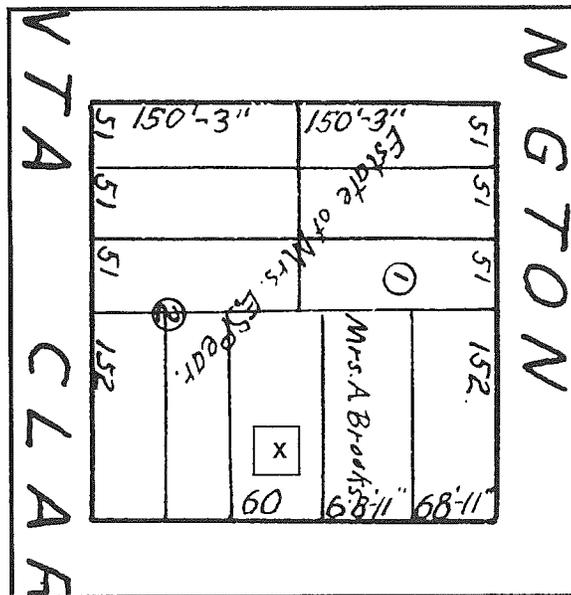
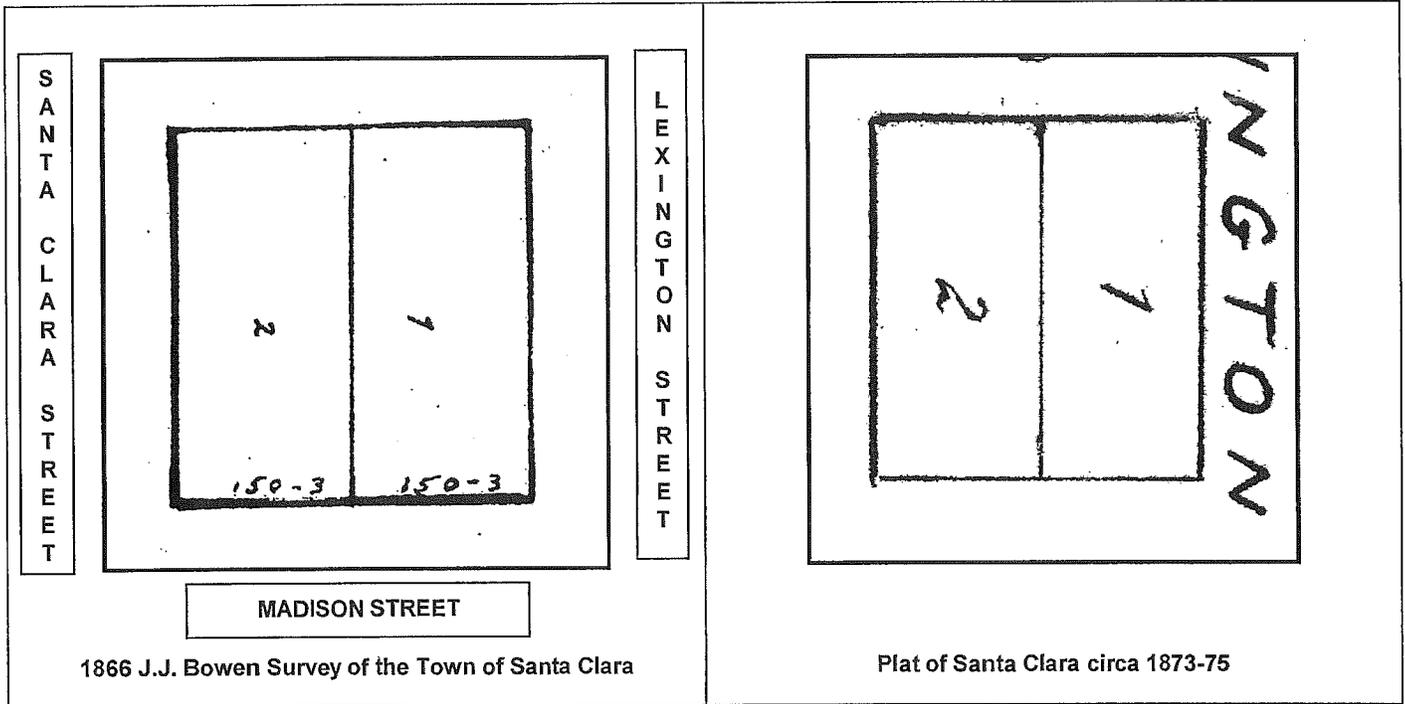
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HISTORIC MAPS



1893 C.E. Moore Map of the Town of Santa Clara
 (X indicates location of Lot 8 - 746 Madison St.)

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Update

SANBORN FIRE INSURANCE MAPS

S A N T A C L A R A S T R E E T		
	X marks 746 Madison Street	
	1891 Sanborn Fire insurance Map	
	X marks 746 Madison Street	
	1901 Sanborn Fire insurance Map	
	X marks 746 Madison Street	
	1915 Sanborn Fire insurance Map	
	X marks 746 Madison Street	
	1930 Sanborn Fire Insurance Map	

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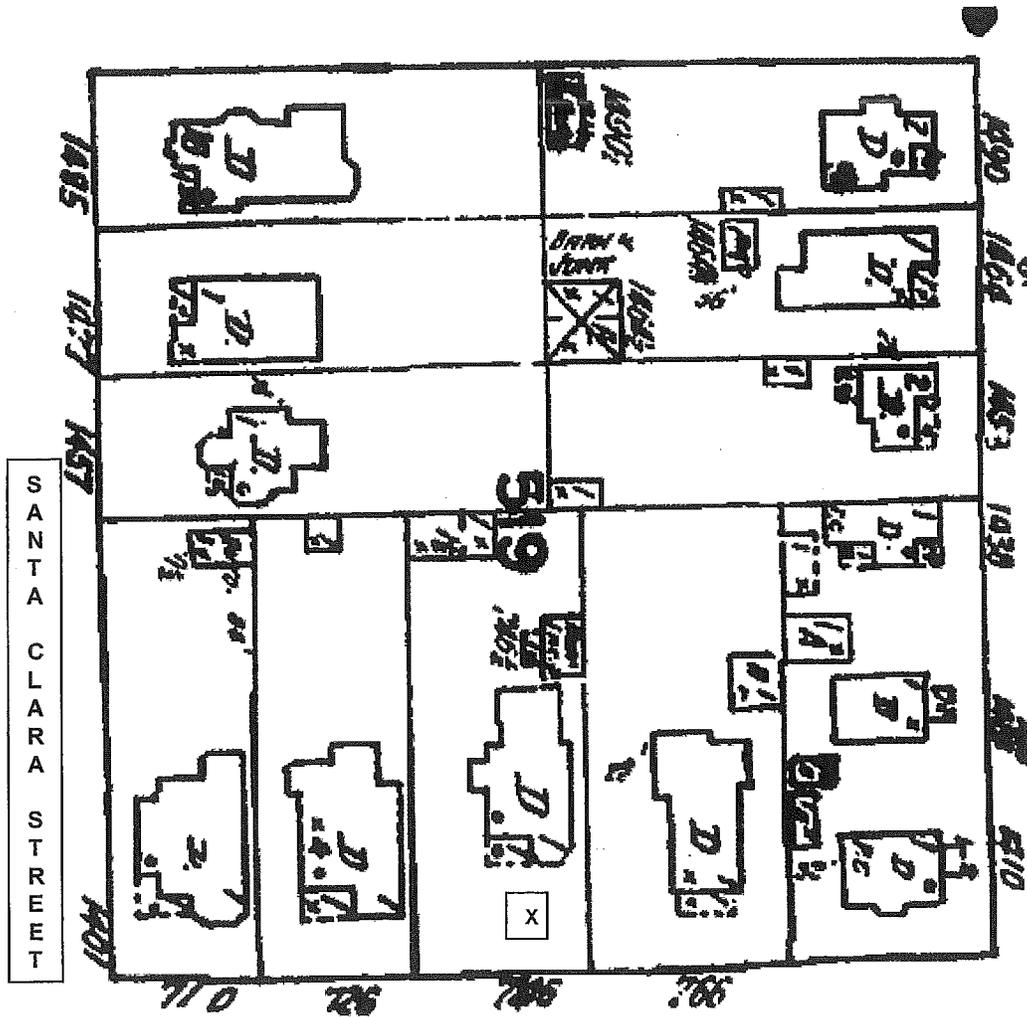
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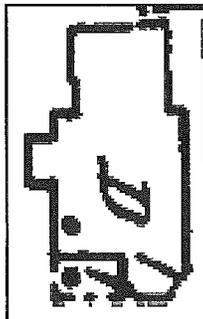
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SANBORN FIRE INSURANCE MAPS continued

1950 Sanborn Fire Insurance Map



X marks 746 Madison Street



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Additional Photos

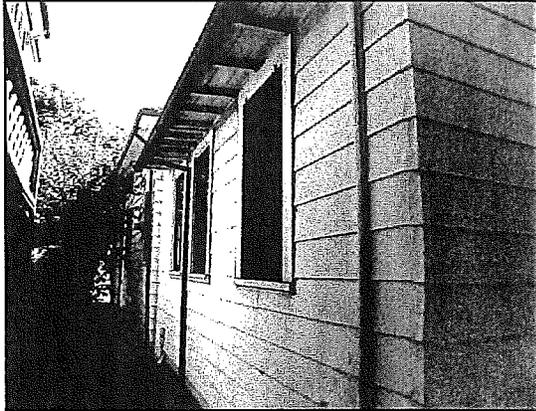


Photo No: 100_1237; View: North side elevation from rear
 Photo Date: Sept., 2014; Camera Facing: NE



Photo No: 100_1213; View: South side elevation from front
 Photo Date: Sept., 2014; Camera Facing: SW

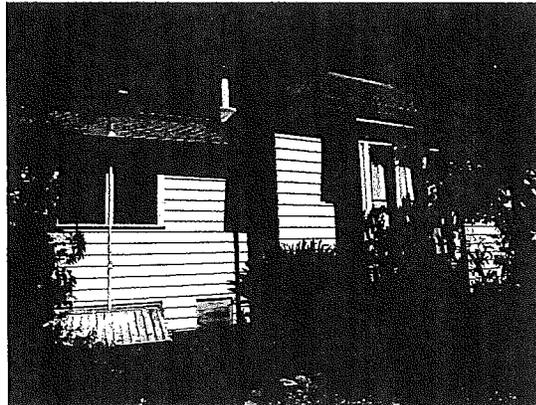


Photo No: 100_1215; View: South side elevation
 Photo Date: Sept., 2014; Camera Facing: N

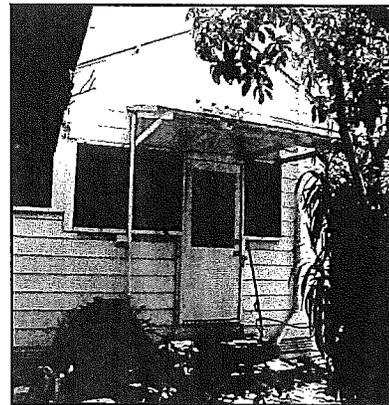


Photo No: 100_1235; View: Rear facade showing back entry
 Photo Date: Sept., 2014; Camera Facing: NE



Photo No: 100_1257; View: Front porch
 Photo Date: Sept., 2014; Camera Facing: SW

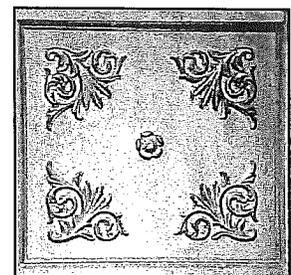
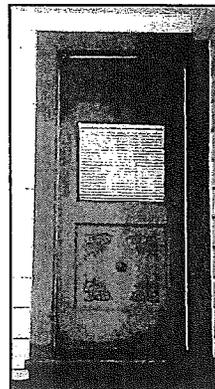


Photo No: L, 100_1246; R, 100_1248
 View: L.- Front (main) Door; R.- Door's decorative panel
 Photo Date: Sept., 2014; Camera Facing: L.- SW; R.- SW

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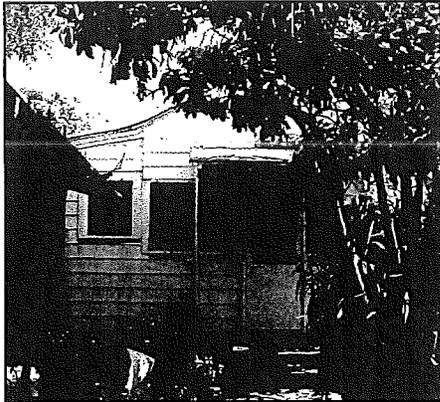


Photo No: 100_1221; View: Rear facade showing 1st expansion
 Photo Date: Sept., 2014; Camera Facing: NE

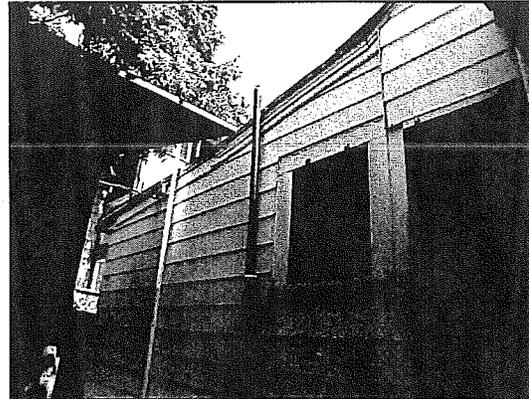


Photo No: 100_1238; View: Rear showing 1st & 2nd expansion
 Photo Date: Sept., 2014; Camera Facing: N

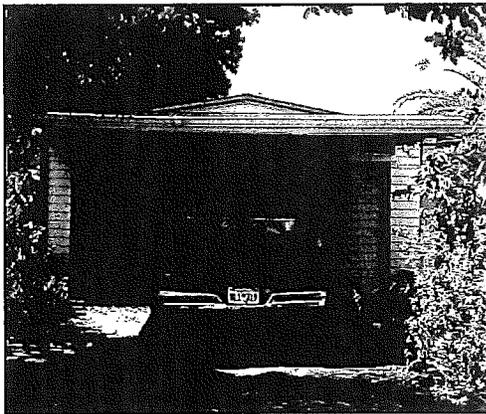


Photo No: 100_1214; View: Garage front
 Photo Date: Sept., 2014; Camera Facing: SW

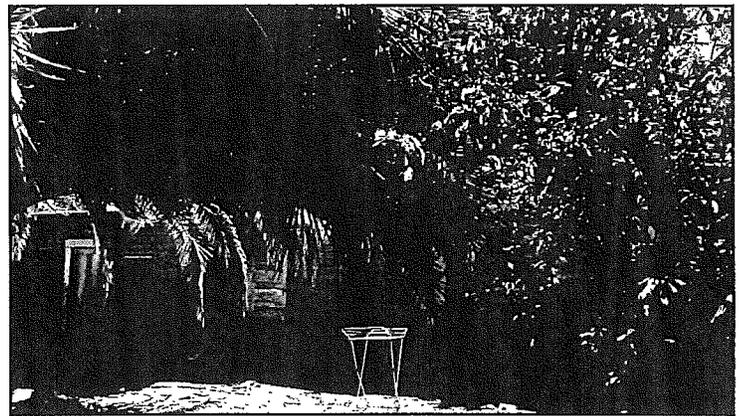


Photo No: 100_1222; View: Garage & attached bldg., north side elevation
 Photo Date: Sept., 2014; Camera Facing: SE

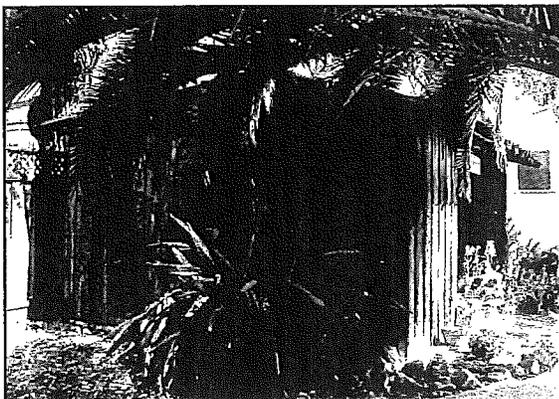


Photo No: 100_1223; View: Shed - west end
 Photo Date: Sept., 2014; Camera Facing: NE



Photo No: 100_1234; View: Shed interior showing small enclosed room
 Photo Date: Sept., 2014; Camera Facing: NW

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(Continued from page 8, Form 523L)

Evaluation of Integrity

The most stylistic elements of the property's architectural style are intact. Except for the widening of the rear wing, both prior to 1915 and after 1950, the building form, size and massing appears to be unaltered from its form following the 1901 reconstruction, as verified by the Sanborn Fire Insurance maps. The building is representative of the development of the "Old Quad" area during the last half of the 19th and early 20th Century and is important to the integrity of the historic area in which it is located. The building has been altered in terms of surface treatment by the application of vinyl siding to the exterior wall surface and wrought iron porch roof supports have replaced the original wooden ones. This has reduced the level of significance. However, the original horizontal siding is retained under the vinyl siding and can be uncovered in the future and historically accurate wooden porch supports can be installed. Nevertheless, sufficient character defining features and building form of the historic residence have been preserved and retained, which convey the historical significance or origin of the building. The historical use of the building has not changed and it remains a single family home.

The evaluator finds 746 Madison Street to retain sufficient integrity to qualify as a historic property and will be further important if the vinyl siding is removed and porch supports replaced. The building appears to be, based on compliance with the Local Significance Criteria, eligible for listing on the City of Santa Clara Architecturally or Historically Significant Properties List.

Meeting Date: 02-10-15

AGENDA REPORT

City of Santa Clara, California

Agenda Item # 13C



Date: February 3, 2015

To: City Manager for Council Action

From: Director of Public Works/City Engineer

Subject: Appropriation of Funds to Establish New CIP Project - El Camino Real Pavement Rehabilitation

EXECUTIVE SUMMARY:

El Camino Real (ECR) is a state highway approximately 4 miles in length within Santa Clara City limits. It is heavily used by residents and businesses, and is the highest ridership route for VTA's bus service. This highway in adjoining cities was recently resurfaced by the State Department of Transportation (Caltrans) and Caltrans has programmed to resurface this segment in Santa Clara in 2017. However, the City would like this segment to be resurfaced sooner to improve ride quality as this is one of the major corridors in Santa Clara.

Recently, City staff met with Caltrans staff to discuss the possibility of Caltrans accelerating this critical project. Through this meeting, City staff understood that it will be difficult for Caltrans to accelerate the project to this year.

The proposed Project scope of work includes resurfacing of ECR in total length of approximately 4 miles which includes asphalt concrete failure repairs, pavement rehabilitation, utility cover adjustment, reinstallation of traffic signal loops, and restriping. Since the Project is in Caltrans' right of way, this project will need Caltrans approval and an encroachment permit. The project approval process involves preparation and submittal of project application, Project Permit Engineering Evaluation Report or Project Study Report depending on construction cost, environmental clearance as needed and final design approval. It is noted that Caltrans design review and issuance of permit could take 90-120 days. While City staff will work diligently to complete the project by the end of this year, it may get delayed due to Caltrans requirements and weather conditions. Additionally, based on input from Caltrans staff, it is possible that the State may require the City to upgrade the ECR to comply with Americans with Disabilities Act (ADA) requirements. City staff has not committed to these upgrades, and this request will be subject to further discussions with Caltrans.

ADVANTAGES AND DISADVANTAGES OF ISSUE:

The Project will improve ride quality, aesthetics, and extend the service life of the existing pavement using City funds.

City Manager for Council Action

Subject: Appropriation of Funds to Establish New CIP Project - El Camino Real Pavement Rehabilitation

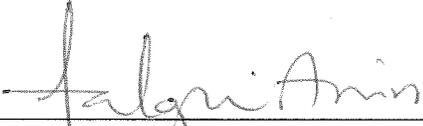
Page 2

ECONOMIC/FISCAL IMPACT:

The El Camino Real Pavement Rehabilitation Project initial estimated cost is approximately \$5.0 million for a minimum level of pavement rehabilitation similar to work done by Caltrans in the City of Sunnyvale. This project will be funded by a transfer of \$3.0 million from unallocated Gas Tax and \$2.0 million from various street improvement projects which will be deferred to a future year when funds are available. Staff will make additional funding recommendation as necessary when Caltrans requirements such as work time restrictions and type of pavement treatment are known. City staff will work with Caltrans for possibility of reimbursement to the City, wholly or partially when State funds become available.

RECOMMENDATION:

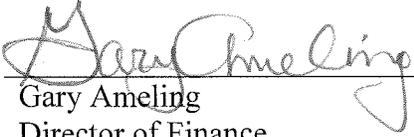
That the City Council approve appropriations in new project - El Camino Real Pavement Rehabilitation Project (521-4443-80300-3425) of \$5.0 million to be funded by a transfer of \$1,150,000 from Fund 521- Gas Tax Unallocated (521-4443-80010-3400), \$500,000 from Fund 522- Gas Tax Unallocated (522-4443-80010-1400), \$1,350,000 from Fund 523 – Gas Tax Unallocated (523-4443-80010-1500), \$1.0 million from Street Surface Re-seal (522-4443-80300-1468), and \$1.0 million from Substandard Street Improvements (523-4443-80XXX-1516).

for 

Rajeev Batra
Director of Public Works/City Engineer

<u>Certified as to Availability of Funds:</u> 	
521-4443-80010-3400	\$1,150,000.00
522-4443-80010-1400	\$500,000.00
523-4443-80010-1500	\$1,350,000.00
522-4443-80300-1468	\$1,000,000.00
523-4443-80XXX-1516	\$1,000,000.00

APPROVED:



Gary Ameling
Director of Finance



for Julio J. Fuentes
City Manager

FIVE COUNCIL VOTES

Documents Related to this Report: None.

02-10-15

CLOSED SESSION REQUEST

17.B



City of Santa Clara, California



It is requested the **CITY COUNCIL OF THE CITY OF SANTA CLARA** meet in closed session on **Tuesday, February 24, 2015, at 6:00 p.m.**, or as soon thereafter as the matter can be discussed, in the Council Conference Room located in the East Wing of City Hall at 1500 Warburton Avenue, Santa Clara, California, to consider the following matter(s) and to potentially take action with respect to it/them:

CONFERENCE WITH LABOR NEGOTIATORS

Pursuant to Gov. Code § 54957.6

City designated representatives: Julio J. Fuentes, City Manager (or designee)

Employee Organization(s):

Unit #1 – Santa Clara Firefighters Association, IAFF, Local 1171

Unit #2 - Santa Clara Police Officer’s Association

Unit #3 – IBEW Local 1245 (International Brotherhood of Electrical Workers)

Unit #4 - City of Santa Clara Professional Engineers

Units #5, 7 & 8 - City of Santa Clara Employees Association

Unit #6 - AFSCME Local 101 (American Federation of State, County and Municipal Employees)

Unit #9 – Miscellaneous Unclassified Management Employees

Unit #9A - Unclassified Police Management Employees

Unit #9B - Unclassified Fire Management Employees

Unit #10 – PSNSEA (Public Safety Non-Sworn Employees Association)

CONFERENCE WITH LEGAL COUNSEL-EXISTING LITIGATION

Pursuant to Gov. Code § 54956.9(d)(1)

Vinod K. Sharma, et al. v. Successor Agency to the Redevelopment Agency of the City of Santa Clara, et al., Sacramento County Superior Court Case No. 34-2013-80001396

Date: February 6, 2015

RICHARD E. NOSKY, JR.
City Attorney