



PUBLIC WORKS DEPARTMENT
10300 TORRE AVENUE
CUPERTINO, CALIFORNIA 95014

PROJECT MANUAL

FOR THE

McCLELLAN ROAD SIDEWALK IMPROVEMENTS-PHASE 2

Bid Date:

July 17, 2018

Project Number: 2015-19


PROJECT MANUAL FOR
McClellan Road Sidewalk Improvements-Phase 2
PROJECT NO. 2015-19

REVIEWED BY:



Michael Zimmermann
Capital Improvement Program Manager

APPROVED BY:



Timm Borden
Director of Public Works

PROJECT DIRECTORY

Project Name: McClellan Road Sidewalk Improvements-Phase 2

Project Number: 2015-19

Location: McClellan Road between Byrne Avenue and San Leandro Avenue

City Representative:

City of Cupertino

John Raaymakers
Public Works Department
10300 Torre Avenue
Cupertino, CA 95014
PH: 408-777-3354
FX: 408-777-3333
e-mail: johnr@cupertino.org

Address for Stop Notices:

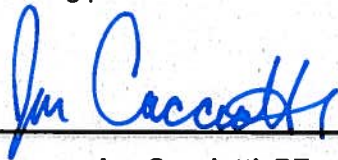
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Engineer of Record:

HMH Engineers, Inc.
1570 Oakland Road
San Jose, CA 95131
(408) 487-2200

SEALS PAGE

The Technical Specifications and Plans have been prepared by or under the direction of the following persons.



Jon Cacciotti, PE



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Technical Specifications



Notice Inviting Bids

1. **Bid Acceptance.** The City of Cupertino (“City”) will accept sealed bids for its McClellan Road Sidewalk Improvements-Phase 2 Project (“Project”), by or before July 17, 2018, at 2:00 p.m., at the City Clerk’s Office, located at 10300 Torre Avenue, Cupertino, California, 95014 at which time the bids will be publicly opened in the City Hall lobby and read aloud. The City may, acting in its sole discretion, reject any and all bids, and may waive any immaterial deviation from the bid requirements to the full extent permitted by law.
2. **Project Information.**
 - 2.1 **Location and Description.** The Project location is McClellan Road between Byrne Avenue and San Leandro Avenue in the city of Cupertino, and is described as follows: Addition of sidewalk, curb, and gutter where gaps currently exist as well as drainage improvements and planting strips where possible.
 - 2.2 **Time for Completion.** The planned timeframe for commencement and completion of construction of the Project is: 75 calendar days.
 - 2.3 **Estimated Cost.** The estimated construction cost is \$500,000.00.
3. **License and Registration Requirements.**
 - 3.1 **License.** This Project requires a valid California contractor’s license for the following classification(s): Class A, General Engineering.
 - 3.2 **DIR Registration.** City may not accept a Bid Proposal from or enter into the Contract with a bidder, without proof that the bidder is registered with the California Department of Industrial Relations (“DIR”) to perform public work under Labor Code section 1725.5, subject to limited legal exceptions.
4. **Contract Documents.** The plans, specifications, bid forms and contract documents for the Project, and any addenda thereto (“Contract Documents”) are available in electronic form only, and may be downloaded from City’s website under “Open Bids” at: <http://www.cupertino.org/i-want-to/bid-on/open-bids> and may also be available from a local or regional plan room or trade journal.
5. **Bid Security.** The Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier’s or certified check made payable to City, or a bid bond executed by a surety licensed to do business in the State of California on the Bid Bond form included with the Contract Documents. The bid security must guarantee that within ten days after City issues the Notice of Award, the successful bidder will execute the Contract and submit the payment and performance bonds and insurance certificates and

endorsements and any other submittals as required by the Contract Documents and specified in the Notice of Award.

6. Prevailing Wage Requirements.

6.1 General. This Project is subject to the prevailing wage requirements applicable to the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the Work, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes.

6.2 Rates. These prevailing rates are on file with the City and available online at <http://www.dir.ca.gov/DLSR>. Each Contractor and Subcontractor must pay no less than the specified rates to all workers employed to work on the Project. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work must be at least time and one-half.

6.3 Compliance. The Contract will be subject to compliance monitoring and enforcement by the DIR, under Labor Code section 1771.4.

- 7. Performance and Payment Bonds.** The successful bidder will be required to provide performance and payment bonds, each for 100% of the Contract Price.
- 8. Substitution of Securities.** Substitution of appropriate securities in lieu of retention amounts from progress payments is permitted under Public Contract Code section 22300.
- 9. Subcontractor List.** Each Subcontractor must be registered with the DIR to perform work on public projects. Each bidder must submit a completed Subcontractor List form with its Bid Proposal, including the name, location of the place of business, California contractor license number, DIR registration number, and percentage of the Work to be performed (based on the Base Bid) for each Subcontractor that will perform work or service or fabricate or install work for the prime contractor in excess of one-half of 1% of the bid price or, for construction of streets and highways, \$10,000 (whichever is greater), using the Subcontractor List form included with the Contract Documents.
- 10. Subcontractor Limit.** The prime contractor is required to self-perform at least 51% of the Work on the Project, as further specified in the Instructions to Bidders.
- 11. Instructions to Bidders.** All bidders should carefully review the Instructions to Bidders before submitting a Bid Proposal.

By:  Date: 6.15.18

Grace Schmidt, City Clerk

Publication Date: 6.22.18

END OF NOTICE INVITING BIDS

Instructions to Bidders

Each Bid Proposal submitted to the City of Cupertino ("City") for its McClellan Road Sidewalk Improvements-Phase 2 Project ("Project") must be submitted in accordance with the following instructions and requirements:

1. Bid Submission.

1.1 General. The Contract for the Project will be awarded, if at all, to the lowest responsible bidder, as determined by City. Each Bid Proposal must be signed, sealed and submitted to City, using the form provided in the Contract Documents, by or before the date and time set forth in the Notice Inviting Bids, or as amended by subsequent addendum. Faxed or emailed Bid Proposals will not be accepted, unless otherwise specified. Late submissions will be returned unopened. City reserves the right to postpone the date and time for receiving or opening bids. Each bidder is solely responsible for all of its costs to prepare and submit its bid and by submitting a bid waives any right to recover those costs from City. The bid price(s) must include all costs to perform the Work as specified, including all labor, material, supplies, and equipment and all other direct or indirect costs such as applicable taxes, insurance and overhead.

1.2 Bid Envelope. The envelope containing the sealed Bid Proposal and all required forms and attachments must be clearly labeled and addressed as follows:

BID PROPOSAL:

McClellan Road Sidewalk Improvements-Phase 2 Project
Project No. 2015-19

City Clerk's Office
Cupertino City Hall
10300 Torre Avenue
Cupertino, CA 95014
Attn: Ms. Grace Schmidt

The envelope must also be clearly labeled, as follows, with the bidder's name, address for bidding on public works contracts (Labor Code sections 1725.5 and 1771.1):

[Contractor company name]
[street address]
[city, state, zip code]

1.3 DIR Registration. City will not accept a Bid Proposal from or enter into the Contract with a bidder without proof that the bidder is registered with the DIR to perform public work under Labor Code section 1725.5, subject to limited legal exceptions. If City is unable to confirm that the bidder's DIR registration is current at the time of bidding, City must disqualify the bidder and return its bid.. (Labor Code section 1725.5.)

2. Bid Proposal Form and Enclosures. Each Bid Proposal must be completed in ink using the Bid Proposal form included in the Contract Documents. The Bid Proposal form must be fully completed without interlineations, alterations, or erasures. Any necessary corrections must be clear and legible, and must be initialed by the bidder's authorized representative. A Bid Proposal submitted with exceptions or terms such as "negotiable," "will negotiate," or similar, will be considered nonresponsive. Each Bid Proposal must be accompanied by bid security, as set forth in Section 4 below, and by a completed Bid Schedule, Subcontractor List, and Non-Collusion Declaration using the forms included in the Project manual as directed.

3. **Authorization and Execution.** Each Bid Proposal must be signed by the bidder's authorized representative. A Bid Proposal submitted by a partnership must be signed in the partnership name by a general partner with authority to bind the partnership. A Bid Proposal submitted by a corporation must be signed with the legal name of the corporation, followed by the signature and title of two officers of the corporation with full authority to bind the corporation to the terms of the Bid Proposal, under California Corporation Code section 313.
4. **Bid Security.** Each Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier's check, certified check, or bid bond using the form included in the Contract Documents and executed by a surety licensed to do business in the State of California, made payable to City. The bid security must guarantee that, within ten days after issuance of the Notice of Award, the bidder will: execute and submit the enclosed Contract for the bid price; submit payment and performance bonds for 100% of the maximum Contract Price; and submit the insurance certificates and endorsements and any other submittals, if any, required by the Contract Documents or the Notice of Award.
5. **Bid Schedule.** Each bidder must complete the Bid Schedule form with unit prices as indicated, and submit the completed Bid Schedule with its Bid Proposal.
 - 5.1 **Incorrect Totals.** In the event a computational error for any bid item (base bid or alternate) results in an incorrect extended total for that item, the submitted base bid or bid alternate total will be adjusted to reflect the corrected amount (as the product of the estimated quantity and the unit cost), unless the cumulative amount of correction changes the total amount of the base bid or bid alternate. In the event of a discrepancy between the actual total of the itemized or unit prices shown on the Bid Schedule for the base bid, and the amount entered as the base bid on the Bid Proposal form, the actual total of the itemized or unit prices shown on the Bid Schedule for the base bid will be deemed the base bid price. Likewise, in the event of a discrepancy between the actual total of the itemized or unit prices shown on the Bid Schedule for any bid alternate, and the amount entered for the alternate on the Bid Proposal form, the actual total of the itemized prices shown on the Bid Schedule for that alternate will be deemed the alternate price. Nothing in this provision is intended to prevent a bidder from requesting to withdraw its bid for material error under Public Contract Code section 5100 et seq.
 - 5.2 **Estimated Quantities.** The quantities shown on the Bid Schedule are estimated and the actual quantities required to perform the Work may be greater or less than the estimated amount. The Contract Price will be adjusted to reflect the actual quantities required for the Work based on the itemized or unit prices provided in the Bid Schedule, with no allowance for anticipated profit for quantities that are deleted or decreased, and no increase in the unit price.
6. **Subcontractor Work Limits.** The prime contractor must perform at least the percentage of the Work on the Project specified in the Notice Inviting Bids, which is calculated as a percentage of the base bid price, with its own forces, except for any Work identified as "Specialty Work" in the Bid Schedule. The total bid amount for any such Specialty Work, as shown on the Bid Schedule, may be deducted from the base bid price before computing the percentage the contractor must self-performance. The remaining Work may be performed by qualified Subcontractor(s).
7. **Bidder's Questionnaire.** A completed, signed Bidder's Questionnaire using the form provided with the Contract Documents and including all required attachments must be submitted within 2 working days following a request by City. A bid submitted by a bidder

that does not fully comply with this requirement may be rejected as nonresponsive. A bidder who submits a Bidder's Questionnaire which is subsequently determined to contain false or misleading information, or material omissions, may be disqualified as non-responsive.

8. Pre-Bid Investigation

8.1 General. Each bidder is solely responsible at its sole expense for diligent and thorough review of the Contract Documents and documents provided "For Reference Only," which may include geotechnical reports, as-built or record drawings, utility diagrams, or other such information. Each bidder is also responsible for appropriate examination of the Project site, and reasonable and prudent inquiry concerning known and potential site and area conditions prior to submitting a Bid Proposal. Each bidder is responsible for knowledge of conditions and requirements which reasonable review and investigation would have disclosed. However, except for any areas that are open to the public at large, bidders may not enter City's property or the Project site without prior written authorization from City, and subject to the site investigation requirements set forth below. Bidders are responsible for reporting any errors or omissions in the Contract Documents to City prior to submitting a Bid Proposal, subject to the limitations of Public Contract Code section 1104.

8.2 Project Site. Soil and soil test data, water table elevations, and soil analyses for test holes, if any, may be available for inspection at the City's offices or as otherwise specified in the Contract Documents. Any subsurface exploration at the Project site must be done at the bidder's expense, but only with prior written authorization from City, and as further specified below in subsection 8.4. All soil data and analyses available for inspection or provided in the Contract Documents or in documents provided "For Reference Only," apply only to the test hole locations. Any water table elevation indicated by a soil test report existed on the date the test hole was drilled. The bidder is responsible for determining and allowing for any differing soil or water table conditions during construction. Because groundwater levels may fluctuate, difference(s) in elevation between ground water shown in soil boring logs and ground water actually encountered during Project construction will not be considered changed Project site conditions. Actual locations and depths must be determined by bidder's field investigation. The bidder may request access to underlying or background information on the Project site in City's possession that is necessary for the bidder to form its own conclusions, including, if available, record drawings or other documents indicating the location of subsurface lines, utilities, or other structures. City expressly disclaims responsibility for assumptions a bidder might draw from the presence or absence of information provided by City. City does not warrant the accuracy of any representation of visible, above-ground conditions that may be independently investigated and verified by the bidder. The City disclaims responsibility for the accuracy of information regarding subsurface conditions that has been provided to City by others, such as utility owners.

8.3 Utilities. The Project must be completed in a manner that satisfies the standards and requirements of the affected utility companies or agencies (collectively, "utility owners"). The successful bidder may be required by the utility owners to provide detailed plans prepared by a California registered civil engineer showing the necessary temporary support of the utilities during coordinated construction work. Bidders are directed to contact the utility owners about their requirements before submitting a Bid Proposal.

8.4 Site Investigation Requirements. Potential bidders will be required to execute an agreement to indemnify City and hold it harmless against any liability arising from site investigation, testing or inspection using City's form Indemnity Agreement (Site Inspection) included with the Project Forms provided with the Contract Documents. The prospective bidder must ensure that any such site investigation is conducted in a manner to avoid

endangering persons or damaging property, and must promptly and fully restore the site to its pre-investigation condition, including filling in holes and cleaning up. City reserves the right to impose additional conditions to site access or investigation in order to protect persons or property, including, but not limited to limitations on machinery used during the site investigation.

- 9. Bidders Interested in More Than One Bid.** No person, firm, or corporation may submit or be a party to more than one Bid Proposal unless alternate bids are specifically called for. However, a person, firm, or corporation that has submitted a subcontract proposal or quote to a bidder may submit subcontract proposals or quotes to other bidders, and may also submit a Bid Proposal as a prime contractor.
- 10. Requests for Information.** Questions or requests for clarifications regarding the Project, the bid procedures, or any of the Contract Documents must be submitted in writing to John Raaymakers, Public Works Project Manager, at johnr@cupertino.org. Oral responses are not authorized and are not binding on the City. Bidders should submit any such written inquiries at least five working days before the scheduled bid opening. Questions received any later might not be addressed before the bid deadline. An interpretation or clarification by City in response to a written inquiry will be issued in an addendum.
- 11. Addenda and Plan Holder's List.** Any addenda issued prior to the bid opening are part of the Contract Documents. Subject to the limitations of Public Contract Code section 4104.5, City reserves the right to issue addenda prior to bid time. Addenda will be posted electronically on the City's website at: <http://www.cupertino.org/i-want-to/bid-on/open-bids>. Notifications will also be transmitted to known plan holders. To be included on the plan holder's list for this Project, email the following information to capitalprojects@cupertino.org: bidder's name, address, phone number and email address, with the Project title included in the subject bar. Each bidder is responsible for ensuring it has received and reviewed all addenda prior to submitting its bid. All bidders, including bidders on the plan holder's list, should regularly check City's website for any addenda or updates on the Project.
- 12. Pre-Bid Substitution Requests.** Any specification designating a material, product, thing, or service by specific brand or trade name, followed by the words "or equal," is intended only to indicate quality and type of item desired, and bidders may request use of any equal material, product, thing, or service. A pre-bid request for substitution must be submitted no later than ten working days before the scheduled bid opening, using the City's Substitution Request Form. All data substantiating the proposed substitute as an equal item must be submitted with the written request for substitution, and all such requests are subject to the requirements and limitations applicable to substitution requests under Section 7.7 of the General Conditions, on Substitutions. These substitution provisions do not apply to materials, products, things, or services that may lawfully be designated by a specific brand or trade name under Public Contract Code section 3400(c).
- 13. Withdrawal of Bid Proposals.** A Bid Proposal may not be withdrawn for a period of 90 days after the bid opening without forfeiture of the bid security, except as authorized for material error under Public Contract Code section 5100 et seq.
- 14. Bid Protest.** Any bid protest must be in writing and received by City at 10300 Torre Avenue, Cupertino, CA 95014 attn: John Raaymakers or via email at johnr@cupertino.org before 5:00 p.m. no later than two Working Days following bid opening (the "Bid Protest Deadline") and must comply with the following requirements:

14.1 Eligibility. Only a bidder who has actually submitted a responsive Bid Proposal, as determined by City, is eligible to submit a bid protest against another bidder.

Subcontractors are not eligible to submit bid protests. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest. For purposes of this Section, a "Working Day" means a day that City is open for normal business, and excludes weekends and holidays observed by City. Pursuant to Public Contract Code section 4104, inadvertent omission of a Subcontractor's DIR registration number on the Subcontractor List form is not grounds for a bid protest provided it is corrected within 24 hours.

14.2 Protest Contents. The bid protest must contain a complete statement of the basis for the protest and all supporting documentation. Material submitted after the Bid Protest Deadline will not be considered. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based. The protest must include the name, address, email address, and telephone number of the protesting bidder and any person representing the protesting bidder.

14.3 Copy to Protested Bidder. Upon submission of its bid protest to City, the protesting bidder must also concurrently transmit the protest and all supporting documents to the protested bidder, and to any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest, by email or hand delivery to ensure delivery before the Bid Protest Deadline.

14.4 Response to Protest. The protested bidder may submit a written response to the protest, provided the response is received by City before 5:00 p.m., within two Working Days after the Bid Protest Deadline or after actual receipt of the bid protest, whichever is sooner (the "Response Deadline"). The response must include all supporting documentation. Material submitted after the Response Deadline will not be considered. The response must include the name, address, email address, and telephone number of the person representing the protested bidder if different from the protested bidder.

14.5 Copy to Protesting Bidder. Upon submission of its response to the bid protest to the City, the protested bidder must also concurrently transmit by email or hand delivery, by or before the Response Deadline, a copy of its response and all supporting documents to the protesting bidder and to any other bidder who has a reasonable prospect of receiving an award depending upon the outcome of the protest.

14.6 Exclusive Remedy. The procedure and time limits set forth in this section are mandatory and are the bidder's sole and exclusive remedy in the event of a bid protest. A bidder's failure to comply with these procedures will constitute a waiver of any right to further pursue a bid protest, including filing a Government Code Claim or initiation of legal proceedings.

14.7 Right to Award. City reserves the right, acting in its sole discretion, to reject any bid protest that it determines lacks merit, to award the Contract to the bidder it has determined to be the responsible bidder submitting the lowest responsive bid, and to issue a Notice to Proceed with the Work notwithstanding any pending or continuing challenge to its determination.

- 15. Reservation of Rights.** To the full extent permitted by law, City reserves the right, acting in its sole discretion, to waive or to decline to waive any immaterial bid irregularities, to accept or reject any and all bids, or to abandon the Project entirely. The Contract will be awarded, if at all, within 90 days after opening of bids or as otherwise specified in the Special Conditions, to the responsible bidder that submitted the lowest responsive bid. Any date given for planned commencement of the Project given in Section 2.2 of the Notice Inviting Bids is provided as informative of City's expectations at the time the Notice Inviting Bids was first issued. City is not bound to issue a Notice to Proceed by or before such

planned commencement date, and reserves the right to issue the Notice to Proceed when the City determines, in its sole discretion, the appropriate time for commencing the Work.

16. **Bonds.** The successful bidder is required to submit payment and performance bonds as specified in the Contract Documents using the bond forms included in the Contract Documents, within ten days following City's issuance of the Notice of Award. All required bonds must be calculated on the maximum total Contract Price as awarded, including additive alternates, if applicable.
17. **License(s).** The successful bidder and its Subcontractor(s) must possess the California contractor's license(s) in the classification(s) required by law to perform the Work. and must also obtain a City Business License before beginning Work on the Project, unless its sole business contact within the City is the sale of goods or services to the City itself.
18. **Ineligible Subcontractor.** Any Subcontractor who is ineligible to perform work on a public works project under Labor Code sections 1777.1 or 1777.7 is prohibited from performing work on the Project.
19. **Safety Orders.** If the Project includes construction of a pipeline, sewer, sewage disposal system, boring and jacking pits, or similar trenches or open excavations, which are five feet or deeper, each bid must include a bid item for adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life or limb, which comply with safety orders as required by Labor Code section 6707.

END OF INSTRUCTIONS TO BIDDERS

Bidder's Name: _____

Bid Proposal

McClellan Road Sidewalk Improvements-Phase 2 Project

_____ ("Bidder") hereby submits this Bid Proposal to the City of Cupertino ("City") for the above-referenced project ("Project") in response to the Notice Inviting Bids and in accordance with the Contract Documents referenced therein.

1. **Base Bid.** Bidder proposes to perform and fully complete the Work for the Project as specified in the Contract Documents, within the time required for full completion of the Work, including all labor, materials, supplies, and equipment and all other direct or indirect costs including, but not limited to, taxes, insurance and all overhead for the following price ("Base Bid"):
\$ _____.

2. **Addenda.** Bidder agrees that it has confirmed receipt of or access to, and reviewed, all addenda issued for this Bid. Bidder specifically acknowledges receipt of the following addenda:

Addendum:	Date Received:	Addendum:	Date Received:
#01	_____	#05	_____
#02	_____	#06	_____
#03	_____	#07	_____
#04	_____	#08	_____

3. **Bidder's Warranties.** By signing and submitting this Bid Proposal, Bidder warrants the following:

3.1 **Examination of Contract Documents.** Bidder has thoroughly examined the Contract Documents and represents that, to the best of Bidder's knowledge, there are no errors, omissions, or discrepancies in the Contract Documents, subject to the limitations of Public Contract Code section 1104.

3.2 **Examination of Worksite.** Bidder has had the opportunity to examine the Worksite and local conditions at the Project location.

3.3 **Bidder is Qualified.** Bidder is fully qualified to perform the Work.

3.4 **Responsibility for Bid.** Bidder has carefully reviewed this Bid Proposal and is solely responsible for any errors or omissions contained in its completed Bid.

4. **Award of Contract.** By signing and submitting this Bid Proposal, Bidder agrees that if Bidder is awarded the Contract for the Project, within ten days following issuance of the Notice of Award to Bidder, Bidder will do all of the following:

4.1 **Execute Contract.** Enter into the Contract with City in accordance with the terms of this Bid Proposal, by signing and submitting to City the Contract prepared by City using the form included with the Contract Documents;

4.2 **Submit Required Bonds.** Submit to City a payment bond and a performance bond, each for 100% of the Contract Price, using the bond forms provided and in accordance with the requirements of the Contract Documents; and

4.3 **Insurance Requirements.** Submit to City the insurance certificate(s) and endorsement(s) as required by the Contract Documents.

Bidder's Name: _____

5. **Bid Security.** As a guarantee that, if awarded the Contract, Bidder will perform its obligations under Section 4 above, Bidder is enclosing bid security in the amount of ten percent of its maximum bid amount in one of the following forms (check one):

_____ A cashier's check or certified check payable to City and issued by _____ [Bank name] in the amount of \$ _____.

_____ A bid bond, using the Bid Bond form included with the Contract Documents, payable to City and executed by a surety licensed to do business in the State of California.

This Bid Proposal is hereby submitted on _____, 2018.

Bidder Business Name

Date

Signature

Signature

Name/Title (If Corporation: Chairman, President or Vice President)

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

License #, Expiration Date, and Classification

DIR Registration #

Address

Phone

City, State, Zip

Contact Name/Title

Contact Phone

Contact Email

END OF BID PROPOSAL

Bidder's Name: _____

Bid Schedule

This Bid Schedule must be completed in ink and included with the sealed Bid Proposal. Pricing must be provided for each Bid Item as indicated. Items marked "(SW)" are Specialty Work that must be performed by a qualified Subcontractor. The lump sum or unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead. The sum of all amounts entered in the "Extended Total Amount" column must be identical to the Base Bid price entered in Section 1 of the Bid Proposal Form.

LS = Lump Sum EA = Each LF = Linear Foot CF = Cubic Feet CY = Cubic Yard
 SY=Square Yard SF = Square Feet LB = Pounds TON = Ton (2000 lbs) AL = Allowance

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
1	Mobilization	1	LS	\$	\$
2	Field Engineering / Survey Work	1	LS	\$	\$
3	Traffic Control / Construction Area Signs	1	LS	\$	\$
4	Tree Protection	1	LS	\$	\$
5	Temporary Water Pollution Control	1	LS	\$	\$
6	Utility Location	1	LS	\$	\$
7	Remove Miscellaneous Concrete	2,950	SF	\$	\$
8	Remove AC Dike	125	LF	\$	\$
9	Remove Curb and Gutter	220	LF	\$	\$
10	Remove Drainage Inlet and Pipe	2	EA	\$	\$
11	Remove Fence	160	LF	\$	\$
12	Remove Roadside Sign	2	EA	\$	\$
13	Remove Retaining Wall	100	LF	\$	\$
14	Relocate Mailbox	10	EA	\$	\$
15	Restore Landscape, Irrigation, Hardscape	1	LS	\$	\$
16	Adjust Manhole to Grade	1	EA	\$	\$
17	Adjust Water Meter Box to Grade	7	EA	\$	\$
18	Adjust Water Valve Box to Grade	4	EA	\$	\$
19	Adjust Cleanout to Grade	2	EA	\$	\$
20	Relocate Roadside Sign	1	EA	\$	\$
21	Install Type 1B Pole	1	EA	\$	\$
22	Replace Through the Curb Drain	3	EA	\$	\$
23	Relocate Chain Link Fence	140	LF	\$	\$
24	Relocate Wooden Fence	25	LF	\$	\$

Bidder's Name: _____

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
25	Site Clearing	1	LS	\$	\$
26	Remove Tree	14	EA	\$	\$
27	Grind and Remove Stump	1	EA	\$	\$
28	Earthwork (Final Pay Item)	335	CY	\$	\$
29	Prune Existing Trees	1	LS	\$	\$
30	Class II Aggregate Base	150	CY	\$	\$
31	Grind AC Pavement	4,250	SF	\$	\$
32	Hot Mix Asphalt (Type A)	192	TON	\$	\$
33	Construct Sidewalk, Walkway, and Driveway Conform	5,160	SF	\$	\$
34	Construct Type A1-6 Curb	40	LF	\$	\$
35	Construct Type A2-6 Curb and Gutter	900	LF	\$	\$
36	Construct Retaining Wall	90	LF	\$	\$
37	Construct Curb Ramp	1	EA	\$	\$
38	Construct Driveway	1,700	SF	\$	\$
39	Striping and Pavement Markings	1	LS	\$	\$
40	Ornamental Steel Fence	90	LF	\$	\$
41	Topsoil	7	CY	\$	\$
42	Plant Shrubs	30	EA	\$	\$
43	Caltrans G3 Inlet	1	EA	\$	\$
44	Drop Inlet-Curb Opening	1	EA	\$	\$
45	15 in. Reinforced Concrete Pipe	5	LF	\$	\$
46	6 in. High Density Polyethylene Pipe	5	LF	\$	\$

TOTAL BASE BID: Items 1 through _____ inclusive: \$ _____

Note: The amount entered as the "Total Base Bid" should be identical to the Base Bid amount entered in Section 1 of the Bid Proposal form.

BIDDER NAME: _____

END OF BID SCHEDULE

Bidder's Name: _____

Subcontractor List

For each Subcontractor that will perform a portion of the Work in an amount in excess of one-half of 1% of the Bidder's total Contract Price,¹ the bidder must list a description of the Work, the name of the Subcontractor, its California contractor license number, the location of its place of business, its DIR registration number, and the portion of the Work that the Subcontractor is performing based on a percentage of the Base Bid price. Bidder may not list more than one Subcontractor for each such portion of the Work listed by Bidder below.

DESCRIPTION OF WORK	SUBCONTRACTOR NAME	CALIFORNIA CONTRACTOR LICENSE NO.	LOCATION OF BUSINESS	DIR REG. NO.	PERCENT OF WORK

END OF SUBCONTRACTOR LIST

¹ For street or highway construction this requirement applies to any subcontract of \$10,000 or more.

Bidder's Name: _____

Noncollusion Declaration

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:

I am the _____ [title] of _____
[business name], 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.

This declaration is intended to comply with California Public Contract Code section 7106 and Title 23 U.S.C section 112.

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].

s/ _____

Name [print]

END OF NONCOLLUSION DECLARATION

Bid Bond

_____ (“Bidder”) has submitted a bid, dated _____, 2018 (“Bid”), to City of Cupertino (“City”) for work on the McClellan Road Sidewalk Improvements-Phase 2 Project (“Project”). Under this duly executed bid bond (“Bid Bond”), Bidder as Principal and _____, its surety (“Surety”), are bound to City as obligee in the penal sum of ten percent of the maximum amount of the Bid (the “Bond Sum”). Bidder and Surety bind themselves and their respective heirs, executors, administrators, successors and assigns, jointly and severally, as follows:

1. **General.** If Bidder is awarded the Contract for the Project, Bidder will enter into the Contract with City in accordance with the terms of the Bid.
2. **Submittals.** Within ten days following issuance of the Notice of Award to Bidder, Bidder must submit to City the following:
 - 2.1 **Contract.** The executed Contract, using the form provided by City in the Project contract documents (“Contract Documents”);
 - 2.2 **Payment Bond.** A payment bond for 100% of the maximum Contract Price, executed by a surety licensed to do business in the State of California using the Payment Bond form included with the Contract Documents;
 - 2.3 **Performance Bond.** A performance bond for 100% of the maximum Contract Price, executed by a surety licensed to do business in the State of California using the Performance Bond form included with the Contract Documents; and
 - 2.4 **Insurance.** The insurance certificate(s) and endorsement(s) required by the Contract Documents, and any other documents required under the Instructions to Bidders.
3. **Enforcement.** If Bidder fails to execute the Contract and to submit the bonds and insurance certificates as required by the Contract Documents, Surety guarantees that Bidder forfeits the Bond Sum to City. Any notice to Surety may be given in the manner specified in the Contract and delivered or transmitted to Surety as follows:

Attn: _____
Address: _____
City/State/Zip: _____
Phone: _____
Fax: _____
Email: _____
4. **Duration; Waiver.** If Bidder fulfills its obligations under Section 2, above, then this obligation will be null and void; otherwise it will remain in full force and effect for 90 days following award of the Contract or until this Bid Bond is returned to Bidder, whichever occurs first. Surety waives the provisions of Civil Code sections 2819 and 2845.

[Signatures are on the following page.]

This Bid Bond is entered into and effective on _____, 20_____.

SURETY: _____
Business name

s/ _____

Name/Title

(Acknowledgement with Notary Seal for Surety, and Surety's Power of Attorney-In-Fact Certificate must be attached.)

BIDDER: _____
Business name

s/ _____

Name/Title

END OF BID BOND

Bidder's Questionnaire

McCLELLAN ROAD SIDEWALK IMPROVEMENTS-PHASE 2 PROJECT

Within 2 working days following a request by the City of Cupertino ("City"), a bidder must submit to City a completed, signed Bidder's Questionnaire using this form and including all required attachments. City may request the Questionnaire from one or more of the apparent low bidders following the bid opening, and may use the completed Questionnaire to evaluate a bidder's qualifications for this Project. The Questionnaire must be filled out completely, accurately, and legibly. Any errors, omissions, or misrepresentations in completion of the Questionnaire may be grounds for rejection of the bid or termination of a Contract awarded pursuant to the bid.

Part 1: General Information

Bidder's Full Legal (Business) Name: _____
("Bidder")

Check One: ___ Corporation
 ___ Partnership
 ___ Sole Proprietorship
 ___ Joint Venture of: _____ *

 ___ Other: _____

Address: _____

Phone: _____

Owner of Business: _____

Contact Person: _____

Email: _____

Bidder's California Contractor's License Number(s): _____

Bidder's Federal I.D. Number: _____

** If Bidder is a joint venture identify each member and the role of each member of the joint venture, and provide a completed Bidder's Questionnaire for each member of the joint venture.*

Part 2: Bidder Experience

- 1. How many years has Bidder been in business under its present business name? ____ years
- 2. Has Bidder completed projects similar in type and size to this Project as a general contractor?
____ Yes ____ No
- 3. Has Bidder ever been disqualified on grounds that it is not responsible?
____ Yes ____ No

If yes, provide additional information on a separate sheet of paper regarding the disqualification, including the name and address of the agency or owner of the subject project, the type and size

of the project, the reasons that Bidder was disqualified as not responsible, and the month and year in which the disqualification occurred.

4. Has Bidder ever been terminated from a construction project, either as a general contractor or as a subcontractor?

Yes No

If yes, provide additional information on a separate sheet of paper regarding the termination, including the name and address of the agency or owner of the subject project, the type and size of the project, whether Bidder was under contract as a general contractor or a subcontractor, the reasons that Bidder was terminated, and the month and year in which the termination occurred.

5. Has Bidder's contractor's license(s) ever been revoked?

Yes No

If yes, provide additional information on a separate sheet of paper regarding each revocation, including the license classification and license number, the reason(s) the license was revoked, the date of revocation, and the date of reinstatement.

6. Has Bidder ever been fined or disbarred for failure to comply with state or federal prevailing wage requirements?

Yes No

If yes, provide additional information on a separate sheet of paper regarding each fine or disbarment, including the reason(s) for the fine or disbarment, the agency that imposed the fine or disbarment, the date(s) of the fine or disbarment, and identify the project and project owner for which the Bidder was determined to be non-compliant with prevailing wage requirements.

7. Has Bidder ever been subject to civil or criminal penalties or other adverse action for violation(s) of health, safety or environmental laws or regulations?

Yes No

If yes, provide additional information on a separate sheet of paper regarding each such violation, including the reason(s) for the determination against Bidder, the agency that determined Bidder to be in violation, the nature and date(s) of such penalty or other adverse action, and identify the project and project owner for which the Bidder was determined to be in violation of health, safety or environmental laws or regulations.

8. Has Bidder ever been fined or convicted for unlawful labor practices, including, but not limited to, employment of undocumented workers?

Yes No

If yes, provide additional information on a separate sheet of paper regarding each such fine or conviction, including the nature and date(s) of the violation(s), the agency that determined Bidder to be in violation, and identify the project and project owner in relation to which the Bidder was fined or convicted of unlawful labor practices.

9. Provide information about Bidder's past projects performed as general contractor as follows:

- 9.1 Six most recently completed public works projects within the last three years;
- 9.2 Three largest completed projects within the last three years; and
- 9.3 Any project which is similar to this Project including magnitude and character of the Work.

10. Use separate sheets of paper to provide all of the following information for each project identified in response to the above three categories, under section 10:

- 10.1 Project name
- 10.2 Location
- 10.3 Owner
- 10.4 Owner contact (name and current phone number)
- 10.5 Architect or engineer name
- 10.6 Architect or engineer contact (name and current phone number)
- 10.7 Project manager (name and current phone number)
- 10.8 Description of project and scope of work performed by bidder, more particularly be specific as to what applies a similar character of work to this project
- 10.9 Initial contract value (at time of bid award)
- 10.10 Final cost of construction (including change orders)
- 10.11 Original scheduled completion date
- 10.12 Time extensions granted (number of days)
- 10.13 Actual date of completion
- 10.14 Number and amount of stop notices or mechanic's liens filed
- 10.15 Amount of liquidated damages assessed against Bidder
- 10.16 Nature and resolution of any claim, lawsuit, and/or arbitration between Bidder and the owner.

Part 3: Bonds and Insurance

- 1. Bidder's current bonding capacity is: \$_____.
- 2. Provide the following information regarding Bidder's bond surety and bond agent:

Surety's Name: _____

NAIC#: _____

Address: _____

Phone: _____

Surety's A.M. Best Ratings for financial size and strength: _____

Is surety an admitted surety in California? Yes No

Bond agent name, address and phone:

Percentage rate paid for payment, performance and warranty bonds: ____%

3. Provide the following information regarding Bidder's insurance policies and insurers:

Commercial General Liability:

Insurer name, address and phone: _____

NAIC#: _____

Insurer A.M. Best's rating for financial size and financial strength: _____

Policy number and expiration date: _____

Coverage limits: \$_____ per occurrence, and \$_____ aggregate

Automobile Liability:

Insurer name, address and phone: _____

NAIC#: _____

Insurer A.M. Best's rating for financial size and financial strength: _____

Policy number and expiration date: _____

Coverage limits: \$_____ per occurrence, and \$_____ aggregate

Workers' Compensation:

Insurer name, address and phone: _____

NAIC#: _____

Insurer A.M. Best's rating for financial size and financial strength: _____

Policy number and expiration date: _____

Coverage limits: \$_____ per occurrence, and \$_____ aggregate

Excess or Umbrella Liability:

Insurer name, address and phone: _____

NAIC#: _____

Insurer A.M. Best's rating for financial size and financial strength: _____

Policy number and expiration date: _____

Coverage limits: \$_____ per occurrence, and \$_____ aggregate

Part 4: Verification

In signing this document, I, the undersigned, declare that I am duly authorized to sign and submit this Bidder's Questionnaire on behalf of the named Bidder, and that all responses and information set forth in this Bidder's Questionnaire and accompanying attachments are, to the best of my knowledge, true, accurate and complete as of the date of submission. City is hereby authorized to obtain a credit report(s) or conduct additional investigation to verify the information provided above or additional information that City deems relevant to its determination of whether Bidder is a "responsible bidder," as that term is defined in Public Contract Code section 1103. **I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.**

Signature: _____ Date: _____

By: _____
Name and Title

END OF BIDDER'S QUESTIONNAIRE

Contract

This public works contract ("Contract") is entered into by and between the City of Cupertino ("City"), a municipal corporation, and _____ ("Contractor"), for work on the McClellan Road Sidewalk Improvements-Phase 2 Project ("Project").

The parties agree as follows:

1. **Award of Contract.** In response to the Notice Inviting Bids, Contractor has submitted a Bid Proposal and accompanying Bid Schedule, a copy of which is attached for convenience as Exhibit A, to perform the Work to construct the Project. On _____, 2018, City authorized award of this Contract to Contractor for the amount set forth in Section 4 below.
2. **Contract Documents.** The Contract Documents incorporated into this Contract include and are comprised of all of the following:
 - 2.1 Notice Inviting Bids;
 - 2.2 Instructions to Bidders;
 - 2.3 Addenda, if any;
 - 2.4 Bid Proposal and attachments thereto;
 - 2.5 Contract;
 - 2.6 Payment Bond, Performance Bond and, if required, a Warranty Bond;
 - 2.7 General Conditions;
 - 2.8 Special Conditions;
 - 2.9 Project Drawings and Specifications;
 - 2.10 Change Orders, if any;
 - 2.11 Notice of Award;
 - 2.12 Notice to Proceed;
 - 2.13 The following: No other documents
3. **Contractor's Obligations.** Contractor will perform all of the Work required for the Project, as specified in the Contract Documents. Contractor must provide, furnish, and supply all things necessary and incidental for the timely performance and completion of the Work, including all necessary labor, materials, supplies, tools, equipment, transportation, and utilities, unless otherwise specified in the Contract Documents. Contractor must use its best efforts to complete the Work in a professional and expeditious manner and to meet or exceed the performance standards required by the Contract Documents.
4. **Payment.** As full and complete compensation for Contractor's timely performance and completion of the Work in strict accordance with the terms and conditions of the Contract Documents, City will pay Contractor \$_____ ("Contract Price") for all of Contractor's direct and indirect costs to perform the Work, including all labor, materials, supplies, equipment, taxes, insurance, bonds and all overhead costs, in accordance with the payment provisions in the General Conditions.
5. **Time for Completion.** Contractor will fully complete the Work for the Project within 75 calendar days from the commencement date given in the Notice to Proceed ("Contract Time"). By signing below, Contractor expressly waives any claim for delayed early completion.
6. **Liquidated Damages.** If Contractor fails to complete the Work within the Contract Time, City will assess liquidated damages in the amount of \$1,500.00 per day for each day of

unexcused delay in completion, and such liquidated damages may be deducted from City's payments due or to become due to Contractor under this Contract.

7. Labor Code Compliance.

7.1 General. This Contract is subject to all applicable requirements of Chapter 1 of Part 7 of Division 2 of the Labor Code, including requirements pertaining to wages, working hours and workers' compensation insurance.

7.2 Prevailing Wages. This Project is subject to the prevailing wage requirements applicable to the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the Work, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes. Copies of these prevailing rates are available online at <http://www.dir.ca.gov/DLSR>.

7.3 DIR Registration. City may not enter into the Contract with a bidder without proof that the bidder and its Subcontractors are registered with the California Department of Industrial Relations to perform public work under Labor Code section 1725.5, subject to limited legal exceptions.

8. Workers' Compensation Certification. Under Labor Code section 1861, by signing this Contract, Contractor certifies as follows: "I am aware of the provisions of Labor Code section 3700 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 on this Contract."

9. Conflicts of Interest. Contractor, its employees, Subcontractors and agents, may not have, maintain or acquire a conflict of interest in relation to this Contract in violation of any City ordinance or policy or in violation of any California law, including under Government Code section 1090 et seq. and under the Political Reform Act as set forth in Government Code section 81000 et seq. and its accompanying regulations. No officer, official, employee, consultant, or other agent of the City ("City Representative") may have, maintain, or acquire a "financial interest" in the Contract, as that term is defined under the Political Reform Act (Government Code section 81000, et seq., and regulations promulgated thereunder); or under Government Code section 1090, et seq.; or in violation of any City ordinance or policy while serving as a City Representative or for one year thereafter. Any violation of this Section constitutes a material breach of the Contract.

10. Independent Contractor. Contractor is an independent contractor under this Contract and will have control of the Work and the means and methods by which it is performed. Contractor and its Subcontractors are not employees of City and are not entitled to participate in any health, retirement, or any other employee benefits from City.

11. **Notice.** Any notice, billing, or payment required by or pursuant to the Contract Documents must be made in writing, signed, dated and sent to the other party by personal delivery, U.S. Mail, a reliable overnight delivery service, or by email as a PDF (or comparable) file. Notice is deemed effective upon delivery unless otherwise specified. Notice for each party must be given as follows:

City:

Name: City of Cupertino
Address: 10300 Torre Avenue
City/State/Zip: Cupertino, CA 95014
Phone: < _____ >
Attn: Director of Public Works
Email: < _____ >
Copy to: < _____ >

Contractor:

Name: _____
Address: _____
City/State/Zip: _____
Phone: _____
Attn: _____
Email: _____
Copy to: _____

12. **General Provisions.**

- 12.1 **Assignment and Successors.** Contractor may not assign its rights or obligations under this Contract, in part or in whole, without City's written consent. This Contract is binding on Contractor's and City's lawful heirs, successors and permitted assigns.
- 12.2 **Third Party Beneficiaries.** There are no intended third party beneficiaries to this Contract except as expressly provided in the General Conditions or Special Conditions.
- 12.3 **Governing Law and Venue.** This Contract will be governed by California law and venue will be in the Superior Court of Santa Clara County, and no other place.
- 12.4 **Amendment.** No amendment or modification of this Contract will be binding unless it is in a writing duly authorized and signed by the parties to this Contract.
- 12.5 **Integration.** This Contract and the Contract Documents incorporated herein, including authorized amendments or Change Orders thereto, constitute the final, complete, and exclusive terms of the agreement between City and Contractor.
- 12.6 **Severability.** If any provision of the Contract Documents, or portion of a provision, is determined to be illegal, invalid, or unenforceable, the remaining provisions of the Contract Documents will remain in full force and effect.
- 12.7 **Authorization.** Each individual signing below warrants that he or she is authorized to do so by the party that he or she represents, and that this Contract is legally

binding on that party. If Contractor is a corporation, signatures from two officers of the corporation are required pursuant to California Corporation Code section 313.

[Signatures are on the following page.]

The parties agree to this Contract as witnessed by the signatures below:

CONTRACTOR

<insert full name of Contractor above>

CITY OF CUPERTINO
A Municipal Corporation

By _____
Name _____
Title _____
Date _____

By _____
Timm Borden
Director of Public Works
Date _____

By _____
Name _____
Title _____
Date _____

APPROVED AS TO FORM:

By _____
Name _____
City Attorney
Date _____

ATTEST:

Grace Schmidt
City Clerk
Date _____

Contract Amount: _____
P.O. No. _____
Account No. _____

END OF CONTRACT

Payment Bond

The City of Cupertino ("City") and _____ ("Contractor") have entered into a contract, dated _____, 2018 ("Contract") for work on the McClellan Road Sidewalk Improvements-Phase 2 Project ("Project"). The Contract is incorporated by reference into this Payment Bond ("Bond").

- 1. General.** Under this Bond, Contractor as principal and _____, its surety ("Surety"), are bound to City as obligee in an amount not less than \$ _____, under California Civil Code sections 9550, et seq.
- 2. Surety's Obligation.** If Contractor or any of its Subcontractors fails to pay a person authorized in California Civil Code section 9100 to assert a claim against a payment bond, any amounts due under the Unemployment Insurance Code with respect to work or labor performed under the Contract, or any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Contractor and its Subcontractors, under California Unemployment Insurance Code section 13020, with respect to the work and labor, then Surety will pay the obligation.
- 3. Beneficiaries.** This Bond inures to the benefit of any of the persons named in California Civil Code section 9100, so as to give a right of action to those persons or their assigns in any suit brought upon this Bond. Contractor must promptly provide a copy of this Bond upon request by any person with legal rights under this Bond.
- 4. Duration.** If Contractor promptly makes payment of all sums for all labor, materials, and equipment furnished for use in the performance of the Work required by the Contract, in conformance with the time requirements set forth in the Contract and as required by California law, Surety's obligations under this Bond will be null and void. Otherwise, Surety's obligations will remain in full force and effect.
- 5. Waivers.** Surety waives any requirement to be notified of alterations to the Contract or extensions of time for performance of the Work under the Contract. Surety waives the provisions of Civil Code sections 2819 and 2845. City waives the requirement of a new bond for any supplemental contract under Civil Code section 9550. Any notice to Surety may be given in the manner specified in the Contract and delivered or transmitted to Surety as follows:

Attn: _____
Address: _____
City/State/Zip: _____
Phone: _____
Fax: _____
Email: _____

- 6. Law and Venue.** This Bond will be governed by California law, and any dispute pursuant to this Bond will be venued in the Superior Court of Santa Clara County in which the Project is located, and no other place. Surety will be responsible for City's attorneys' fees and costs in any action to enforce the provisions of this Bond.

7. **Effective Date; Execution.** This Bond is entered into and is effective on _____, 2018.

SURETY: _____
Business Name

s/ _____

Name/Title

(Acknowledgment with Surety's Notary Seal and Surety's Power of Attorney must be attached.)

CONTRACTOR: _____
Business Name

s/ _____

Name/Title

s/ _____

Name/Title

END OF PAYMENT BOND

Performance Bond

The City of Cupertino ("City") and _____ ("Contractor") have entered into a contract, dated _____, 20____ ("Contract") for work on the McClellan Road Sidewalk Improvements-Phase 2 Project ("Project"). The Contract is incorporated by reference into this Performance Bond ("Bond").

1. **General.** Under this Bond, Contractor as Principal and _____, its surety ("Surety"), are bound to City as obligee for an amount not less than \$_____. By executing this Bond, Contractor and Surety bind themselves and their respective heirs, executors, administrators, successors and assigns, jointly and severally, to the provisions of this Bond.
2. **Surety's Obligations.** If Contractor fully performs its obligations under the Contract, including its warranty obligations under the Contract, and Contractor has timely provided a warranty bond as required under the Contract. Surety's obligations under this Bond will become null and void upon City's acceptance of the Project, excluding any exceptions to acceptance, if any. Otherwise Surety's obligation will remain in full force and effect until expiration of the one year warranty period under the Contract.
3. **Waiver.** Surety waives any requirement to be notified of and further consents to any alterations to the Contract made under the applicable provisions of the Contract Documents, including changes to the scope of Work or extensions of time for performance of Work under the Contract. Surety waives the provisions of Civil Code sections 2819 and 2845.
4. **Application of Contract Balance.** Upon making a demand on this Bond, City will make the Contract Balance available to Surety for completion of the Work under the Contract. For purposes of this provision, the Contract Balance is defined as the total amount payable by City to Contractor as the Contract Price minus amounts already paid to Contractor, and minus any liquidated damages, credits, or back charges to which City is entitled under the terms of the Contract.
5. **Contractor Default.** Upon written notification from City that Contractor is in default under Article 13 of the Contract General Conditions, time being of the essence, Surety must act within the time specified in Article 13 to remedy the default through one of the following courses of action:
 - 5.1 Arrange for completion of the Work under the Contract by Contractor, with City's consent, but only if Contractor is in default solely due to its financial inability to complete the Work;
 - 5.2 Arrange for completion of the Work under the Contract by a qualified contractor acceptable to City, and secured by performance and payment bonds issued by an admitted surety as required by the Contract Documents, at Surety's expense; or
 - 5.3 Waive its right to complete the Work under the Contract and reimburse City the amount of City's costs to have the remaining Work completed.
6. **Surety Default.** If Surety defaults on its obligations under the Bond, City will be entitled to recover all costs it incurs due to Surety's default, including legal, design professional, or delay costs.
7. **Notice.** Any notice to Surety may be given in the manner specified in the Contract and sent to Surety as follows:

Attn: _____
Address: _____
City/State/Zip: _____
Phone: _____
Fax: _____
Email: _____

- 8. Law and Venue.** This Bond will be governed by California law, and any dispute pursuant to this Bond will be venued in the Superior Court for Santa Clara County in which the Project is located, and no other place. Surety will be responsible for City's attorneys' fees and costs in any action to enforce the provisions of this Bond.
- 9. Effective Date; Execution.** This Bond is entered into and effective on _____, 2018.

SURETY: _____
Business Name

s/ _____

Name/Title [print]

(Acknowledgment with Notary Seal for Surety and Surety's Power of Attorney must be attached.)

CONTRACTOR: _____
Business Name

s/ _____

Name/Title

s/ _____

Name/Title

END OF PERFORMANCE BOND

General Conditions

Article 1 – Definitions

Definitions. The following definitions apply to all of the Contract Documents unless otherwise indicated. Defined terms and titles of documents are capitalized in the Contract Documents, with the exception of the following (in any tense or form): “day,” “furnish,” “including,” “install,” “work day” or “working day.”

Allowance means a specific amount that must be included in the Bid Proposal for a specified purpose.

Article, as used in these General Conditions, means a numbered Article of the General Conditions, unless otherwise indicated by the context.

Change Order means a written document duly approved and executed by City, which changes the scope of Work, the Contract Price, or the Contract Time.

City means the City of Cupertino, acting through its City Council, officers, employees, City Engineer, and any other authorized representatives.

City Engineer means the City Engineer for City and his or her authorized delegee(s).

Claim means a separate demand by Contractor for a change in the Contract Time or Contract Price, that has previously been submitted to City in accordance with the requirements of the Contract Documents, and which has been rejected by City, in whole or in part; or a written demand by Contractor objecting to the amount of Final Payment.

Contract means the signed agreement between City and Contractor.

Contract Documents means, collectively, all of the documents listed as such in Section 2 of the Contract, including the Notice Inviting Bids; the Instructions to Bidders; addenda, if any; the Bid Proposal, and attachments thereto; the Contract; the Notice of Award and Notice to Proceed; the payment, performance and warranty bonds; the General Conditions; the Special Conditions; the Project Drawings and Specifications; any Change Orders; and any other documents expressly made part of the Contract Documents.

Contract Price means the total compensation to be paid to Contractor for performance of the Work, as set forth in the Contract and as amended by Change Order or adjusted for an Allowance. The Contract Price is not subject to adjustment due to inflation or due to the increased cost of labor, material, supplies or equipment following submission of the Bid Proposal.

Contract Time means the time specified for complete performance of the Work, as set forth in the Contract and as may be amended by Change Order.

Contractor means the individual, partnership, corporation, or joint-venture that has signed the Contract with City to perform the Work.

Day means a calendar day unless otherwise specified.

Design Professional means the licensed individual(s) or firm(s) retained by City to provide architectural or engineering services for the Project. If no Design Professional has been retained for this Project, any reference to Design Professional is deemed to refer to the Engineer.

DIR means the California Department of Industrial Relations.

Drawings means the City-provided plans and graphical depictions of the Project requirements, and does not include Shop Drawings.

Engineer means the City Engineer for the City of Cupertino and his or her authorized delegates.

Extra Work means new or unforeseen work added to the Project, as determined by the Engineer in his or her sole discretion, including Work that was not part of or incidental to the scope of the Work when the Contractor's bid was submitted; Work that is substantially different from the Work as described in the Contract Documents at bid time; or Work that results from a substantially differing and unforeseeable condition.

Final Completion means Contractor has fully completed all of the Work required by the Contract Documents to the City's satisfaction, including all punch list items, and any required commissioning or training, and has provided the City with all required submittals, including the warranty bond, instructions and manuals, product warranties and as-built drawings.

Final Payment means payment to Contractor of the unpaid Contract Price, including release of undisputed retention, less amounts withheld pursuant to the Contract Documents, including liquidated damages, up to 125% of the amount of any unreleased stop notice, amounts subject to setoff, up to 150% of any unresolved third-party claim for which Contractor is required to indemnify City, and up to 150% of any amount in dispute as authorized by Public Contract Code section 7107.

Furnish means to purchase and deliver for the Project.

Hazardous Materials means any substance or material identified now or in the future as hazardous under any federal, state, or local law or regulation, or any other substance or material that may be considered hazardous or otherwise subject to statutory or regulatory requirements governing handling, disposal, or cleanup.

Including, whether or not capitalized, means "including, but not limited to," unless the context clearly requires otherwise.

Inspector means the individual(s) or firm(s) retained or employed by City to inspect the workmanship, materials, and manner of construction of the Project and its components to ensure compliance with the Contract Documents and all applicable codes, regulations, and permits.

Install means to fix in place for materials, and to fix in place and connect for equipment.

Plans has the same meaning as Drawings.

Project means the public works project referenced in the Contract.

Project Manager means the individual designated by City to oversee and manage the Project on City's behalf and may include his or her authorized delegee(s) when the Project Manager is unavailable. If no Project Manager has been designated for this Project, any reference to Project Manager is deemed to refer to the Engineer.

Request for Information or RFI means Contractor's written request for information submitted to City, in the manner and format specified by City, about the Contract Documents, the Work or the Project.

Section as used in these General Conditions, means a numbered Section of the General Conditions, unless otherwise indicated by the context, e.g., statutory references.

Shop Drawings means drawings, plan details or other graphical depictions prepared by or on behalf of Contractor, and subject to City acceptance, which are intended to provide details for fabrication, installation, and the like, of items required by or shown in the Drawings and Specifications.

Specialty Work means Work that must be performed by a specialized Subcontractor with the specified license or other special certification, and not by the Contractor.

Specifications means the technical, text specifications describing the Project requirements, which are prepared for and incorporated into this Project by or on behalf of City, and does not include the Contract, General Conditions or Special Conditions.

Subcontractor means an individual, partnership, corporation, or joint-venture retained by Contractor directly or indirectly through a subcontract to perform a specific portion of the Work. The term Subcontractor applies to subcontractors, suppliers, fabricators, and equipment lessors of all tiers, unless otherwise indicated by the context.

Technical Specifications means Specifications.

Work means all of the construction and services necessary for or incidental to completing the Project in conformance with the requirements of the Contract Documents.

Work Day or Working Day, whether or not capitalized, means a weekday when the City is open for business, and does not include holidays observed by the City or furlough days when City staff is unavailable. If a holiday falls on a Saturday, the preceding Friday will be the holiday. If a holiday falls on a Sunday, the following Monday will be the holiday.

Holidays observed by the City and furlough days are:

- 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. Memorial Day, last Monday in May;
- f. Independence Day, July 4;
- g. Labor Day, first Monday in September;
- h. Veterans' Day, November 11;
- i. Thanksgiving Day, as designated by the President;
- j. The Day following Thanksgiving Day;
- k. Christmas Day, December 25;
- l. City Closure, December 24, 26, 27,28,29,30 and 31: and
- m. Each day appointed by the Governor of California and formally recognized by the Santa Clara County Board of Supervisors as a day of mourning, thanksgiving, or special observance.

Worksite means the place or places where the Work is performed, which includes, but may extend beyond the Project site, including separate locations for staging or fabrication.

Article 2 - Roles and Responsibilities

2.1 City.

- (A) **City Council.** The City Council has final authority in all matters affecting the Project, except to the extent it has delegated authority to the Engineer.
- (B) **Engineer.** The Engineer, acting within the authority conferred by the City Council, is responsible for administration of the Project on behalf of City, including authority to provide directions to the Design Professional and to Contractor to ensure proper and timely completion of the Project. The Engineer's decisions are final and conclusive within the scope of his or her authority, including interpretation of the Contract Documents.
- (C) **Design Professional.** The Design Professional is responsible for the overall design of the Project and, to the extent authorized by City, may act on City's behalf to ensure performance of the Work in compliance with the Contract Documents. The Design Professional's interpretation of the Drawings or Specifications is final and conclusive.

2.2 Contractor.

- (A) **General.** Contractor must provide all labor, materials, supplies equipment and services and incidentals necessary to perform and timely complete the Work in strict accordance with the Contract Documents, and in an economic and efficient manner in the best interests of City, and with minimal inconvenience to the public.
- (B) **Responsibility for the Work and Risk of Loss.** Contractor is responsible for supervising and directing all aspects of the Work to facilitate the efficient and timely completion of the Work. Contractor is solely responsible for and required to exercise full control over the Work, including the construction means, methods, techniques, sequences, procedures, and coordination of all portions of the Work with that of all other contractors and Subcontractors, except to the extent that the Contract Documents provide other specific instructions. Contractor's responsibilities extend to any plan, method or sequence suggested, but not required by City or specified in the Contract Documents. From the date of commencement of the Work until either the date on which City formally accepts the Project or the effective date of termination of the Contract, whichever is later, Contractor bears all risks of injury or damage to the Work and the materials and equipment delivered to the Worksite, by any cause including fire, earthquake, wind, weather, vandalism or theft.
- (C) **Project Administration.** Contractor must provide sufficient and competent administration, staff, and skilled workforce necessary to perform and timely complete the Work in accordance with the Contract Documents. Before starting the Work, Contractor must designate in writing and provide complete contact information, including telephone numbers and email address, for the officer or employee in Contractor's organization who is to serve as Contractor's primary representative for the Project, and who has authority to act on Contractor's behalf. A Subcontractor may not serve as Contractor's primary representative.
- (D) **On-Site Superintendent.** Contractor must, at all times during performance of the Work, provide a qualified and competent full-time superintendent acceptable to City, and assistants as necessary, who must be physically present at the Project site while any aspect of the Work is being performed. City's approval of the superintendent is required before the Work commences. If City is not satisfied with the superintendent's performance, City may request a qualified replacement of the superintendent. Failure to comply may result in temporary suspension of the Work, at Contractor's sole expense

and with no extension of Contract Time, until the approved superintendent is physically present to supervise the Work. Contractor must provide written notice to City, as soon as practicable, before replacing the superintendent.

(E) **Standards; Compliance.** Contractor must, at all times, ensure that the Work is performed in an efficient, skillful manner following best practices and in full compliance with the Contract Documents and all applicable laws, regulations, codes, standards, and permits, including City's municipal code, rules, and regulations, and any orders of the administrative or judicial bodies with jurisdiction over the Work.

(F) **Meetings.** Contractor, its superintendent, and its major Subcontractors and suppliers will be required to attend a Preconstruction Conference before beginning Work on the Project, and will also be required to attend regular progress meetings, as further specified below. City will notify Contractor in advance of the date, time, place and required attendees for the Preconstruction Conference and progress meetings and will provide and administer the agenda. Contractor is responsible for notifying its major Subcontractors and suppliers, and other required attendees, as applicable, of the date, time and place for the Preconstruction Conference and progress meetings; for providing them with the City's agenda; and for requiring their attendance at these meetings.

(1) *Preconstruction Conference.* The Preconstruction Conference agenda items may include schedules, personnel and vehicle permit procedures, use of the premises, locations for staging area(s) and jobsite trailers, security, housekeeping, submittal and RFI procedures, Project forms and procedures, inspection and testing procedures, utility shutdown procedures, control and reference point procedures, injury and illness prevention program, Contractor's schedule of values, Contractor's schedule of submittals, and such other matters that the City deems necessary to address before the Work begins.

(2) *Progress Meetings.* During the course of the Project, progress meetings will be conducted on a weekly basis by the City and at Contractor's on-site office, unless otherwise specified. Progress meeting agenda items may include review of past meeting minutes, review of Work in progress since previous progress meeting, schedule status and updates, status of submittals or change orders, worker safety, and other such matters pertaining to the progress of the Work.

(G) **Responsible Party.** Contractor is solely responsible to City for the acts or omissions of any Subcontractors, or any other party or parties performing portions of the Work or providing equipment, materials or services for or on behalf of Contractor or the Subcontractors. Upon City's written request, Contractor must promptly and permanently remove from the Project, at no cost to City, any employee or Subcontractor or employee of a Subcontractor who the Engineer has determined to be incompetent, intemperate or disorderly, or who has failed or refused to perform the Work as required under the Contract Documents.

(H) **Correction of Defects.** Contractor must promptly correct, at Contractor's sole expense, any Work that is determined by City to be deficient or defective in any way, including workmanship, materials, parts or equipment. Workmanship, materials or equipment that do not conform to the requirements under the Drawings, Specifications and every other Contract Document, as determined by City, will be considered defective and subject to rejection. Contractor must also promptly correct, at Contractor's sole expense, any Work performed beyond the lines and grades shown on the Plans or established by City, and any Extra Work performed without City's prior written approval. However, City may elect to retain defective Work, and deduct the difference in value, as determined by the Engineer, from payments otherwise due to Contractor.

(I) **Contractor's Records.** Contractor must maintain all of its records relating to the Project in any form, including paper documents, photos, videos and electronic records. Project records subject to this provision include, but are not limited to, Project cost records and records relating to preparation of Contractor's bid.

(1) Contractor's cost records must include all supporting documentation, including original receipts, invoices, and payroll records, evidencing its direct costs to perform the Work, including, but not limited to, costs for labor, materials and equipment. Each cost record should include, at a minimum, a description of the expenditure with references to the applicable requirements of the Contract Documents, the amount actually paid, the date of payment, and whether the expenditure is part of the original Contract Price, related to an executed Change Order, or otherwise categorized by Contractor as Extra Work. Contractor's failure to comply with this provision as to any claimed cost operates as a waiver of any rights to recover the claimed cost.

(2) Contractor must continue to maintain its Project records in an organized manner for a period of four years after City's acceptance of the Project or following Contract termination, whichever occurs first. Subject to prior notice to Contractor, City is entitled to inspect or audit any of Contractor's Project records relating to the Project or to investigate Contractor's plant or equipment during Contractor's normal business hours.

(J) **Copies of Contract Documents.** Contractor and its Subcontractors must keep copies, at the Project site, of the Work-related documents, including the Contract, permit(s), Drawings, Specifications, Addenda, Contract amendments, Change Orders, RFIs and RFI responses, Shop Drawings, and any related written interpretations. The Contract Documents, as-built drawings, and all Worksite copies must be available to City for reference at all times.

2.3 Subcontractors.

(A) **General.** All Work which is not performed by Contractor with its own forces must be performed by Subcontractors. City reserves the right to approve or reject any and all Subcontractors proposed to perform the Work, for reasons including the subcontractor's poor reputation, lack of relevant experience, financial instability, and lack of technical ability or adequate trained workforce

(B) **Contractual Obligations.** Contractor must require every Subcontractor to be bound to the provisions of the Contract Documents as they apply to the Subcontractor's portion(s) of the Work, and to likewise bind their subcontractors or suppliers. Nothing in these Contract Documents creates a contractual relationship between a Subcontractor and City, but City is deemed to be a third-party beneficiary of the contract between Contractor and each Subcontractor.

(C) **Termination.** If the Contract is terminated, each Subcontractor's agreement must be assigned by Contractor to City, subject to the prior rights of any surety, but only if City accepts the assignment by written notification, and assumes all rights and obligations of Contractor pursuant to each such subcontract agreement.

(D) **Substitution of Subcontractor.** If Contractor requests substitution of a listed Subcontractor under Public Contract Code section 4107, Contractor is solely responsible for all costs City incurs in responding to the request, including legal fees and costs to conduct a hearing.

2.4 Coordination of Work.

(A) **Concurrent Work.** City reserves the right to perform or to have performed other work on or adjacent to the Project site while the Work is being performed. Contractor is responsible for coordinating its Work with other work being performed on or adjacent to the Project site, including by any utility companies or agencies, and must avoid hindering, delaying, or interfering with the work of other contractors and subcontractors. To the full extent permitted by law, Contractor must hold harmless and indemnify City against any and all claims arising from or related to Contractor's avoidable, negligent, or willful hindrance of, delay to, or interference with the work of any utility company or agency or another contractor or subcontractor.

(B) **Defects.** Before proceeding with any portion of the Work affected by the construction or operations of others, Contractor must give the Project Manager prompt written notification of any defects Contractor discovers which will prevent the proper execution of the Work. Failure to give notice of any known defects will be deemed acknowledgement by Contractor that the work of others is not defective and will not prevent the proper execution of the Work.

2.5 Submittals. Unless otherwise specified, Contractor must submit to the Engineer for review and acceptance of all schedules, Shop Drawings, samples, product data and similar submittals required by the Contract Documents, or upon request by the Engineer. Unless otherwise specified, all submittals, including Requests for Information, are subject to the general provisions of this Section, as well as specific submittal requirements that may be included in the Special Conditions or elsewhere in the Contract Documents. Unless otherwise specified, all submittals should be transmitted electronically using standard commercial software programs.

(A) **General.** Contractor is responsible for ensuring that its submittals are complete, legible, accurate and conform to the Contract Documents. Incomplete or illegible submittals will be rejected and returned for resubmission. Contractor must use the applicable forms provided or specified for use by the City, including the Project Forms provided with the Contract Documents, and forms provided by City at the pre-construction conference.

(B) **Time and Manner of Submission.** Contractor must ensure that its submittals are prepared and delivered in a manner consistent with the current City-accepted schedule for the Work and within the applicable time specified in the Contract Documents, or if no time is specified, in such time and sequence so as not to delay the performance of the Work or completion of the Project.

(C) **Required Contents.** Each submittal must include the Project name and contract number, Contractor's name and address, the name and address of any Subcontractor or supplier involved with the submittal, the date, and references to applicable Specification section(s) and/or drawing and detail number(s).

(D) **Required Corrections.** If corrections are required, Contractor must promptly make and submit any required corrections as specified in full conformance with the requirements of this Section, or other requirements that apply to that submittal. If a submittal remains non-compliant after being re-submitted for a second time, City may back-charge Contractor for all further review time and additional administrative costs. For City employees the hourly amount charged will be 2.5 times the employee's direct hourly payroll cost to the City. For consultants, the amount charged will be 1.25 times the amount billed to the City for additional review and administrative time.

(E) **Effect of Review and Acceptance.** Review and acceptance of a submittal by City will not relieve Contractor from complying with the requirements of the Contract

Documents. Contractor is responsible for any errors in any submittal, and review or acceptance of a submittal by City is not an assumption of risk or liability by City.

(F) **Enforcement.** Any Work performed or any material furnished, installed, fabricated or used without City's prior acceptance of a required submittal is performed or provided at Contractor's risk, and Contractor may be required to bear the costs incident thereto, including the cost of removing and replacing such Work, repairs to other affected portions of the Work or material, and the cost of additional time or services required of City, including costs for the Design Professional, Project Manager, or Inspector.

(G) **Excessive RFIs.** A Request for Information (RFI) will be considered excessive or unnecessary if City determines that the explanation or response to the RFI is clearly and unambiguously discernable from the Contract Documents. City's costs to review and respond to excessive or unnecessary RFIs may be deducted from payments otherwise due to Contractor, on the same basis as excessive submittal review, under subsection (D) (Required Corrections).

2.6 Shop Drawings. When Shop Drawings are required by the Specifications or requested by the Engineer, they must be prepared according to best practices at Contractor's expense. The Shop Drawings must be of a size and scale to clearly show all necessary details. Unless otherwise specified by City, Shop Drawings must be provided to the Engineer for review and acceptance at least 30 days before the Work will be performed. If City requires changes, the corrected Shop Drawings must be resubmitted to the Engineer for review within the time specified by the Engineer. For all Project components requiring Shop Drawings, Contractor will not furnish materials or perform any Work until the Shop Drawings for those components are accepted by City. Contractor is responsible for any errors or omissions in the Shop Drawings, shop fits and field corrections, any deviations from the Contract Documents, and for the results obtained by the use of Shop Drawings. Acceptance of Shop Drawings by City does not relieve Contractor of Contractor's responsibility.

Article 3 - Contract Documents

3.1 Interpretation of Contract Documents.

(A) **Drawings and Specifications.** The Drawings and Specifications included in the Contract Documents are complementary. If Work is shown on one but not on the other, Contractor must perform the Work as though fully described on both, consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. The Drawings and Specifications are deemed to include and require everything necessary and reasonably incidental to completion of the Work, whether or not particularly mentioned or shown. Contractor must perform all work and services and supply all things reasonably related to and inferable from the Contract Documents. In the event of a conflict between the Drawings and Specifications, the Specifications will control. Detailed Drawings take precedence over general Drawings, and large scale Drawings take precedence over smaller scale Drawings. Any arrangement or division of the Drawings and Specifications into sections is for convenience and is not intended to limit the Work required by separate trades. A conclusion presented in the Drawings or Specifications is only a recommendation. Actual locations and depths must be determined by Contractor's field investigation. Contractor may request access to underlying or background information in City's possession that is necessary for Contractor to form its own conclusions.

(B) **Duty to Notify and Seek Direction.** If Contractor becomes aware of a changed condition in the Project, or of any ambiguity, conflict, inconsistency, discrepancy,

omission, or error in the Contract Documents, including under the Drawings or Specifications, Contractor must immediately submit a Request for Information to the Engineer and wait for a response from City before proceeding further with the related Work. The RFI must notify City of the issue and request clarification, interpretation or direction. The Engineer's clarification, interpretation or direction will be final and binding on Contractor. If Contractor proceeds with the related Work before obtaining City's response, Contractor will be responsible for any resulting costs, including the cost of correcting any incorrect or defective Work that results. City will not extend the Contract Time due to Contractor's failure to submit a timely RFI to the Engineer.

(C) **Figures and Dimensions.** Figures control over scaled dimensions.

(D) **Technical or Trade Terms.** Any terms that have well-known technical or trade meanings will be interpreted in accordance with those meanings, unless otherwise specifically defined in the Contract Documents.

(E) **Measurements.** Contractor must verify all relevant measurements at the Worksite before ordering any material or performing any Work, and will be responsible for the correctness of those measurements.

(F) **Limitations.** Any arrangement or division of the Drawings and Specifications into sections is for convenience and is not intended to limit the Work required by separate trades. A conclusion presented in the Drawings or Specifications is only a recommendation. Actual locations and depths must be determined by Contractor's field investigation. Contractor may request access to underlying or background information in City's possession that is necessary for Contractor to form its own conclusions.

3.2 Order of Precedence. Information included in one Contract Document but not in another will not be considered a conflict or inconsistency. Unless otherwise specified in the Special Conditions, in case of any conflict or inconsistency among the Contract Documents, the following order of precedence will apply, beginning from highest to lowest:

- (A) Change Orders;
- (B) Addenda;
- (C) Contract;
- (D) Notice to Proceed;
- (E) Notice of Award;
- (F) Special Conditions;
- (G) General Conditions;
- (H) Payment, Performance and Warranty Bonds;
- (I) Specifications;
- (J) Drawings;
- (K) Contractor's Bid Proposal and attachments;
- (L) Notice Inviting Bids;
- (M) Instructions to Bidders;
- (N) The City of Cupertino's Standard Details; and
- (O) Any documents prepared by and on behalf of a third party, that were not prepared specifically for this Project, such as the Caltrans Standard Specifications or Caltrans Special Provisions.

3.3 Caltrans Standard Specifications. Any reference to or incorporation of the Standard Specifications of the State of California, Department of Transportation ("Caltrans"), including "Standard Specifications," "Caltrans Specifications," "State Specifications," or "CSS," means the most current edition of Caltrans' Standard Specifications, unless otherwise specified ("Caltrans Standard Specifications"), including the most current

amendments as of the date that Contractor's bid was submitted for this Project. The following provisions apply to use of or reference to the Caltrans Standard Specifications or Special Provisions:

(A) **Limitations.** The "General Provisions" of the Caltrans Standard Specifications, i.e., sections 1 through 9, do not apply to these Contract Documents with the exception of any specific provisions, if any, which are expressly stated to apply to these Contract Documents.

(B) **Conflicts or Inconsistencies.** If there is a conflict or inconsistency between any provision in the Caltrans Standard Specifications or Special Provisions and a provision of these Contract Documents, as determined by City, the provision in the Contract Documents will govern.

(C) **Meanings.** Terms used in the Caltrans Standard Specifications or Special Provisions are to be interpreted as follows:

(1) Any reference to the "Engineer" is deemed to mean the City Engineer.

(2) Any reference to the "Special Provisions" is deemed to mean the Special Conditions, unless the Caltrans Special Provisions are expressly included in the Contract Documents listed in Section 2 of the Contract.

(3) Any reference to the "Department" or "State" is deemed to mean City.

3.4 For Reference Only. Contractor is responsible for the careful review of any document, study, or report provided by City or appended to the Contract Documents solely for informational purposes and identified as "For Reference Only." Nothing in any document, study, or report so appended and identified is intended to supplement, alter, or void any provision of the Contract Documents. Contractor is advised that City or its representatives may be guided by information or recommendations included in such reference documents, particularly when making determinations as to the acceptability of proposed materials, methods, or changes in the Work. Any record drawings or similar final or accepted drawings or maps that are not part of the Contract Documents are deemed to be For Reference Only. The provisions of the Contract Documents are not modified by any perceived or actual conflict with provisions in any document that is provided For Reference Only.

3.5 Current Versions. Unless otherwise specified by City, any reference to standard specifications, technical specifications, or any City or state codes or regulations means the latest specification, code or regulation in effect at the time the Contract is signed.

3.6 Conformed Copies. If City prepares a conformed set of the Contract Documents following award of the Contract, it will provide Contractor with a copy of the electronic file in PDF format. It is Contractor's responsibility to ensure that all Subcontractors, including fabricators, are provided with the conformed set of the Contract Documents at Contractor's sole expense.

Article 4 - Bonds, Indemnity, and Insurance

4.1 Payment and Performance Bonds. Within ten days following issuance of the Notice of Award, Contractor is required to provide a payment bond and a performance bond, each in the penal sum of not less than 100% of the Contract Price, using the bond forms included with the Contract Documents.

(A) **Surety.** Each bond must be issued by a surety admitted in California, and the surety must have a financial rating from A.M. Best Company of A-, class 7 or better, or as otherwise acceptable to the City. If an issuing surety cancels the bond or becomes insolvent, within seven days following written notice from City, Contractor must substitute a surety acceptable to City. If Contractor fails to substitute an acceptable surety within the specified time, City may, at its sole discretion, withhold payment from Contractor until the surety is replaced to City's satisfaction, or terminate the Contract for default.

(B) **Supplemental Bonds for Increase in Contract Price.** If the Contract Price increases during construction by five percent or more over the original Contract Price, Contractor must provide supplemental or replacement bonds within ten days of written notice from City pursuant to this Section, covering 100% of the increased Contract Price and using the bond forms included with the Contract Documents.

4.2 Indemnity. To the fullest extent permitted by law, Contractor must indemnify, defend, and hold harmless City, its Council, officers, officials, employees, agents, volunteers and consultants (individually, an "Indemnitee," and collectively the "Indemnitees") from and against any and all liability, loss, damage, claims, causes of action, demands, charges, costs and expenses (including, without limitation, attorney fees, expert witness fees, paralegal fees, and fees and costs of litigation or arbitration) (collectively, "Liability") of every nature arising out of or in connection with the acts or omissions of Contractor, its employees, Subcontractors, representatives, or agents, in bidding or performing the Work or in failing to comply with any obligation of Contractor under the Contract, except such Liability caused by the active negligence, sole negligence, or willful misconduct of an Indemnitee. This indemnity requirement applies to any Liability arising from alleged defects in the content or manner of submission of Contractor's bid for the Contract. Contractor's failure or refusal to timely accept a tender of defense pursuant to this Contract will be deemed a material breach of the Contract. City will timely notify Contractor upon receipt of any third-party claim relating to the Contract, as required by Public Contract Code section 9201. Contractor's indemnity obligations under this Contract will survive the expiration or any early termination of the Contract.

4.3 Insurance.

Contractor shall procure and maintain for the duration of the contract, *and for five years following the completion of the Project*, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by Contractor, its agents, representatives, employees or subcontractors.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, *written on a comprehensive general liability form, and must include coverage for liability arising from Contractor's or Subcontractor's acts or omissions, including Contractor's protected coverage, blanket contractual, products and completed operations, with limits of at least \$2,000,000 per occurrence. The CGL policy must protect against any and all liability for personal injury, death, property damage or destruction, and personal and advertising injury.* If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be **\$4,000,000** which is twice the required occurrence limit.
 - a. It shall be a requirement under this agreement that any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements

and/or limits shall be made available to the Additional Insured and shall be (1) the minimum coverage/limits specified in this agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policy, whichever is greater.

- b. Additional Insured coverage under Contractor's policy shall be "primary and non-contributory," will not seek contribution from City's insurance/self-insurance, and shall be at least as broad as ISO CG 20 01 04 13
 - c. The limits of insurance required may be satisfied by a combination of primary and umbrella or excess insurance, provided each policy complies with the requirements set forth in this Contract. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of City before the City's own insurance or self-insurance shall be called upon to protect City as a named insured.
2. **Automobile Liability:** ISO Form CA 00 01 covering any auto (Code 1), or if Contractor has no owned autos, then hired autos (Code 8) and non-owned autos (Code 9), with limit no less than **\$2,000,000** per accident for bodily injury and property damage.
3. **Workers' Compensation:** As required by the State of California, with Statutory Limits, and Employer's Liability Insurance of no less than **\$1,000,000** per accident for bodily injury or disease, or as otherwise required by statute. If Contractor is self-insured, Contractor must provide a Certificate of Permission to Self-Insure, duly authorized by the DIR.
 N/A if box checked (*Contractor provides signed, written verification it has no employees*).
4. **Professional Liability** with limits no less than **\$1,000,000** per occurrence or claim, and \$2,000,000 aggregate.
 N/A if box checked (*Contract is not design/build*).
5. **Builder's Risk.** Course of Construction insurance utilizing an "All Risk" (Special Perils) coverage form, with limits equal to the completed value of the project and no coinsurance penalty provisions.
 N/A if box checked (*Project does not involve construction or improvements/installations to property*).
6. **Contractors' Pollution Legal Liability** and/or Asbestos Legal Liability and/or Errors and Omissions with limits no less than **\$1,000,000** per occurrence or claim, and \$2,000,000 policy aggregate.
 N/A if box checked (*Project does not involve environmental hazards*).

If Contractor maintains broader coverage and/or higher limits than the minimums shown above, City shall be entitled to the broader coverage and/or higher limits maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

City reserves the right to modify these insurance requirements based on Contractor's prior experience, insurer, coverage, and considering the nature of the risk involved in the work and other circumstances. Contractor should discuss these requirements with its insurer and the designated Public Works Agency representative.

Self-Insured Retentions. Self-insured retentions must be declared to and approved by City. At City's option, either: (1) Contractor shall cause the insurer to reduce or eliminate self-insured retentions as respects City, its officers, officials, employees, and volunteers; or (2) Contractor

shall provide a financial guarantee satisfactory to City guaranteeing payment of losses and related investigations, claim administration, and defense expenses. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or the City.

OTHER INSURANCE PROVISIONS

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status

The City of Cupertino, its City Council, officers, officials, employees, agents, servants and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of the Services performed by or on behalf of Contractor including materials, parts, or equipment furnished. Endorsement of CGL coverage shall be at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; and CG 20 37 if a later edition is used.

Primary Coverage

For any claims related to this Project, Contractor's insurance coverage shall be "**primary and non-contributory**" and at least as broad as ISO CG 20 01 04 13 with respect to City, its officers, officials, employees and volunteers, and shall not seek contribution from City's insurance. If the limits of insurance are satisfied in part by **Umbrella/Excess Insurance**, the Umbrella/Excess Insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a "primary and non-contributory" basis for the benefit of City.

Notice of Cancellation

Each insurance policy required shall provide that coverage shall not be canceled, except with notice to the City. Each certificate of insurance must state that the coverage afforded by the policy is in force and will not be reduced, cancelled or allowed to expire without at least 30 days advance written notice to City, unless due to non-payment of premiums, in which case ten days advance written notice must be provided to City. Such notice must be sent to City via certified mail and addressed to the attention of the City Manager.

Builder's Risk

*Contractor may submit Builder's Risk insurance in the form of Course of Construction coverage, which shall **name the City as a loss payee**, as its interest may appear. Policy limits must be per occurrence and for all-risk coverage on a 100% completed value basis on the insurable portion of the Project, with no coinsurance penalties, and for the benefit of City. If the Project does not involve new or major reconstruction, City may elect in its sole discretion to accept an Installation Floater policy instead of Builder's Risk. For such projects, the Property Installation Floater shall include improvement, remodel, modification, alteration, conversion or adjustment to existing buildings, structures, processes, machinery and equipment, and shall provide property damage coverage for any building, structure, machinery or equipment damaged, impaired, broken, or destroyed during the performance of the Work, including during transit, installation, and testing at the City's site.*

Waiver of Subrogation

Each required policy must include an endorsement providing that the carrier agrees to waive any right of subrogation it may have against City. Contractor agrees to waive rights of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Contractor, its employees, agents and subcontractors.

Acceptability of Insurers

Insurance must be issued by insurers acceptable to City and licensed to do business in the State of California, and each insurer must have an A.M. Best's financial strength rating of "A-" or better and a financial size rating of "VII" or better.

Verification of Coverage

Contractor shall furnish the City with original certificates and amendatory endorsements, or copies of the applicable insurance language, effecting coverage required by this contract. All certificates and endorsements are to be received and approved by the City before work commences. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements, required by these specifications, at any time.

Subcontractors

Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that City is an additional insured on insurance required from subcontractors. For CGL coverage subcontractors shall provide coverage with a form at least as broad as CG 20 38 04 13.

Claims Made Policies

If any coverage required is written on a claims-made coverage form:

1. The retroactive date must be shown, and this date must be before the execution date of the contract or the beginning of contract work.
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective, or start of work date, the Contractor must purchase extended reporting period coverage for a minimum of five (5) years after completion of contract work.
4. A copy of the claims reporting requirements must be submitted to the Entity for review.
5. If the services involve lead-based paint or asbestos identification/remediation, the Contractors Pollution Liability policy shall not contain lead-based paint or asbestos exclusions. If the services involve mold identification/remediation, the Contractors Pollution Liability policy shall not contain a mold exclusion, and the definition of Pollution shall include microbial matter, including mold.

Article 5 - Contract Time

- 5.1 Time is of the Essence.** Time is of the essence in Contractor's performance and completion of the Work, and Contractor must diligently prosecute the Work and complete it within the Contract Time.

(A) **Notice to Proceed.** Contractor must commence the Work on the date indicated in the Notice to Proceed, and must fully complete the Work in strict compliance with all requirements of the Contract Documents and within the Contract Time. The Notice to Proceed will not be issued until Contractor has executed and returned the Contract, the required bonds, insurance certificates and endorsements and any other submittals required prior to issuance of the Notice to Proceed, subject to City's approval of all such documents. Contractor may not begin performing Work on the Project Site before the date authorized in the Notice to Proceed. After receiving the Notice to Proceed, Contractor must notify the City in writing of the date Contractor intends to begin Work on the Project, at least 24 hours in advance of beginning the Work. Contractor is not entitled to compensation or credit for any Work performed before the date specified in the Notice to Proceed, with the exception of any schedules, submittals, or other requirements that must be provided or performed before issuance of the Notice to Proceed.

(B) **Rate of Progress.** Contractor and its Subcontractors must, at all times, provide workers, materials, and equipment sufficient to maintain the rate of progress necessary to ensure full completion of the Work within the Contract Time. If City determines that Contractor is failing to prosecute the Work at a sufficient rate of progress, City may, in its sole discretion, direct Contractor to provide additional workers, materials, or equipment, or to work additional hours or days without additional cost to City, in order to achieve a rate of progress satisfactory to City. If Contractor fails to comply with City's directive in this regard, City may, at Contractor's expense, separately contract for additional workers, materials, or equipment or use City's own forces to achieve the necessary rate of progress. Alternatively, City may terminate the Contract based on Contractor's default.

5.2 Schedule Requirements. Contractor must prepare all schedules using standard scheduling software acceptable to the Engineer, and must provide the schedules in electronic and paper form as requested by the Engineer. In addition to the general scheduling requirements set forth below, Contractor must also comply with any scheduling requirements included in the Special Conditions or in the Technical Specifications.

(A) **Baseline (As-Planned) Schedule.** Within ten calendar days following City's issuance of the Notice to Proceed (or as otherwise specified in the Special Conditions), Contractor must submit to City for review and acceptance a baseline (as-planned) schedule using critical path methodology showing in detail how Contractor plans to perform and fully complete the Work within the Contract Time, including labor, equipment, materials and fabricated items. The baseline schedule must show the order of the major items of Work and the dates of start and completion of each item, including when the materials and equipment will be procured. The schedule must also include the work of all trades, reflecting anticipated labor or crew hours and equipment loading for the construction activities, and must be sufficiently comprehensive and detailed to enable progress to be monitored on a day-by-day basis. For each activity, the baseline schedule must be dated, provided in the format specified in the Contract Documents or as required by City, and must include, at a minimum, a description of the activity, the start and completion dates of the activity, and the duration of the activity.

(1) **Specialized Materials Ordering.** Within five calendar days following issuance of the Notice to Proceed, Contractor must order any specialized material or equipment for the Work that is not readily available from material suppliers. Contractor must also retain documentation of the purchase orders date(s).

(B) **City's Review of Schedules.** City will review and may note exceptions to the baseline schedule, and to the progress schedules submitted as required below, to assure completion of the Work within the Contract Time. Contractor is solely responsible for resolving any exceptions noted in a schedule and must, within seven days, correct the schedule to address them.

(C) **Progress Schedules.** After City accepts the final baseline schedule with no exceptions, Contractor must submit an updated progress schedule and three-week look-ahead schedule, in the format specified by City, for review and acceptance with each application for a progress payment, or when otherwise specified by City, until completion of the Work. The updated progress schedule must: show how the actual progress of the Work as constructed to date compares to the baseline schedule; reflect any proposed changes in the construction schedule or method of operations, including to achieve Project milestones within the Contract Time; and identify any actual or potential impacts to the critical path. Contractor must also submit periodic reports to City of any changes in the projected material or equipment delivery dates for the Project.

(1) *Float*. The progress schedule must show early and late completion dates for each task. The number of days between those dates will be designated as the "float." Any float belongs to the Project and may be allocated by the Engineer to best serve timely completion of the Project.

(2) *Failure to Submit Schedule*. Reliable, up-to-date schedules are essential to efficient and cost-effective administration of the Project and timely completion. If Contractor fails to submit a schedule within the time periods specified in this Section, or submits a schedule to which City has noted exceptions that are not corrected, City may withhold up to ten percent from payment(s) otherwise due to Contractor until the exceptions are resolved, the schedule is corrected and resubmitted, and City has accepted the schedule. In addition, Contractor's failure to comply with the schedule requirements in this Section 5.2 will be deemed a waiver of any claims for Excusable Delay or loss of productivity arising when Contractor is out of compliance, subject only to the limits of Public Contract Code section 7102.

(D) **Recovery Schedule**. If City determines that the Work is more than one week behind schedule, within seven days following written notice of such determination, Contractor must submit a recovery schedule, showing how Contractor intends to perform and complete the Work within the Contract Time, based on actual progress to date.

(E) **Effect of Acceptance**. Contractor and its Subcontractors must perform the Work in accordance with the most current City-accepted schedule unless otherwise directed by City. City's acceptance of a schedule does not operate to extend the time for completion of the Work or any component of the Work, and will not affect City's right to assess liquidated damages for Contractor's unexcused delay in completing the Work within the Contract Time.

(F) **Posting**. Contractor must at all times maintain a copy of the most current City-accepted progress or recovery schedule posted prominently in its on-site office.

(G) **Reservation of Rights**. City reserves the right to direct the sequence in which the Work must be performed or to make changes in the sequence of the Work in order to facilitate the performance of work by City or others, or to facilitate City's use of its property. The Contract Time or Contract Price may be adjusted to the extent such changes in sequence actually increase or decrease Contractor's time or cost to perform the Work.

(H) **Authorized Working Days and Times**. Contractor is limited to working Monday through Friday, excluding holidays, during City's normal business hours, except as provided in the Special Conditions or as authorized in writing by City. City reserves the right to charge Contractor for additional costs incurred by City due to Work performed on days or during hours not expressly authorized in the Contract Documents, including reimbursement of costs incurred for inspection, testing, and construction management services.

5.3 Delay and Extensions of Contract Time.

(A) **Notice of Delay**. If Contractor becomes aware of any actual or potential delay affecting the critical path, Contractor must promptly notify the Engineer in writing, regardless of the nature or cause of the delay, so that City has a reasonable opportunity to mitigate or avoid the delay.

(B) **Excusable Delay**. The Contract Time may be extended if Contractor encounters "Excusable Delay," which is an unavoidable delay in completing the Work within the

Contract Time due to causes completely beyond Contractor's control, and which Contractor could not have avoided or mitigated through reasonable care, planning, foresight, and diligence. Grounds for Excusable Delay may include fire, natural disasters including earthquake or unusually severe weather, acts of terror or vandalism, epidemic, unforeseeable adverse government actions, unforeseeable actions of third parties, encountering unforeseeable hazardous materials, unforeseeable site conditions, or suspension for convenience under Article 13.

(C) **Non-Excusable Delay.** Delay which Contractor could have avoided or mitigated through reasonable care, planning, foresight and diligence is "Non-Excusable Delay." Contractor is not entitled to an extension of Contract Time or any compensation for Non-Excusable Delay, or for Excusable Delay that is concurrent with Non-Excusable Delay. Non-Excusable Delay includes delay caused by:

- (1) weather conditions which are normal for the location of the Project, as determined by reliable records, including monthly rainfall averages, for the preceding ten years;
- (2) Contractor's failure to order equipment and materials sufficiently in advance of the time needed for timely completion of the Work;
- (3) Contractor's failure to provide adequate notification to utility companies or agencies for connections or services necessary for the timely performance and completion of the Work;
- (4) foreseeable conditions which Contractor could have ascertained from reasonably diligent inspection of the Worksite or review of the Contract Documents or other information provided or available to Contractor; or
- (5) Contractor's financial inability to perform the Work, including insufficient funds to pay its Subcontractors or suppliers.

(D) **Compensable Delay.** Pursuant to Public Contract Code section 7102, in addition to entitlement to an extension of Contract Time, Contractor is entitled to compensation for costs incurred due to delay caused solely by City, when that delay is unreasonable under the circumstances involved and not within the contemplation of the parties ("Compensable Delay").

(E) **Concurrent Delay.** Contractor is not entitled to an extension of Contract Time or recovery of costs for any Compensable Delay that is concurrent with Non-Excusable Delay.

(F) **Weather Delay.** A "Weather Delay Day" is a Working Day during which Contractor and its forces, including Subcontractors, are unable to perform more than 40% of the critical path Work scheduled for that day due to adverse weather conditions which impair the ability to safely or effectively perform the scheduled critical path Work that day. Adverse weather conditions may include rain, saturated soil, and Worksite cleanup required due to adverse weather. Determination of what constitutes critical path Work scheduled for that day will be based on the most current, City-approved schedule.

- (1) Based on historic records for the Project location from the Western Regional Climate Center, Contractor's schedule should assume the following number of normal Weather Delay Days and precipitation for each month:

Month	# Normal Weather Delay Days	Precipitation
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January	6	2.86
February	6	2.66
March	6	2.29
April	3	1.20
May	1	0.44
June	0	0.10
July	0	0.02
August	0	0.07
September	1	0.19
October	2	0.76
November	4	1.51
December	5	2.43
Total	34	14.53

(2) Contractor will be entitled to a non-compensable extension of the Contract Time for each Weather Delay Day in excess of the normal Weather Delay Days within a given month, as set forth in Section 5.3(F)(1) above, subject to the following limitations:

- a. Contractor must fully comply with the applicable procedures in Article 5 and 6 of these General Conditions regarding requests to modify the Contract Time.
- b. Normal Weather Delay Days which do not occur during a given month do not carry over to another month.
- c. Contractor will not be entitled to an extension of time for a Weather Delay Day to the extent Contractor is responsible for concurrent delay on that day.

(G) **Recoverable Costs.** Contractor is not entitled to compensation for Excusable Delay unless it is Compensable Delay, as defined above. Contractor is entitled to recover only the actual, direct, reasonable, and substantiated costs (“Recoverable Costs”) for each working day that the Compensable Delay prevents Contractor from proceeding with more than 50% of the critical path Work scheduled for that day, based on the most recent progress schedule accepted by City. Recoverable Costs will not include home office overhead or lost profit.

(H) **Request for Extension of Contract Time or Recoverable Costs.** A request for an extension of Contract Time or any associated Recoverable Costs must be submitted in writing to City within ten calendar days of the date the delay is first encountered, even if the duration of the delay is not yet known at that time, or any entitlement to the Contract Time extension or to the Recoverable Costs will be deemed waived. In addition to complying with the requirements of this Article 5, the request must be submitted in compliance with the Change Order request procedures in Article 6 below. Strict compliance with these requirements is necessary to ensure that any delay or consequences of delay may be mitigated as soon as possible, and to facilitate cost-efficient administration of the Project and timely performance of the Work. Any request for an extension of Contract Time or Recoverable Costs that does not strictly comply with all of the requirements of Article 5 and Article 6 will be deemed waived.

(1) **Required Contents.** The request must include a detailed description of the cause(s) of the delay, and must also describe the measures that Contractor has taken to mitigate the delay and/or its effects, including efforts to mitigate the cost impact of the delay, such as by workforce management or by a change in

sequencing. If the delay is still ongoing at the time the request is submitted, the request should also include Contractor's plan for continued mitigation of the delay or its effects.

(2) *Delay Days and Costs.* The request must specify the number of days of Excusable Delay claimed, or provide a realistic estimate if the duration of the delay is not yet known. If Contractor believes it is entitled to Recoverable Costs for Compensable Delay, the request must specify the amount and basis for the Recoverable Costs that are claimed, or provide a realistic estimate if the amount is not yet known. Any estimate of delay duration or cost must be updated in writing and submitted with all required supporting documentation as soon as the actual time and cost is known. The maximum extension of Contract Time will be the number of days, if any, by which an Excusable Delay or a Compensable Delay exceeds any concurrent Non-Excusable Delay. Contractor is entitled to an extension of Contract Time, or compensation for Recoverable Costs, only if, and only to the extent that, such delay will unavoidably delay Final Completion.

(3) *Supporting Documentation.* The request must also include any and all supporting documentation necessary to evidence the delay and its actual impacts, including scheduling and cost impacts with a time impact analysis using critical path methodology and demonstrating the unavoidable delay to Final Completion. The time impact analysis must be submitted in a form or format acceptable to City.

(4) *Burden of Proof.* Contractor has the burden of proving that: the delay was an Excusable or Compensable Delay, as defined above; Contractor has made reasonable efforts to mitigate the delay and its schedule and cost impacts; the delay will unavoidably result in delaying Final Completion; and any Recoverable Costs claimed by Contractor were actually incurred and were reasonable under the circumstances.

(5) *Legal Compliance.* Nothing in this Section 5.3 is intended to require the waiver, alteration, or limitation of the applicability of Public Contract Code section 7102.

(6) *No Waiver.* Any grant of an extension of Contract Time, or compensation for Recoverable Costs due to Compensable Delay, will not operate as a waiver of City's right to assess liquidated damages for Non-Excusable Delay.

(7) *Dispute Resolution.* In the event of a dispute over entitlement to an extension of Contract Time or compensation for Recoverable Costs, Contractor may not stop working pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work. Contractor's sole recourse for an unresolved dispute based on City's rejection of a Change Order request for an extension of Contract Time or compensation for Recoverable Costs is to comply with the Dispute Resolution provisions set forth in Article 12 below.

5.4 Liquidated Damages. It is expressly understood that if Final Completion is not achieved within the Contract Time, City will suffer damages from the delay that are difficult to determine and accurately specify. Pursuant to Public Contract Code section 7203, if Contractor fails to achieve Final Completion within the Contract Time, City will charge Contractor in the amount specified in the Contract for each day that Final Completion is delayed beyond the Contract Time, as liquidated damages and not as a penalty.

- (A) **Liquidated Damages.** Liquidated damages will not be assessed for any Excusable or Compensable Delay, as set forth above.
- (B) **Milestones.** Liquidated damages may also be separately assessed for failure to meet milestones specified elsewhere in the Contract Documents.
- (C) **Setoff.** City is entitled to deduct the amount of liquidated damages assessed against any payments otherwise due to Contractor, including unreleased retention. If there are insufficient Contract funds remaining to cover the full amount of liquidated damages assessed, City is entitled to recover the balance from Contractor or its performance bond surety.
- (D) **Occupancy or Use.** Occupancy or use of the Project in whole or in part prior to Final Completion does not constitute City's acceptance of the Project and will not operate as a waiver of City's right to assess liquidated damages for Contractor's Non-Excusable Delay in achieving Final Completion.
- (E) **Other Remedies.** City's right to liquidated damages under this Section applies only to damages arising from Contractor's Non-Excusable Delay or failure to complete the Work within the Contract Time. City retains its right to pursue all other remedies under the Contract for other types of damage, including damage to property or persons, or for defective materials or workmanship.

Article 6 - Contract Modification

6.1 Contract Modification and Changes in Work. Modifications to the Contract are valid and legally binding only if duly authorized by a written and signed Change Order. City may also make changes in the Work without invalidating the Contract. City may direct changes in the Work, which may include Extra Work as set forth in subsection (B) below, deletion or modification of portions of the Work, or other modifications determined by City, acting in its sole discretion, to be in City's best interest. Pursuant to section 3.23.170 of the Cupertino Municipal Code, City reserves the right to delete up to 25% of the Work. Any change in the Work, whether directed by City or pursuant to Contractor's request for a Change Order under Section 6.2 below, will not be a valid and binding change to the Contract unless it is formalized in a Change Order, which may include commensurate changes in the Contract Price or Contract Time as applicable. Contractor must promptly comply with City-directed changes in the Work in accordance with the original Contract Documents, even if Contractor and City have not yet reached agreement as to adjustments to the Contract Price or Contract Time for the change in the Work or for the Extra Work. Contractor is not entitled to extra compensation pursuant to Public Contract Code section 7101 based on cost reduction changes or "value engineering," unless otherwise specified in the Special Conditions, or unless expressly authorizing in advance in writing by City.

(A) **Disputes.** In the event of a dispute over entitlement to or the amount of a change in Contract Time or a change in Contract Price related to a City-directed change in the Work, Contractor must perform the Work as directed and may not delay its Work or cease Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work, including the Work in dispute. In the event that City and Contractor dispute whether a portion or portions of the Work are already required by the Contract Documents or constitute Extra Work, or otherwise dispute the interpretation of any portion(s) of the Contract Documents, Contractor must perform the Work as directed and may not delay its Work or cease Work pending resolution of the dispute, but must continue to comply with its duty to diligently prosecute the performance and timely completion of the Work, including the Work in

dispute, as directed by City. Contractor's sole recourse for an unresolved dispute related to changes in the Work or performance of any Extra Work is to comply with the dispute resolution provisions set forth in Article 12, below.

(B) **Extra Work.** City may direct Contractor to perform Extra Work related to the Project. Contractor must promptly perform any Extra Work as directed or authorized by City in accordance with the original Contract Documents, even if Contractor and City have not yet reached agreement on adjustments to the Contract Price or Contract Time for such Extra Work. Contractor must maintain detailed daily records that itemize the cost of each element of Extra Work, and sufficiently distinguish the direct cost of the Extra Work from the cost of other Work performed. For each day that Contractor performs Extra Work, or Work that Contractor contends is Extra Work, Contractor must submit no later than the following Working Day, a daily report of the Extra Work performed that day and the related costs, together with copies of certified payroll, invoices, and other documentation substantiating the costs ("Extra Work Report"). The Engineer will make any adjustments to Contractor's Extra Work Report(s) based on the Engineer's records of the Work. When an Extra Work Report(s) is agreed on and signed by both City and Contractor, the Extra Work Report(s) will become the basis for payment under a duly authorized and signed Change Order. Failure to submit the required documentation by close of business on the next Working Day is deemed a full and complete waiver for any change in the Contract Price or Contract Time for any Extra Work performed that day.

(C) **Remedy for Non-Compliance.** Contractor's failure to promptly comply with a City-directed change is deemed a material breach of the Contract, and in addition to all other remedies available to it, City may, at its sole discretion, hire another contractor or use its own forces to complete the disputed Work at Contractor's sole expense, and may deduct the cost from the Contract Price.

6.2 Contractor Change Order Requests. Contractor must submit a request or proposal for a change in the Work, compensation for Extra Work, or a change in the Contract Price or Contract Time as a written Change Order request or proposal.

(A) **Time for Submission.** Any request for a change in the Contract Price or the Contract Time must be submitted in writing to the Engineer within ten calendar days of the date that Contractor first encounters the circumstances, information or conditions giving rise to the Change Order request, even if the total amount of the requested change in the Contract Price or impact on the Contract Time is not yet known at that time. If City requests that Contractor propose the terms of a Change Order, unless otherwise specified in City's request, Contractor must provide the Engineer with a written proposal for the change in the Contract Price or Contract Time within five working days of receiving City's request, in a form satisfactory to the Engineer.

(B) **Required Contents.** Any Change Order request or proposal submitted by Contractor must include a complete breakdown of actual or estimated costs and credits, and must itemize labor, materials, equipment, taxes, insurance, subcontract amounts and if applicable, Extra Work Reports. Any estimated cost must be updated in writing as soon as the actual amount is known.

(C) **Required Documentation.** All claimed costs must be fully documented, and any related request for an extension of time or delay-related costs must be included at that time and in compliance with the requirements of Article 5 of the General Conditions.

(D) **Required Form.** Contractor must use City's form(s) for submitting all Change Order requests or proposals, unless otherwise specified by City.

(E) **Certification.** All Change Order requests must be signed by Contractor and must include the following certification:

“The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Change Order request are true and correct. Contractor warrants that this Change Order request is comprehensive and complete as to the Work or changes referenced herein, and agrees that any costs, expenses, or time extension request not included herein is deemed waived. Contractor understands that submission of claims which have no basis in fact or which Contractor knows to be false may violate the False Claims Act, as set forth in Government Code sections 12650 et seq.”

6.3 Adjustments to Contract Price. The amount of any increase or decrease in the Contract Price will be determined based on one of the following methods, but in the order provided with unit pricing taking precedence over the other methods:

(A) **Unit Pricing.** Amounts previously provided by Contractor in the form of unit prices, either in a bid schedule or schedule of values, will apply if unit pricing has previously been provided in Contractor’s accepted bid schedule or schedule of values for the affected Work. No additional markup for overhead, profit, or other indirect costs will be added to the calculation.

(B) **Lump Sum.** A mutually agreed upon lump sum for the affected Work with no additional markup for overhead, profit, or other indirect costs.

(C) **Time and Materials.** On a time and materials basis, including allowed markup for overhead, profit, and all other indirect costs, and which may include a not-to-exceed limit, calculated as the total of the following sums:

- (1) All direct labor costs plus 15% markup;
- (2) All direct material costs, including sales tax, plus 15% markup;
- (3) All direct plant and equipment rental costs, plus 15% markup;
- (4) All direct subcontract costs plus ten percent markup; and
- (5) Increased bond or insurance premium costs computed at 1.5% of total of the previous four sums.

6.4 Unilateral Change Order. If the parties dispute the terms of a proposed Change Order, including disputes over the amount of compensation or extension of time that Contractor has requested, the value of deleted or changed Work, what constitutes Extra Work, or quantities used, City may elect to issue a unilateral Change Order, directing performance of the Work, and authorizing a change in the Contract Price or Contract Time for the amount of compensation or added time that the City believes is merited. Contractor’s sole recourse to dispute the terms of a unilateral Change Order is to submit a timely Claim pursuant to Article 12, below.

6.5 Non-Compliance Deemed Waiver. Contractor waives its entitlement to any increase in the Contract Price or Contract Time if Contractor fails to fully comply with the provisions of this Article. Contractor will not be paid for unauthorized Extra Work.

Article 7 - General Construction Provisions

7.1 Permits and Taxes.

(A) **General.** Contractor must obtain and pay for all permits, fees, or licenses required to perform the Work, except that if a City building permit is required, no fee will be charged. Contractor must cooperate with and provide notifications to all government agencies with jurisdiction over the Project, as may be required. Contractor must provide City with copies of all notices, permits, licenses, and renewals required for the Work.

(B) **Federal Excise Tax.** Contractor must pay for all taxes on labor, material and equipment, except Federal Excise Tax to the extent that City is exempt from Federal Excise Tax.

7.2 Temporary Facilities.

Contractor must provide, at Contractor's sole expense, any and all temporary facilities for the Project, including an onsite staging area for material and equipment, a field office, sanitary facilities, utilities, storage, scaffolds, barricades, walkways, and any other temporary structure required to safely perform the Work along with any incidental utility services. The location of all temporary facilities must be approved by the City prior to installation.

(A) **Standards.** Temporary facilities must be safe and adequate for the intended use, and installed and maintained in accordance with all applicable federal, state, and local laws, codes, and regulations.

(B) **Screening.** Contractor must fence and screen the Project site and staging area, and its operation must minimize inconvenience to neighboring properties and be approved by the City.

(C) **Utilities.** Contractor must install and maintain the light, power, water and all other utilities required for the Project site, including the piping, wiring, lamps and related equipment necessary to perform the Work.

(D) **Removal and Repair.** Contractor must promptly remove all such temporary facilities when they are no longer needed or upon completion of the Work, whichever comes first. Contractor must promptly repair any damage to City's property or to other property caused by the installation, use, or removal of the temporary facilities, and must promptly restore the property to its original or intended condition.

(E) **Additional Requirements.** Additional provisions pertaining to temporary facilities may be included in the Specifications or Special Conditions.

7.3 Noninterference and Additional Work Areas.

Contractor must avoid interfering with City's use of its property at or adjacent to the Project site, including use of roadways, entrances, parking areas, walkways, and structures. Contractor must also minimize disruption of access to private property in the Project vicinity. Contractor must coordinate with affected property owners, tenants, and businesses, and maintain some vehicle and pedestrian access to their residences or properties at all times. Temporary access ramps, fencing or other measures must be provided as needed. Before blocking access to a private driveway or parking lot, Contractor must notify the affected parties of the pending closure and allow them to remove vehicles. Private driveways, residences and parking lots must have access to a roadway during non-Work hours.

(A) **Offsite Acquisition.** Unless otherwise provided by City, Contractor must acquire, use and dispose of, at its sole expense, any additional Work areas, easements, and temporary facilities necessary to access and perform the Work.

(B) **Offsite Staging Area and Field Office.** If additional space beyond the Project site is needed, such as for the staging area or the field office, Contractor may need to make arrangements with the nearby property owner(s) to secure the space. Before using or occupying any property owned by a third party, Contractor must provide City with a copy of the necessary license agreement, easement, or other written authorization from the property owner, together with a written release from the property owner holding City harmless from any related liability, in a form acceptable to the City Attorney.

7.4 Signs. No signs may be displayed on or about City's property, except signage which is required by law or by the Contract Documents, without City's prior written approval as to size, design, and location.

7.5 Worksite and Nearby Property Protections.

(A) **General.** Contractor is responsible at all times, on a 24-hour basis and at its sole cost, for protecting the Work, the Project site, and the materials and equipment to be incorporated into the Work, until the notice of completion has been recorded. Except as specifically authorized by City, Contractor must confine its operations to the area of the Project site indicated in the Drawings. Contractor is liable for any damage caused by Contractor or its Subcontractors to the Work, City's property, the property of adjacent or nearby property owners, and the work or personal property of other contractors working for City. In addition, Contractor is responsible for damage caused by its failure to adequately secure the Work or any Worksite.

(1) Subject to City's approval, Contractor will provide and install safeguards to protect the Work, the Project site, City's real or personal property, and the real or personal property of adjacent or nearby property owners.

(2) Cupertino Sanitary District and the City of Sunnyvale own and operate wastewater systems within Cupertino and they may not be interrupted. If the Work disrupts existing sewer facilities, Contractor must immediately notify City to determine who owns the system and establish a plan, subject to the systems owner's approval, to convey the sewage in closed conduits back into the sanitary sewer system. Sewage must not be permitted to flow in trenches or be covered by backfill.

(3) Contractor must remove with due care, and store at City's request, any objects or material from the Project site that City will salvage or reuse at another location.

(4) If directed by Engineer, Contractor must promptly repair or replace any property damage, as specified by the Engineer. However, acting in its sole discretion, City may elect to have the property damage remedied otherwise, and may deduct the cost to repair or replace the damaged property from payment otherwise due to Contractor.

(B) **Securing Project Site.** After completion of Work each day, Contractor must secure the Project site and, to the extent feasible, make the area reasonably accessible to the public unless City approves otherwise. All excess materials and equipment not protected by approved traffic control devices must be relocated to the staging area or demobilized. Trench spoils must be hauled off the Project site daily and open excavations must be protected with steel plates. Contractor and Subcontractor personnel may not occupy or use the Project site for any purpose during non-Work hours, except as may be provided in the Contract Documents or pursuant to prior written authorization from City.

(C) **Unforeseen Conditions.** If Contractor encounters facilities, utilities, or other unknown conditions not shown on or reasonably inferable from the Drawings or apparent from inspection of the Project site, Contractor must immediately notify the City and promptly submit a Request for Information to the Engineer. Contractor must avoid taking any action which could cause damage to the facilities or utilities pending further direction from the Engineer. The Engineer's written response will be final and binding on Contractor. If the Engineer's subsequent direction to Contractor affects Contractor's cost or time to perform the Work, Contractor may submit a Change Order request as set forth in Article 6 above.

(D) **Support; Adjacent Properties.** Contractor must provide, install, and maintain all shoring, bracing, and underpinning necessary to provide support to City's property and adjacent properties and improvements thereon. Contractor must provide notifications to adjacent property owners as may be required by law.

7.6 Materials and Equipment.

(A) **General.** Unless otherwise specified, all materials and equipment required for the Work must be new, free from defects, and of the best grade for the intended purpose, and furnished in sufficient quantities to ensure the proper and expeditious performance of the Work. Contractor must employ measures to preserve the specified quality and fitness of the materials and equipment. Unless otherwise specified, all materials and equipment required for the Work are deemed to include all components required for complete installation and intended operation, and must be installed in accordance with the manufacturer's recommendations or instructions. Contractor is responsible for all shipping, handling, and storage costs associated with the materials and equipment required for the Work, Contractor is responsible for providing security and protecting the Work and all of the required materials, supplies, tools and equipment at Contractor's sole cost until City has formally accepted the Project as set forth in Section 11.1 below. Contractor will not assign, sell, mortgage, or hypothecate any materials or equipment for the Project, or remove any materials or equipment that have been installed or delivered.

(B) **City-Provided.** If the Work includes installation of materials or equipment to be provided by City, Contractor is solely responsible for the proper examination, handling, storage, and installation in accordance with the Contract Documents. Contractor must promptly notify City of any defects discovered in City-provided materials or equipment. Contractor is solely responsible for any loss of or damage to such items which occurs while the items are in Contractor's custody and control, the cost of which may be offset from the Contract Price and deducted from any payment(s) due to Contractor.

(C) **Existing City Equipment.** Contractor will carefully remove all existing equipment from the Worksite. If the City specifies or indicates that equipment is to be salvaged and reused or to remain the property of City then the Contractor will reuse or return the equipment to the City. Contractor will store and protect salvaged equipment specified to be reused in the Work. Contractor will delivery to the City in good condition the equipment that is to remain City property but not be reused in the Work.

(1) If an item specified to be salvaged is damaged during its removal, storage, or handling through carelessness or improper procedures, then Contractor will replace that equipment in kind or with a new item. For those items specified to be salvaged Contractor may choose to instead furnish and install new equipment, in which case the original, removed items will become Contractor's property. Existing materials and equipment removed by Contractor will only be reused in the Work if so specified or indicated by the City.

(D) **Intellectual Property Rights.** Contractor must, at its sole expense, obtain any authorization or license required for use of patented or copyright protected materials, equipment, devices or processes that are incorporated into the Work. Contractor's indemnity obligations in Article 4 apply to any claimed violation of intellectual property rights in violation of this provision.

(E) **Certificate of Compliance.** When a Certificate of Compliance is specified, or for any material or item ("material") produced or assembled outside of the United States, Contractor must submit a Certificate of Compliance before incorporating that material into the Project. A Certificate of Compliance must be submitted for each lot of material delivered to the Project site, and in a form acceptable to the Engineer, identifying the material, its source, and the lot. Each Certificate of Compliance must be signed by the material producer stating that the material fully complies with the applicable requirements of the Specifications. Submission of a Certificate of Compliance will not limit Contractor's continuing obligation to use only materials that conform with the requirements of the Contract Documents. Any materials furnished pursuant to a Certificate of Compliance may be inspected or tested at any time by City, subject to the inspection and testing provisions of Article 7, and defective or non-conforming material may be rejected at any time, even if already installed.

(F) **Site Materials.** Except as otherwise specified, City retains full ownership of and all rights to use any water, soil, stone, gravel, sand, minerals or other materials ("Site Materials") on City property, including the Project site, and including any site materials that have been extracted, excavated, or otherwise affected or made accessible by performance of the Work. However, City, acting in its sole discretion, may provide written authorization in the Specifications or in a Change Order for Contractor to make use of or incorporate specified Site Materials in the Work.

7.7 Substitutions.

(A) **"Or Equal."** Any Specification designating a material, product, or thing (collectively, "item") or service by specific brand or trade name, followed by the words "or equal," is intended only to indicate the quality and type of item or service desired, and Contractor may request use of any equal item or service.

(B) **Request for Substitution.** A request for substitution of an item or service must be submitted in writing to the Engineer for approval in advance, within the applicable time period provided in the Contract Documents. If no time period is specified, the substitution request may be submitted any time within 35 days after the date of award of the Contract, or sufficiently in advance of the time needed to avoid delay of the Work, whichever is earlier. The request must be submitted on the City's Substitution Request Form.

(C) **Substantiation.** Any available data substantiating the proposed substitute as an equal item or service must be submitted with the written request for substitution. Contractor's failure to timely provide all necessary substantiation, including any required test results as soon as they are available, is grounds for rejection of the proposed substitution, without further review.

(D) **Burden of Proving Equality.** Contractor has the burden of proving the equality of the proposed substitution at Contractor's sole cost, including testing using methods acceptable to City. City has sole discretion to determine whether a proposed substitution is equal, and City's determination is final.

(E) **Approval or Rejection.** If the proposed substitution is approved, Contractor is solely responsible for any additional costs or time associated with the substituted item or

service. If the proposed substitution is rejected, Contractor must, without delay, install the item or use the service as specified by City.

(F) **Contractor's Obligations.** City's approval of a proposed substitution will not relieve Contractor from any of its obligations under the Contract Documents. In the event Contractor makes an unauthorized substitution, Contractor will be solely responsible for all resulting cost impacts, including the cost of removal and replacement and the impact to other design elements.

7.8 Inspection and Testing.

(A) **General.** All materials, equipment, and workmanship used in the Work are subject to inspection and testing by City at all times and locations during construction and/or fabrication and at any Worksite, including at shops and yards as well as at the Project site, or at the plant of a manufacturer of materials or items to be incorporated into the Work. All manufacturers' application or installation instructions must be provided to the Inspector at least ten days prior to the first such application or installation. Contractor must, at all times, make the Work available for inspection.

(B) **Scheduling and Notification.** Contractor must cooperate with City in coordinating the inspections and testing. Contractor must submit samples of materials, and schedule all tests required by the Contract Documents in time to avoid any delay to the progress of the Work. Contractor must notify the Engineer in writing no later than two Working Days before any inspection or testing is being requested, and must provide timely notice to the other necessary parties as specified in the Contract Documents. If Contractor schedules an inspection or test beyond regular Work hours, or on a Saturday, Sunday, or recognized City holiday, Contractor must seek, in writing, Engineer's approval at least two Working Days in advance. If approved, Contractor must reimburse City for the cost of the overtime inspection or testing. Such costs, including the City's hourly costs for required personnel and Inspector, may be deducted from payments otherwise due to Contractor.

(C) **Responsibility for Costs.** City will bear the initial cost of inspection and testing to be performed by independent inspections and/or testing consultants retained by City, subject to the following exceptions:

- (1) Contractor will be responsible for the costs of any subsequent inspections and/or tests which are required to substantiate compliance with the Contract Documents, and any associated remediation costs.
- (2) Contractor will be responsible for inspection and testing costs, at the rate charged by the consultant retained by the City to provide inspection and testing services, and for inspection and testing time lost because the Work is not ready or Contractor fails to appear for a scheduled inspection.
- (3) If any portion of the Work that is subject to inspection or testing is covered or concealed by Contractor prior to the inspection or testing, Contractor will bear the cost of making that portion of the Work available for the inspection or testing required by the Contract Documents, and any associated repair or remediation costs.
- (4) Contractor is responsible for properly shoring all compaction test sites deeper than five feet below grade, as required under Section 7.15 below.
- (5) Any Work or material that is defective or fails to comply with the requirements of the Contract Documents must be promptly repaired, removed, replaced, or

corrected by Contractor, at Contractor's sole expense, even if that Work or material was previously inspected or included in a progress payment.

(D) **Contractor's Obligations.** All Work and materials must conform with the lines, grades, typical cross sections, dimensions, material requirements, and tolerances shown or described by the Drawings and Specifications. City, acting in its sole discretion, will determine whether Work or materials conform with the Drawings and Specifications, including allowable deviations. City's determination as to conformity or allowable deviations is final. Contractor is solely responsible for any delay occasioned by remediation of defective or noncompliant Work or material. Inspection of the Work does not in any way relieve Contractor of its obligations to perform the Work as specified. Any Work done without the required inspection(s) will also be subject to rejection by City.

(E) **Distant Locations.** If required off-site testing or inspection must be conducted at a location more than 100 miles from the Project site, Contractor is solely responsible for the additional travel costs required for testing and/or inspection at such locations.

(F) **Plant Inspection.** If specified in the Contract Documents, or upon written request by City, Contractor must use its best efforts to facilitate and arrange for City's inspection, sampling or testing of materials or items required for the Work at the plant or facility from which the materials or items are to be obtained. Contractor's best efforts must include contacting the producer or manufacturer on a timely basis to schedule inspection by City's selected representative, including appropriate access and any safety equipment, all at no cost to City. The inspection must be scheduled sufficiently in advance of the planned shipping or production date to allow for alternative arrangements if the City determined that the materials or items do not meet the requirements of the Drawings and Specifications. Nothing in this provision obligates City to inspect materials or items at the source plant or facility.

(G) **Final Inspection.** The provisions of this Section 7.8 apply to final inspection under Article 11, Completion and Warranty Provisions.

7.9 Worksite Conditions and Maintenance. Contractor must at all times, on a 24-hour basis and at its sole cost, maintain the Project site and staging and storage areas in clean and neat condition and in compliance with all regulatory requirements for air quality and dust control. Contractor must also, on a daily basis and at its sole cost, remove and properly dispose of the debris and waste materials from the Project site.

(A) **Protection of Existing Property, Structures, and Utilities.** If the Drawings indicate existing above-grade and below-grade structures, drainage lines, storm drains, sewers, water, gas, electrical, phone and data cable, and other similar items or utilities known to the City, then Contractor will locate these known existing installations before proceeding with trenching or other operations which may cause damage, will maintain them in service where appropriate, and will repair any damage caused to them by the Work, at no increase in the Contract Price.

(1) The Contractor may temporarily mark or paint the ground, pavement, sidewalk, or any other improvements, but must not do so in a public right-of-way or on the Site more than 30 days prior to the commencement of excavation work performed in connection with an installation. Any mark or paint must be removed from all surfaces, including any decorative work, within 30 days of the completion of the excavation work. The Contractor is responsible for any expense associated with damages caused by the Contractor's mark or paint, including the removal thereof.

(2) The Contractor will record the location and existence of pavement markers and striping prior to construction, and will provide such records to the Engineer. The Contractor will replace in kind any permanent paving marker or striping that it removes or damages, or as marked in the Plans, at its expense.

(B) **Air Emissions Control.** Contractor must not discharge smoke or other air contaminants into the atmosphere in violation of any applicable law, regulation or rule.

(C) **Dust and Debris.** Contractor must minimize and confine dust and debris resulting from the Work. Contractor must abate dust nuisance by cleaning, sweeping, and immediately sprinkling with water excavated areas of dirt or other materials prone to cause dust, and within one hour after the Engineer notifies Contractor that an airborne nuisance exists. The Engineer may direct that Contractor provide an approved water-spraying truck for this purpose. If the Engineer determines that the dust control is not adequate, City may have the work done by others and deduct the cost from the Contract Price. Contractor will immediately remove any excess excavated material from the Worksite and any dirt deposited on public streets.

(D) **Clean up.** Before discontinuing Work in an area, Contractor must clean the area and remove all debris and waste along with the construction equipment, tools, machinery, waste and surplus materials.

(1) Except as otherwise specified, all excess Project materials, and the materials removed from existing improvements on the Project site with no salvage value or intended reuse by City, will be Contractor's property.

(2) Hauling trucks and other vehicles leaving the Project site must be cleaned of exterior mud or dirt before traveling on City streets. Materials and loose debris must be delivered and loaded to prevent dropping materials or debris. Contractor must immediately remove spillage from hauling on any publicly traveled way. Streets affected by Work on the Project must be kept clean by street sweeping.

(E) **Disposal.** Contractor must dispose of all Project debris and waste materials in a safe and legal manner. Contractor may not burn or bury waste materials on the Project site. Contractor will not allow any dirt, refuse, excavated material, surplus concrete or mortar, or any associated washings, to be disposed of onto streets, into manholes or into City's storm drain system.

(F) **Completion.** At the completion of the Work, Contractor must remove from the Worksite all of its equipment, tools, surplus materials, waste materials and debris, presenting a clean and neat appearance. Before demobilizing from the Worksite, Contractor must ensure that all surfaces are cleaned, sealed, waxed, or finished as applicable, and that all marks, stains, paint splatters, and the like have been properly removed from the completed Work and the surrounding areas. Contractor must ensure that all parts of the construction are properly joined with the previously existing and adjacent improvements and conditions. Contractor must provide all cutting, fitting and patching needed to accomplish that requirement. Contractor must also repair or replace all existing improvements that are damaged or removed during the Work, both on and off the Project site, including curbs, sidewalks, driveways, fences, signs, utilities, street surfaces and structures. Repairs and replacements must be at least equal to the previously existing improvements, and the condition, finish and dimensions must match the previously existing improvements.

(G) **Non-Compliance.** If Contractor fails to comply with its maintenance and cleanup obligations or any City clean up order, City may, acting in its sole discretion, elect to suspend the Work until the condition(s) is corrected with no increase in the Contract Time

or Contract Price, or undertake appropriate cleanup measures without further notice and the cost will be deducted from any amounts due or to become due to Contractor.

7.10 Instructions and Manuals. Contractor must provide to City two bound copies and an electronic PDF copy of each of all instructions and manuals required by the Contract Documents, unless otherwise specified. These must be complete as to drawings, details, parts lists, performance data, and other information that may be required for City to easily maintain and service the materials and equipment installed for this Project.

(A) **Submittal Requirements.** All manufacturers' application or installation instructions must be provided to City at least ten days prior to the first such application. The instructions and manuals, along with any required guarantees, must be delivered to City for review.

(B) **Training.** Contractor or its Subcontractors must instruct City's personnel in the operation and maintenance of any complex equipment as a condition precedent to Final Completion, if required in the Contract Documents.

7.11 As-built Drawings. Contractor and its Subcontractors must prepare and maintain at the Project site a detailed, complete and accurate as-built set of Drawings which will be used solely for the purpose of recording changes made in any portion of the original Drawings in order to create accurate record drawings at the end of the Project.

(A) **Duty to Update.** The as-built drawings must be updated as changes occur, on a daily basis if necessary. Progress payments may be delayed, in whole or in part, until the as-built drawings are brought up to date to the satisfaction of City. Actual locations to scale must be identified on the as-built drawings for all runs of mechanical and electrical work, including all site utilities installed underground, in walls, floors, or otherwise concealed. Deviations from the original Drawings must be shown in detail. The exact location of all main runs, whether piping, conduit, ductwork or drain lines, must be shown by dimension and elevation. The location of all buried pipelines, appurtenances, or other improvements must be represented by coordinates and by the horizontal distance from visible above-ground improvements.

(B) **Final Completion.** Contractor must verify that all changes in the Work are depicted in the as-built drawings and must deliver the complete set of as-built drawings to the Engineer for review and approval as a condition precedent to Final Completion and Final Payment.

7.12 Existing Utilities. As required by Government Code section 4215, if, during the performance of the Work, Contractor discovers utility facilities not identified by City in the Contract Documents, Contractor must immediately provide written notice to City and the utility. City assumes responsibility for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Project site if those utilities are not identified in the Contract Documents. Contractor will be compensated in accordance with the provisions of the Contract Documents for the costs of locating, repairing damage not due to Contractor's failure to exercise reasonable care, and removing or relocating utility facilities not indicated in the Drawings or Specifications with reasonable accuracy, and for equipment on the Project necessarily idled during such work. Contractor will not be assessed liquidated damages for delay in completion of the Work, to the extent the delay was caused by City's failure to provide for removal or relocation of the utility facilities.

7.13 Notice of Excavation. Contractor must comply with all applicable operator requirements in Government Code sections 4216 through 4216.5. Government Code section 4216.2 requires that, except in an emergency, Contractor must contact the

appropriate regional notification center, or Underground Services Alert, at least two working days but not more than 14 calendar days before starting any excavation if the excavation will be conducted in an area that is known, or reasonably should be known, to contain subsurface installations, and, if practical, Contractor must delineate with white paint or other suitable markings the area to be excavated. Contractor may not begin excavation until it has obtained and submitted to Engineer an inquiry identification number from Underground Services Alert.

7.14 Trenching and Excavations of Four Feet or More. As required by Public Contract Code section 7104, if the Work includes digging trenches or other excavations that extend deeper than four feet below the surface, the provisions in this Section apply to the Work and the Project.

(A) **Duty to Notify.** Contractor must promptly, and before the following conditions are disturbed, provide written notice to City if Contractor finds any of the following conditions:

(1) Material that Contractor believes may be a hazardous waste, as defined in section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law;

(2) Subsurface or latent physical conditions at the Worksite differing from those indicated by information about the Worksite made available to bidders prior to the deadline for submitting bids; or

(3) Unknown physical conditions at the Worksite of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in work of the character required by the Contract Documents.

(B) **City Investigation.** City will promptly investigate the conditions and if City finds that the conditions materially differ or involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, City will issue a Change Order.

(C) **Disputes.** In the event that a dispute arises between City and Contractor regarding any of the conditions specified in subsection (A) above, Contractor will not be excused from completing the Work within the Contract Time, but must proceed with all Work to be performed under the Contract. Contractor will retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes between Contractor and City.

7.15 Trenching of Five Feet or More. As required by Labor Code section 6705, if the Contract Price exceeds \$25,000 and the Work includes the excavation of any trench or trenches of five feet or more in depth, a detailed plan must be submitted to City for acceptance in advance of the excavation. The detailed plan must show the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. If the plan varies from the shoring system standards, it must be prepared by a California registered civil or structural engineer. Use of a shoring, sloping, or protective system less effective than that required by the Construction Safety Orders is prohibited.

7.16 New Utility Connections. Except as otherwise specified. City will pay connection charges and meter costs for new permanent utilities required by the Contract Documents, if any. Contractor must notify City sufficiently in advance of the time needed to request

service from each utility provider so that connections and services are initiated in accordance with the Project schedule.

7.17 Lines and Grades. Contractor is required to use any benchmark provided by the Engineer. Unless otherwise specified in the Contract Documents, Contractor must provide all lines and grades required to execute the Work. Contractor must also provide, preserve, and replace if necessary, all construction stakes required for the Project. All stakes or marks must be set by a California licensed surveyor or a California registered civil engineer. Contractor must notify the Engineer of any discrepancies found between Contractor's staking and grading and information provided by the Contract Documents. Upon completion, all Work must conform to the lines, elevations, and grades shown in the Plans.

7.18 Historic or Archeological Items.

(A) **Contractor's Obligations.** Contractor must ensure that all persons performing Work at the Project site are required to immediately notify the Project Manager, upon discovery of any potential historic or archeological items, including historic or prehistoric ruins, a burial ground, archaeological or vertebrate paleontological site, including fossilized footprints or other archeological, paleontological or historical feature on the Project site (collectively, "Historic or Archeological Items").

(B) **Discovery; Cessation of Work.** Upon discovery of any potential Historic or Archeological Items, Work must be stopped within an 85-foot radius of the find and may not resume until authorized in writing by City. If required by City, Contractor must assist in protecting or recovering the Historic or Archeological Items, with any such assistance to be compensated as Extra Work on a time and materials basis under Article 6, Contract Modification. Any suspension of Work required due to discovery of Historic or Archeological Items will be treated as a suspension for convenience under Article 13.

7.19 Recycling and Waste Disposal.

(A) **Approved Recycling Facility.** Contractor must dispose of all recyclable materials at a recycling facility approved by the Engineer.

(B) **Inert Solids and Plant Materials.** Contractor must remove all asphalt concrete, Portland cement concrete, aggregate base material, inert solids and any plant material from the Project site and deposit at an approved recycling facility. Contractor must conform the above material to an acceptable size and composition for recycling.

(C) **Recyclable Materials.** Contractor must recycle at least 65% of all materials at an approved recycling facility.

(D) **Waste Management Plan and Disposal Report.** If the California Green Building Standards Code applies to the Project, Contractor must submit to the City a waste management plan prior to starting work. A disposal report is required upon completion of the Project, for materials that are hauled by Contractor or by the City's franchised hauler. If a waste management plan is required it must be available throughout the duration of the Project for examination by the City. Electronic submittals are acceptable. The waste management plan must include the following:

- (1) Project title and number;
- (2) Identify the construction methods that will be employed to reduce waste;
- (3) Type of material(s) to be recycled, salvaged or landfilled;

- (4) Specify if the waste will be sorted onsite or bulk-mixed; and
- (5) Name and address of recycling facilit(ies) and landfill(s) to be used;

The disposal report must include the following:

- (1) Project title;
- (2) Date and time of disposal;
- (3) Truck number;
- (4) Type of material recycled, salvaged, or landfilled;
- (5) Weight of material recycled, salvaged, or landfilled;
- (6) Name and address of recycling facility or landfill;
- (7) Certification or weight tags from facility;
- (8) Weight tags for all material landfilled; and
- (9) If the recycling goal is not met, provide an explanation, to be approved by City, for why it was not met.

(E) **Collection of Waste and Debris.** Collection of garbage, mixed non-organic recyclables, organic waste, and any construction or demolition materials in debris boxes, compactors, or bin-by-the-day services that are not City franchisees or otherwise agents of the City is prohibited. Notwithstanding the above, Contractor must dispose of debris from the Project in one of the following:

- (1) Franchised hauler bin;
- (2) A bin owned by Contractor or a demolition Subcontractor provided that it is hauled by an employee of the Contractor or the demolition Subcontractor and by a vehicle owned and registered to the Contractor or the demolition Subcontractor; or
- (3) Private truck with a bed.

(F) **Recycling Containers.** The disposal of garbage in containers designated for compostable waste recycling is prohibited.

7.20 Storm Water Pollution Control

(A) **Storm Drains.** Contractor will comply with all state and federal storm water regulations. Contractor will not allow any waste materials or pollutants to enter the storm drainage system.

(B) **Best Management Practices.** Contractor must remove any waste found or generated at the Project site using the appropriate Best Management Practices (BMPs), and must properly dispose of the waste or pollutants off-site. If solid or liquid waste materials or pollutants from the Project enter the storm drain system, Contractor must immediately notify the City's Environmental Services Division, and thoroughly clean up the affected catch basins, storm sewer, and storm manholes to the satisfaction of the

Engineer. If Contractor fails to meet the requirements of this section, the City may issue a stop-work notice and take necessary action to require Contractor to set up preventive measures or clean up the storm drainage system. Contractor will bear all costs related to the stop-work action and corrective work, and will not be entitled to an extension of the Contract time for any resulting delay.

(C) **Stormwater Permit.** Contractor must control all water pollution pursuant to the Contract Documents, the State Water Resources Control Board National Pollutant Discharge Elimination System ("NPDES") General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities ("Stormwater Permit"). If required for the Work, a copy of the Stormwater Permit is on file in City's principal administrative offices, and Contractor must comply with the same without adjustment of the Contract Price or the Contract Time. Contractor must timely and completely submit required reports and monitoring information required by the conditions of the Stormwater Permit. Contractor also must comply with all other applicable state, municipal or regional laws, ordinances, rules or regulations governing discharge of stormwater, including applicable municipal stormwater management programs.

(D) **Failure to Comply with Stormwater Permit.** Contractor must pay all costs and liabilities imposed by law as a result of Contractor's failure to comply with the provisions set forth in the Contract Documents. Such costs and liabilities include, but are not limited to, fines, penalties, and damages, whether assessed against the City or Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

(E) **Storm Water Pollution Prevention Plan Preparation.** Contractor must incorporate the following BMPs, as applicable, into a site-specific Storm Water Pollution Prevention Plan (SWPPP) if required for this Project. The SWPPP must be approved by the Engineer prior to construction.

(1) *Non Hazardous Material/Waste Management.*

- a. Contractor must designate areas of the Project site suitable for material delivery, storage, and waste collection that, to the maximum extent practicable, are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.
- b. Contractor must store granular material at least 10 feet away from catch basin and curb returns.
- c. Contractor must prevent granular material to enter the storm drains or creeks.
- d. During wet weather and when rain is forecast in the next 24 hours, Contractor must cover granular material with a tarpaulin and surround the material with sand bags or other weights to ensure that tarpaulin does not expose the material during wind and rain.
- e. Contractor will use minimal amounts of water to control dust on a daily basis or as directed by the Engineer.
- f. At the end of each working day or as directed by the City, Contractor must clean and sweep roadways and on-site paved areas of all materials on or adjacent to the Worksite.

g. Throughout the working day and at the end of each working day, or as directed by the City, Contractor must pick up litter, trash, scrap, waste material, and debris from the Project site and any adjacent sidewalk, curb, and gutter area. Contractor must keep the site and perimeter free from cigarette butts and other litter.

h. Contractor must ensure that lids for trash receptacles are kept closed and that trash receptacles are maintained in a manner that prevents overflows.

i. Contractor must maintain a clean and litter-free area around all trash receptacles on the site.

j. Contractor will not use water to flush down streets in place of street sweeping or other dry methods of spill cleanup such as applying absorbent, sweeping up material and disposing it in a waste bin.

k. In addition to Contractor's obligation to recycle materials pursuant to Section 7.19 of the General Conditions, Contractor must, to the maximum extent practicable, reuse or recycle any useful construction materials generated during the Project.

l. Contractor must inspect any waste and recycling receptacles for leaks, and must contact the City's trash hauling franchisee to immediately replace or repair any leaking receptacles.

m. Contractor will not discharge water on-site as a result of cleaning recycling or trash receptacles.

n. Contractor must arrange for regular waste collection before receptacles overflow, and must adjust the frequency of service or the receptacle size as needed to ensure that overflows do not occur.

(2) *Hazardous Material/Waste Management.*

a. Contractor must label and store all hazardous materials including but not limited to pesticides, paints, thinners, solvents, and fuels; and all hazardous wastes, including but not limited to waste oil and antifreeze; in accordance with the City's Hazardous Materials Storage Ordinance and all applicable state and federal regulations.

b. Contractor must keep an accurate, up-to-date inventory, including Materials Safety Data Sheets (MSDSs), of hazardous materials and hazardous wastes stored on-site.

c. When rain is forecast within 24 hours or during wet weather, the Contractor must not apply chemicals such as pesticides and cleaners, or any materials that may potentially enter the storm drain system, in outside areas.

d. Contractor must not over-apply pesticides or fertilizers and must follow materials manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals. Over-application of a pesticide constitutes a "label violation" subject to an enforcement action by the Santa Clara County Agriculture Department.

e. Contractor must arrange for regular hazardous waste collection to comply with all applicable time limits on storage of hazardous wastes.

f. Contractor must dispose of hazardous waste only at authorized and permitted treatment, storage and disposal facilities, and must use only licensed hazardous waste haulers to remove the waste off-site, unless quantities to be transported are below applicable threshold limits for transportation specified in state and federal regulations.

g. If Contractor's business office is located in Santa Clara County, Contractor may dispose of this waste through the Countywide Hazardous Waste Program. Businesses generating less than 27 gallons or 220 pounds of hazardous waste per month are legally classified as conditionally exempt small quantity generators (CESQGs). Information on the CESQG program may be requested by calling the County at (408) 299-7300.

(3) *Spill Prevention and Control.*

a. Contractor must keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.

b. Contractor must immediately contain and prevent leaks and spills from entering storm drains, and properly clean up and dispose of the waste and cleanup materials, using dry methods to the extent feasible. If the waste is hazardous, Contractor must handle the waste as described in subsection (2) above.

c. Contractor will not wash any spilled material into streets, gutters, storm drains, or creeks and will not bury spilled hazardous materials.

d. Contractor must report any hazardous materials spill by calling 911 and must notify the City's Public Works Environmental Division at 408-777-3354.

(4) *Vehicle/Equipment Cleaning.*

a. Contractor will not perform vehicle or equipment cleaning on-site or in the street using soaps, solvents, degreasers, steam cleaning equipment, or equivalent methods.

b. Contractor must perform vehicle or equipment cleaning, with water only, in a designated, bermed, pervious area that will not allow rinse water to run offsite or into streets, gutters, storm drains, or creeks.

(5) *Vehicle/Equipment Maintenance and Fueling.*

a. Contractor will not perform maintenance and fueling of vehicles onsite.

b. Contractor must perform maintenance and fueling of equipment only when necessary, and in a designated, bermed area or over a drip pan that will not allow run-on of storm water or runoff of spills.

- c. Contractor must use secondary containment, such as a drip pan, to catch leaks or spills any time that equipment fluids are dispensed, changed, or poured.
- d. Contractor must keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site to clean up drips and spills.
- e. Contractor must clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described above.
- f. Contractor will not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.
- g. Contractor must report any hazardous materials spill by calling 911. After the emergency has been reported, Contractor must notify the City's Public Works Environmental Division.
- h. Contractor must inspect vehicles and equipment arriving on-site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans must be used to catch leaks until repairs are made. Shut-off valves on equipment must be working properly.
- i. Contractor must comply with federal, state and City requirements for above-ground storage tanks.

(6) *Contractor Training and Awareness.*

- a. Contractor must train all employees and Subcontractors on the SWPPP requirements contained in these General Conditions.
- b. Contractor must include appropriate provisions in its subcontracts to ensure that these SWPPP requirements are met.
- c. Contractor must post warning signs in areas treated with chemicals.
- d. Contractor must paint City-approved stencil or, preferably, apply steel medallions to, any new catch basins with the "No Dumping, Flows to Creek" stencil or medallion markers available from the City's Public Works Environmental Division.

(7) *Activity-Specific Requirements.* The following requirements apply if the Project includes the listed activities.

- a. Dewatering or Pumping Operations.
 - (i) Contractor must not discharge water to the storm drain system. Water discharges must be directed to a pervious, landscaped, or bioretention area where water will be infiltrated without causing runoff, or routed to the sanitary sewer system after obtaining a permit from Cupertino Sanitary District or Sunnyvale Sanitary, depending on which has jurisdictional authority, or contained using a Baker tank or other means to collect the water for re-use or safe and legal disposal.

Contractor may contact the City's Environmental Division for more information on these control measures.

(ii) Contractor must obtain approval of the Engineer for any control measure in advance.

(iii) Contractor must reuse water for other needs, including but not limited to dust control or irrigation, to the maximum extent practicable.

b. Paving Operations.

(i) When rain is forecast within 24 hours or during wet weather, the Engineer may require that paving be delayed for more suitable conditions.

(ii) The Engineer may direct Contractor to protect drainage courses by using control measures, including but not limited to, earth dike, straw bale, and sand bag, to divert runoff or trap and filter sediment. Contractor must refer to California Storm Water Best Management Practice Handbook for these control measures.

(iii) Contractor must place drip pans or absorbent material under paving equipment when not in use.

(iv) Contractor must securely cover catch basins and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.

(v) Contractor must remove, clean and reapply or replace catch basin covers as often as needed to ensure protection of the storm drain system from any material other than rain.

(vi) Before Final Completion, Contractor must remove and dispose of all catch basin covers and material trapped by the covers. If Contractor fails to remove and dispose of the covers and materials trapped, City reserves the right to delay final inspection and/or deduct monies from payments due Contractor to compensate the City for its additional costs for removal and disposal of catch basin protection (BMPs).

(vii) If the paving operation includes an on-site mixing plant, Contractor must comply with Santa Clara County General Industrial Activities Storm Water Permit requirements.

(viii) Contractor must preheat, transfer or load hot bituminous material away from drainage systems or watercourses.

(ix) Contractor will not sweep or wash down excess sand (placed as part of a sand seal or to absorb excess oil) into streets, gutters, storm drains, or creeks. Contractor must either collect the sand and return it to the stockpile, or dispose of it in a trash container. Contractor will not use water to wash down fresh asphalt concrete pavement.

c. Saw Cutting.

(i) Contractor must use as little water as possible during saw cutting and grinding operations.

(ii) Contractor must cover or barricade catch basins using control measures, including but not limited to as filter fabric, straw bales, sand bags, and fine gravel dams, to keep slurry out of the storm drain system. When protecting a catch basin, Contractor must ensure that the entire opening is covered. Contractor must refer to California Storm Water Best Management Practice Handbook for these control measures.

(iii) Contractor must remove, clean and reapply or replace catch basin covers.

(iv) Before Final Completion, Contractor must remove and dispose of all catch basin covers.

(v) Contractor must shovel, absorb or vacuum saw cut slurry and pick up the waste prior to moving to the next location or at the end of each working day, whichever is sooner.

(vi) If saw cut slurry enters catch basins, Contractor must remove the slurry from the storm drain system immediately.

d. Traffic Detector Loop Installation and Repair.

(i) Contractor must protect nearby storm drain inlets prior to cutting or flushing slot for traffic detector loops. Contractor must block or berm around nearby storm drain inlets using sand bags or an equivalent barrier or use absorbent materials such as pads, pillows and socks to contain slurry.

(ii) Before Final Completion, Contractor must remove all sand bags and equivalent barriers and absorbent materials from the site and sweep the area clean and away from the storm drain inlet.

(iii) Contractor must clean up residues by sweeping up as much material as possible and must dispose of material properly.

e. Concrete, Grout and Mortar Waste Management.

(i) Contractor must avoid mixing excess amounts of fresh concrete or cement mortar on-site.

(ii) Contractor must store concrete, grout and mortar away from drainage areas and ensure that these materials do not enter the storm drain system.

(iii) Contractor will not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.

(iv) Contractor must perform washout of concrete trucks or equipment off-site or in a designated area on-site where the

water will flow onto dirt or into a temporary pit in a dirt area. Contractor must let the water percolate into the soil and dispose of the hardened concrete in a trash container. If a suitable dirt area is not available, Contractor must collect the wash water and remove it off-site.

(v) Contractor will prevent creating runoff by draining water from washing of exposed aggregate concrete to a dirt area. If a suitable dirt area is not available, Contractor must collect the wash water and remove it off-site.

(vi) Before Final Completion, Contractor must remove all protective measures and treatment materials and sweep the site clean.

(vii) Contractor must collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in a trash container.

f. Painting.

(i) Contractor must conduct cleaning of painting equipment and tools in a designated area that will not allow run-on of storm water or runoff of spills.

(ii) Contractor will not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drains or creeks.

(iii) Contractor will remove as much excess paint as possible from brushes, rollers and equipment before starting cleanup.

(iv) To the maximum extent practicable and with permission from Cupertino Sanitary District, Contractor will dispose of wash water from aqueous cleaning of equipment and tools to the sanitary sewer.

(v) If Contractor cannot dispose of wash water to the sanitary sewer, Contractor must direct wash water onto dirt area and spade in.

(vi) To the maximum extent practicable, Contractor will filter paint thinner and solvents for reuse.

(vii) Contractor must dispose of thinners, solvents, oil and water-based paint, and sludge from cleaning of equipment and tools as hazardous waste, as described in these General Conditions.

(viii) Contractor must store paint, solvents, chemicals, and waste materials in compliance with the City of Cupertino Hazardous Materials Storage Ordinance and all applicable state and federal regulations. Contractor must store these materials in a designated area that will not allow run-on of storm water or runoff of spills.

- (ix) Contractor must dispose of dry or empty paint cans and buckets, old brushes, rollers, rags, and drop cloths in the trash.
- g. Earthwork.
 - (i) Contractor must use the BMPs for erosion and sedimentation in either the California Storm Water Best Management Practice Handbook - Construction Activity or the ABAG Manual of Standards for Erosion and Sediment Control Measures.
- h. Thermoplastic.
 - (i) Contractor must transfer and load hot thermoplastic away from drainage systems or watercourses.
 - (ii) Contractor must sweep thermoplastic grindings into plastic bags. Yellow thermoplastic grindings may require special handling as they may contain paint.
- i. Pesticide Usage and Pest Management.
 - (i) Contractor must follow all federal, state, and local policies (including the City's Integrated Pest Management Policy), laws, and regulations governing the use, storage, and disposal of pesticides and training of pest control advisors and applicators.
 - (ii) Contractor must submit pest management control methods to Engineer for approval. Such control methods may include, but are not limited to: no controls; physical or mechanical methods; environmental controls (mulching, pest-resistant vegetation); biological controls (predators, parasites, etc.); less toxic controls (soaps, oils, etc.); and hot water.
 - (iii) Contractor must notify and receive permission from the Engineer and the Public Works Environmental Division before applying any pesticides.
 - (iv) If permitted to use pesticides, Contractor must use the least toxic pesticides available and the use and type of such pesticides must be approved by the City. The City will consider the LD50, overall risk to the applicator, and impact to the environment when approving the use of pesticides.
 - (v) Contractor must apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging non-degraded pesticides in stormwater runoff. Contractor will not apply pesticides if rain is expected.
 - (vi) Contractor must mix and apply only as much material as is necessary for treatment. Contractor must calibrate application equipment prior to and during use to ensure desired application rate.

(vii) Contractor will not mix or load pesticides in application equipment adjacent to a storm drain inlet culvert or watercourse.

(viii) Contractor will not use Clopyralid, Diazinon, Chlorpyrifos, Chloradane, DDT, Dieldrin or other organophosphates. Fipronil and pyrethroids including, but not limited to Deltamethrin and Bifenthrin, will not be applied on City property.

(ix) Contractor must submit monthly summaries of pesticide use to the Public Works Environmental Division on appropriate City form. Information provided must include, at a minimum, the product used, the method of application, date applied, the area to which it is applied, and the amount applied.

7.21 Traffic Control and Public Safety

A. **Fences and Barriers.** Contractor must furnish, erect, and maintain fences, barriers, lights, and signs, and must provide flagging and guards as necessary to give adequate warning to the public of the construction and of any dangerous condition at Contractor's sole cost and expense. City must approve all signs as to size, wording, and location. City, in its sole discretion, may direct Contractor to implement additional measures. Contractor may be required to cover certain signs which regulate or direct public traffic to roadways that are not open to traffic. The Engineer will determine which signs must be covered.

B. **Manual on Uniform Traffic Control Devices (MUTCD).** Notwithstanding the requirements of this Section 7.21, all fences, barriers, signs, lights, flags, and other warning and safety devices and their use must conform to the requirements of Part 6 of the United States Department of Transportation MUTCD and the MUTCD California Supplement.

C. **Sign Conflicts.** Signs and other protective devices furnished and erected by Contractor will not obscure the visibility of, nor conflict in intent, meaning, and function of, existing signs, lights, and traffic control devices or any construction area signs and traffic control devices

D. **Public Access.** Contractor must conduct operations in the manner that offers the least possible obstruction and inconvenience to the public. Contractor must complete the Work in a manner that allows for access to public rights-of-way. Unless otherwise provided in the Contract Documents, all public traffic must be permitted to pass through the Work with as little inconvenience and delay as possible. Where possible, public traffic must be routed on new or existing paved surfaces.

E. **Public Spills.** Spillage resulting from hauling operations along or across any public right-of-way must be removed immediately by Contractor at Contractor's sole cost and expense.

F. **Existing Traffic Signals.** Existing traffic signals and highway lighting must be kept in operation and available for routine maintenance during construction.

G. **Abutting Properties.** Construction operations must be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners. Contractor must maintain convenient access to driveways, houses, and buildings, and temporary approaches to crossings or intersecting highways must be provided and kept in good condition. When an abutting property owner's access across the right-of-way line

is to be eliminated or replaced by other access facilities, the existing access will not be closed until the replacement access facilities are usable.

H **Lane Closures.** Lane closures are not permitted before 7:00 A.M. or after 5:00 P.M. from Monday through Friday or as otherwise specified in the Special Conditions or Specifications. City may, at its sole discretion, approve lane closures during this time upon written request from Contractor. Contractor must maintain a minimum of two travel lanes for traffic use (one in each direction) at all times.

I. **Costs.** Contractor is solely responsible for all costs for all required traffic control and public safety measures.

7.22 Noise Control. Contractor must comply with all applicable noise control laws, ordinances, regulations and rules. Noise control requirements apply to all equipment used for the Work or related to the Work, including trucks, transit mixers or transient equipment that may or may not be owned by Contractor.

7.23 Fire Protection Plan. If a fire protection plan is required for this Project, within 21 days after the date of issuance of the Notice of Award, Contractor must submit to the Engineer a fire protection plan that has been reviewed and approved by the Santa Clara County Fire Department. In addition to any specified requirements for the fire protection plan, the plan should address all of the following:

- (A) Equipment spark arresters;
- (B) Fire-extinguishing equipment at the Worksite(s);
- (C) Fire response procedures;
- (D) Notification to authorities of any fire;
- (E) Fire equipment access during performance of the Work and after hours;
- (F) Educating and training workers to comply with the fire protection plan
- (G) Safe storage and transport of flammable materials; and
- (H) Equipment for ventilation and illumination.

Article 8 - Payment

8.1 Schedule of Values. Prior to submitting its first application for payment, Contractor must prepare and submit to the Project Manager a schedule of values apportioned to the various divisions and phases of the Work, including mobilization and demobilization. If a Bid Schedule was submitted with Contractor's bid, the amounts must be consistent with the Bid Schedule. Each line item contained in the schedule of values must be assigned a value such that the total of all items equals the Contract Price. The items must be sufficiently detailed to enable accurate evaluation of the percentage of completion claimed in each application for payment, and the assigned value consistent with any itemized or unit pricing submitted with Contractor's bid.

(A) **Measurements for Unit Price Work.** Materials and items of Work to be paid for on the basis of unit pricing will be measured according to the methods stipulated in the Contract Documents.

(B) **Deleted or Reduced Work.** Contractor will not be compensated for Work that City has deleted or reduced in scope, except for any labor, material or equipment costs for such Work that Contractor reasonably incurred before Contractor learned that the Work could be deleted or reduced. Contractor will only be compensated for those actual, direct and documented costs incurred, and will not be entitled to any mark up for overhead or lost profits.

8.2 Progress Payments. Following the last day of each month, or as otherwise required by the Special Conditions or Specifications, Contractor will submit to the Project Manager a monthly application for payment for Work performed during the preceding month based on the estimated value of the Work performed during that preceding month.

(A) **Application for Payment.** Each application for payment must be itemized to include labor, materials, and equipment incorporated into the Work, and materials and equipment delivered to the Worksite, as well as authorized and approved Change Orders. Each pay application must be supported by Contractor's Bid Schedule or schedule of values and any other substantiating data required by the Contract Documents.

(B) **Payment of Undisputed Amounts.** City will pay the undisputed amount due within thirty (30) days after Contractor has submitted a complete and accurate payment application, subject to Public Contract Code section 20104.50. City will deduct a percentage from each progress payment as retention, as set forth in Section 8.5, below, and may withhold additional amounts as set forth in Section 8.3, below.

8.3 Adjustment of Payment Application. City may adjust or reject the amount requested, in a payment application, including application for Final Payment, in whole or in part, if the amount requested is disputed or unsubstantiated. Contractor will be notified in writing of the basis for the modifications to the amount requested. City may also deduct or withhold from payment otherwise due based upon any of the circumstances and amounts listed below. Sums withheld from payment otherwise due will be released when the basis for that withholding has been remedied and no longer exists.

(A) For Contractor's unexcused failure to perform the Work as required by the Contract Documents, including correction or completion of punch list items, City may withhold or deduct an amount based on the City's estimated cost to correct or complete the Work;

(B) For loss or damage caused by Contractor or its Subcontractors arising out of or relating to performance of the Work or any failure to protect the Worksite, City may deduct an amount based on the estimated cost to repair or replace;

(C) For Contractor's failure to pay its Subcontractors and suppliers when payment is due; City may withhold an amount equal to the total of past due payments.

(D) For Contractor's failure to timely correct rejected, nonconforming, or defective Work, City may withhold or deduct an amount based on the City's estimated cost to correct or complete the Work;

(E) For any unreleased stop notice, City may withhold 125% of the amount claimed;

(F) For Contractor's failure to submit any required schedule or schedule update in the manner and within the time specified in the Contract Documents, City may withhold or deduct an amount equal to five percent of the total amount requested;

(G) For Contractor's failure to maintain or submit as-built documents in the manner and within the time specified in the Contract Documents, City may withhold or deduct an amount based on the City's cost to prepare the as-builts;

(H) For Work performed without approved Shop Drawings, when approved Shop Drawings are required before proceeding with the Work, City may deduct an amount based on the estimated costs to correct unsatisfactory work or diminution in value;

(I) For fines assessed under the Labor Code, as require by law;

(J) For any other costs or charges that may be withheld, deducted from, or offset against payments due, as provided in the Contract Documents, including liquidated damages; or

(K) For failure to release claims as to undisputed amounts pursuant to Section 8.9, below.

8.4 Early Occupancy. Neither City's payment of progress payments nor its partial or full use or occupancy of the Project constitutes acceptance of any part of the Work.

8.5 Retention. City will retain five percent of the amount due on each progress payment, or the percentage stated in the Notice Inviting Bids, whichever is greater, as retention to ensure full and satisfactory performance of the Work.

(A) **Substitution of Securities.** As provided by Public Contract Code section 22300, Contractor may request in writing that it be allowed, at its sole expense, to substitute securities for the retention withheld by City. Any escrow agreement entered into pursuant to this provision must fully comply with Public Contract Code section 22300, and will be subject to approval as to form by City's legal counsel.

(B) **Release of Undisputed Retention.** All undisputed retention, less any amounts that may be assessed as liquidated damages, retained for stop notices, or otherwise withheld under Section 8.3 or Section 8.6, will be released as Final Payment to Contractor no sooner than 35 days following recordation of the notice of completion, and no later than 60 days following acceptance of the Project by City's governing body or authorized designee pursuant to Section 11.1(E) below, or, if the Project has not been accepted, no later than 60 days after the Project is otherwise considered complete under Public Contract Code section 7107(c).

8.6 Setoff. City is entitled to set off any amounts due from Contractor against any payments due to Contractor. City's entitlement to setoff includes progress payments as well as Final Payment and unreleased retention.

8.7 Payment to Subcontractors and Suppliers. Each month, Contractor must promptly pay each Subcontractor and supplier the value of the portion of labor, materials, and equipment incorporated into the Work or delivered to the Worksite by the Subcontractor or supplier during the preceding month. Such payments must be made in accordance with the requirements of the law, and those of the Contract Documents and applicable subcontract or supplier contract.

(A) **Withholding for Stop Notice.** Pursuant to Civil Code section 9358, City will withhold 125% of the amount claimed by an unreleased stop notice, a portion of which may be retained by City for the costs incurred in handling the stop notice claim, including attorneys' fees and costs, as authorized by law.

- (B) **Joint Checks.** City reserves the right to issue joint checks made payable to Contractor and its Subcontractors or suppliers. As a condition to release of payment by a joint check, the joint check payees may be required to execute a joint check agreement in a form provided or approved by City. The joint check payees will be jointly and severally responsible for the allocation and disbursement of funds paid by joint check. Payment by joint check will not be construed to create a contractual relationship between City and a Subcontractor or supplier of any tier beyond the scope of the joint check agreement.
- 8.8 Final Payment.** Contractor's application for Final Payment must comply with the requirements for submitting an application for a progress payment as stated in Section 8.2, above. Corrections to previous progress payments, including adjustments to estimated quantities for unit priced items, may be included in the Final Payment. The date of Final Payment is deemed to be effective on the date that City acts to release undisputed retention as final payment to Contractor, or otherwise provides written notice to Contractor of Final Payment. If the amount due from Contractor to City exceeds the amount of Final Payment, City retains the right to recover the balance from Contractor or its sureties.
- 8.9 Release of Claims.** City may, at any time, require that payment of the undisputed portion of any progress payment or Final Payment (excepting undisputed retention subject to release under Public Contract Code section 7107) be contingent upon Contractor furnishing City with a written waiver and release of all claims against City arising from or related to the portion of Work covered by those undisputed amounts subject to the limits of Public Contract Code section 7100. The waiver and release of claims must be submitted using the City's Release of Claims form. Any disputed amounts may be specifically excluded from the release.
- 8.10 Warranty of Title.** Contractor warrants that title to all work, materials, or equipment incorporated into the Work or delivered to a Worksite, and included in a request for payment will pass over to City free of any claims, liens, or encumbrances upon any payment to Contractor pursuant to this Article 8.

Article 9 - Labor Provisions

- 9.1 Discrimination Prohibited.** Discrimination against any prospective or present employee engaged in the Work on grounds of race, color, ancestry, national origin, ethnicity, religion, sex, sexual orientation, age, disability, or marital status is strictly prohibited. Contractor and its Subcontractors are required to comply with all applicable federal and California laws, including the California Fair Employment and Housing Act (Government Code sections 12900 et seq.), Government Code section 11135, and Labor Code sections 1735, 1777.5, 1777.6, and 3077.5.
- 9.2 Labor Code Requirements.**
- (A) **Eight Hour Day.** Under Labor Code section 1810, eight hours of labor constitute a legal day's work under this Contract.
- (B) **Penalty.** Under Labor Code section 1813, Contractor will forfeit to City as a penalty, the sum of \$25.00 for each day during which a worker employed by Contractor or any Subcontractor is required or permitted to work more than eight hours in any one calendar day or more than 40 hours per calendar week, except if such workers are paid overtime under Labor Code section 1815.

(C) **Apprentices.** Contractor is responsible for compliance with the requirements governing employment and payment of apprentices, as set forth in Labor Code section 1777.5, which is fully incorporated by reference.

(D) **Notices.** Under Labor Code section 1771.4, Contractor is required to post all job site notices prescribed by law or regulation.

9.3 Prevailing Wages. Each worker performing Work under this Contract that is covered under Labor Code section 1720 or 1720.9, including cleanup at the Project site, must be paid at a rate not less than the prevailing wage as defined in sections 1771 and 1774 of the Labor Code. The prevailing wage rates are on file with the City and available online at <http://www.dir.ca.gov/dlsr>. Contractor must post a copy of the applicable prevailing rates at the Worksite.

(A) **Penalties.** Under Labor Code section 1775, Contractor and any Subcontractor will forfeit to City as a penalty up to \$200.00 for each calendar day, or portion a day, for each worker paid less than the applicable prevailing wage rate. Contractor must also pay each worker the difference between the applicable prevailing wage rate and the amount actually paid to that worker.

(B) **Federal Requirements.** If this Project is subject to federal prevailing wage requirements in addition to California prevailing wage requirements, Contractor and its Subcontractors are required to pay the higher of the current applicable prevailing wage rates under federal law, available online at <http://www.access.gpo.gov/davisbacon/ca.html>.

9.4 Payroll Records. Contractor must comply with the provisions of Labor Code sections 1776 and 1812 and all implementing regulations, which are fully incorporated by this reference, including requirements for electronic submission of payroll records to the DIR.

(A) **Contractor and Subcontractor Obligations.** Contractor and each Subcontractor must keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in connection with the Work. Each payroll record must contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

- (1) The information contained in the payroll record is true and correct; and
- (2) Contractor or the Subcontractor has complied with the requirements of Labor Code sections 1771, 1811, and 1815 for any Work performed by its employees on the Project.

(B) **Certified Record.** A certified copy of an employee's payroll record must be made available for inspection or furnished to the employee or his or her authorized representative on request, to City, to the Division of Labor Standards Enforcement, to the Division of Apprenticeship Standards of the DIR, and as further required by the Labor Code.

(C) **Enforcement.** Upon notice of noncompliance with Labor Code section 1776, Contractor or Subcontractor has ten days in which to comply with requirements of this section. If Contractor or Subcontractor fails to do so within the ten day period, Contractor or Subcontractor will forfeit a penalty of \$100.00 per day, or portion a day, for each worker for whom compliance is required, until strict compliance is achieved. Upon

request by the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement, these penalties will be withheld from progress payments then due.

- 9.5 Labor Compliance.** Under Labor Code section 1771.4, the Contract for this Project is subject to compliance monitoring and enforcement by the DIR.

Article 10 - Safety Provisions

- 10.1 Safety Precautions and Programs.** Contractor and its Subcontractors are fully responsible for safety precautions and programs, and for the safety of persons and property in the performance of the Work. Contractor and its Subcontractors must at all times comply with all applicable safety laws, rules and regulations and seek to avoid injury, loss, or damage to persons or property by taking reasonable steps to protect its employees and other persons at the Worksite, materials and equipment stored on or off site, and property at or adjacent to the Worksite.

(A) **Reporting Requirements.** Contractor must immediately provide a written report to City of all recordable accidents and injuries occurring at the Worksite. If Contractor is required to file an accident report with a government agency, Contractor will provide a copy of the report to City.

(B) **Legal Compliance.** Contractor's safety program must comply with the applicable legal and regulatory requirements. Contractor must provide City with copies of all notices required by law or regulation.

(C) **Contractor's Obligations.** Any damage or loss caused by Contractor arising from the Work which is not insured under property insurance must be promptly remedied by Contractor.

(D) **Remedies.** If City determines, in its sole discretion, that any part of the Work or Worksite is unsafe, City may, without assuming responsibility for Contractor's safety program, require Contractor or its Subcontractor to cease performance of the Work or to take corrective measures to City's satisfaction. If Contractor fails to promptly take the required corrective measures, City may perform them and deduct the cost from the Contract Price. Contractor agrees it is not entitled to submit a Claim for damages, for an increase in Contract Price, or for a change in Contract Time based on Contractor's compliance with City's request for corrective measures pursuant to this provision.

- 10.2 Hazardous Materials.** Unless otherwise specified in the Contract Documents, this Contract does not include the removal, handling, or disturbance of any asbestos or other Hazardous Materials. If Contractor encounters materials on the Worksite that Contractor reasonably believes to be asbestos or other Hazardous Materials, and the asbestos or other Hazardous Materials have not been rendered harmless, Contractor may continue Work in unaffected areas reasonably believed to be safe, but must immediately cease work on the area affected and report the condition to City. No asbestos, asbestos-containing products or other Hazardous Materials may be used in performance of the Work.

- 10.3 Material Safety.** Contractor is solely responsible for complying with section 5194 of Title 8 of the California Code of Regulations, including by providing information to Contractor's employees about any hazardous chemicals to which they may be exposed in the course of the Work. A hazard communication program and other forms of warning and training about such exposure must be used. Contractor must also maintain Material Safety Data Sheets ("MSDS") at the Worksite, as required by law, for materials or substances used or

consumed in the performance of the Work. The MSDS will be accessible and available to Contractor's employees, Subcontractors, and City.

(A) **Contractor Obligations.** Contractor is solely responsible for the proper delivery, handling, use, storage, removal, and disposal of all materials brought to the Worksite and/or used in the performance of the Work. Contractor must notify the Engineer if a specified product or material cannot be used safely.

(B) **Labeling.** Contractor must ensure proper labeling on any material brought onto the Worksite so that any persons working with or in the vicinity of the material may be informed as to the identity of the material, any potential hazards, and requirements for proper handling, protections, and disposal.

10.4 Hazardous Condition. Contractor is solely responsible for determining whether a hazardous condition exists or is created during the course of the Work, involving a risk of bodily harm to any person or risk of damage to any property. If a hazardous condition exists or is created, Contractor must take all precautions necessary to address the condition and ensure that the Work progresses safely under the circumstances. Hazardous conditions may result from, but are not limited to, use of specified materials or equipment, the Work location, the Worksite condition, the method of construction, or the way any Work must be performed.

Article 11 - Completion and Warranty Provisions

11.1 Final Completion.

(A) **Final Inspection.** When the Work required by this Contract is fully performed, Contractor must provide written notification to City requesting final inspection. The Engineer will schedule the date and time for final inspection, which must include Contractor's primary representative for this Project and its superintendent. Based on that inspection, City will prepare a punch list of items that are incomplete, incorrectly installed, or not operating as required by the Contract Documents. The omission of any such item from this punch list will not relieve Contractor from fulfilling all requirements of the Contract Documents.

(B) **Punch List.** City will deliver the punch list to Contractor and will specify the time by which all of the punch list items must be completed or corrected. The punch list may include City's estimated cost to complete each punch list item if Contractor fails to do so within the specified time.

(C) **Requirements for Final Completion.** Final Completion will be achieved upon completion or correction of all punch list items, as verified by City inspection, and upon satisfaction of all other Contract requirements, including any commissioning required under the Contract Documents and submission of all final submittals, including a warranty bond as required under Section 4.4, instructions and manuals as required under Section 7.10, and as-built drawings as required under Section 7.11, all to City's satisfaction.

(D) **Acceptance.** The Project will be considered accepted upon City Council action during a public meeting to accept the Project, or if the Engineer is authorized to accept the Project, the Project will be considered accepted upon the date of the Engineer's issuance of a written notice of acceptance. The City may elect, acting in its sole discretion, to accept the Project as complete subject to exceptions for punch list items that are not completed within the time specified in the punch list.

(E) **Final Payment.** Final Payment and release of retention, less any sums withheld pursuant to the provisions of the Contract Documents, will not be made sooner than 35

days after recordation of the notice of completion. If Contractor fails to complete all of the punch list items within the specified time, City may withhold up to 150% of City's estimated cost to complete each of the remaining items from Final Payment.

11.2 Warranty.

(A) **General.** Contractor warrants that all materials and equipment will be new unless otherwise specified, of good quality, in conformance with the Contract Documents, and free from defective workmanship and materials. Contractor further warrants that the Work will be free from material defects not intrinsic in the design or materials required in the Contract Documents. At City's request, Contractor must furnish satisfactory evidence of the quality and type of materials and equipment furnished. Contractor's warranty does not extend to damage caused by normal wear and tear, or improper use or maintenance.

(B) **Warranty Period.** Contractor's warranty must guarantee its Work for a period of one year from the date of recordation of the notice of completion (the "Warranty Period"), except when a longer guarantee is provided by a supplier or manufacturer or is required by the Specifications or Special Conditions. Contractor must obtain from its Subcontractors, suppliers and manufacturers any special or extended warranties required by the Contract Documents.

(C) **Warranty Documents.** As a condition precedent to acceptance, Contractor must supply City with all warranty and guarantee documents relevant to equipment and materials incorporated into the Work and guaranteed by their suppliers or manufacturers.

(D) **Subcontractors.** The warranty obligations in the Contract Documents apply to Work performed by Contractor and its Subcontractors, and Contractor agrees to be co-guarantor of such Work.

(E) **Contractor's Obligations.** Upon written notice from City to Contractor of any defect in the Work discovered during the Warranty Period, Contractor or its responsible Subcontractor must promptly correct the defective Work at its own cost. Contractor's obligation to correct defects discovered during the Warranty Period will continue past the expiration of the Warranty Period as to any defects in Work for which Contractor was notified prior to expiration of the Warranty Period.

(F) **City's Remedies.** If Contractor or its responsible Subcontractor fails to correct defective Work within ten days following notice by City, or sooner if required by the circumstances, Contractor expressly agrees that City may correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor must reimburse City for its costs within 30 days following City's submission of a demand(s) for payment pursuant to this provision. If City is required to initiate legal action to compel Contractor's compliance with this provision, and City is the prevailing party in such action, Contractor and its surety are solely responsible for all of City's attorney's fees and legal costs expended to enforce Contractor's warranty obligations herein in addition to any and all costs City incurs to correct the defective Work.

(G) **Emergency Repairs.** In cases of emergency where any delay in correcting defective Work could cause harm, loss or damage, Contractor expressly agrees that City may immediately correct the defects to conform with the Contract Documents at Contractor's sole expense. Contractor or its surety must reimburse City for its costs within 30 days following City's submission of a demand(s) for payment pursuant to this provision. If City is required to initiate legal action to compel Contractor's compliance with this provision, and City is the prevailing party in such action, Contractor and its surety are solely responsible for all of City's attorney's fees and legal costs expended to enforce

Contractor's warranty obligations herein in addition to any and all costs City incurs to immediately correct the defective Work, including any associated overtime charges.

11.3 Use Prior to Final Completion. City reserves the right to occupy or make use of the Project, or any portions of the Project, prior to Final Completion if City has determined that the Project or portion of it is in a condition suitable for the proposed occupation or use, and that it is in its best interest to occupy or make use of the Project, or any portions of it, prior to Final Completion. City will notify Contractor in writing of its intent to occupy or make use of the Project or any portions of the Project, pursuant to this provision.

(A) **Non-Waiver.** Occupation or use prior to Final Completion will not operate as acceptance of the Work or any portion of it, nor will it operate as a waiver of any of City's rights or Contractor's duties pursuant to these Contract Documents, and will not affect nor bear on the determination of the time of substantial completion with respect to any statute of repose pertaining to the time for filing an action for construction defect.

(B) **City's Responsibility.** City will be responsible for the cost of maintenance and repairs due to normal wear and tear with respect to those portions of the Project that are being occupied or used before Final Completion. The Contract Price or the Contract Time may be adjusted pursuant to the applicable provisions of these Contract Documents if, and only to the extent that, any occupation or use under this Section actually adds to Contractor's cost or time to complete the Work within the Contract Time.

11.4 Substantial Completion. For purposes of determining "substantial completion" with respect to any statute of repose pertaining to the time for filing an action for construction defect, "substantial completion" is deemed to mean the last date that Contractor or any Subcontractor performs Work on the Project prior to recordation of the notice of completion, except for warranty work performed under this Article.

Article 12 - Dispute Resolution

12.1 Claims. This Article applies to and provides the exclusive procedures for any Claim arising from or related to the Contract or performance of the Work.

(A) **Definition.** "Claim" means a separate demand by Contractor, submitted in writing by registered or certified mail with return receipt requested, for change in the Contract Time, including a time extension or relief from liquidated damages, or a change in the Contract Price, that has previously been submitted to City in accordance with the requirements of the Contract Documents, and which has been rejected or disputed by City, in whole or in part.

(B) **Limitations.** A Claim may only include the portion of a previously rejected demand that remains in dispute between Contractor and City. With the exception of any dispute regarding the amount of money actually paid to Contractor as Final Payment, Contractor is not entitled to submit a Claim demanding a change in the Contract Time or the Contract Price, which has not previously been submitted to City in full compliance with Article 5 and Article 6, and subsequently rejected in whole or in part by City.

(C) **Scope of Article.** This Article is intended to provide the exclusive procedures for submission and resolution of Claims of any amount, and applies in addition to the provisions of Public Contract Code section 9204 and sections 20104 et seq., which are incorporated by reference herein.

(D) **No Work Delay.** Notwithstanding the submission of a Claim or any other dispute between the parties related to the Project or the Contract Documents, Contractor must

perform the Work and may not delay or cease Work pending resolution of the Claim or other dispute, but must continue to diligently prosecute the performance and timely completion of the Work, including the Work pertaining to the Claim or other dispute.

12.2 Claims Submission. The following requirements apply to any Claim subject to this Article:

(A) **Substantiation.** The Claim must be submitted to City in writing, clearly identified as a “Claim” submitted pursuant to this Article 12, and must include all of the documents necessary to substantiate the Claim including the Change Order request that was rejected in whole or in part, and a copy of City’s written rejection that is in dispute. The Claim must clearly identify and describe the dispute, including relevant references to applicable portions of the Contract Documents, and a chronology of relevant events. Any Claim for additional payment must include a complete, itemized breakdown of all labor, materials, taxes, insurance, and subcontract, or other costs. Substantiating documentation such as payroll records, receipts, invoices, or the like, must be submitted in support of each claimed cost. Any Claim for an extension of time or delay costs must be substantiated with a schedule analysis and narrative depicting and explaining claimed time impacts.

(B) **Claim Format.** A Claim must be submitted in the following format:

(1) General introduction, specifically identifying the submission as a “Claim” submitted under this Article 12.

(2) Relevant background information, including identification of the specific demand at issue, and the date of City’s rejection of that demand.

(3) Detailed explanation of the issue(s) in dispute. For multiple issues, separately number and identify each issue and include the following for each separate issue:

- a. The background of the issue, including references to relevant provisions of the Contract Documents;
- b. A succinct statement of the matter in dispute, including Contractor’s position and the basis for that position;
- c. A chronology of relevant events;
- d. The identification and attachment of all supporting documents (see subsection (A), above, on Substantiation); and
- e. Use of a separate page for each issue.

(4) Summary of issues and damages.

(5) The following certification, executed by Contractor’s authorized representative:

“The undersigned Contractor certifies under penalty of perjury that its statements and representations in this Claim are true and correct. Contractor warrants that this Claim is comprehensive and complete as to the matters in dispute, and agrees that any costs, expenses, or delay claim not included herein are deemed waived. Contractor understands that submission of a Claim which has no basis

in fact or which Contractor knows to be false may violate the False Claims Act (Government Code Section 12650 et seq.).”

(C) **Submission Deadlines.**

(1) A Claim must be submitted within 15 days following the date that City notified Contractor in writing that a request for a change in the Contract Time or Contract Price, duly submitted in compliance with Article 5 and Article 6, has been rejected in whole or in part.

(2) With the exception of any dispute regarding the amount of Final Payment, any Claim must be filed on or before the date of Final Payment, or will be deemed waived.

(3) A Claim disputing the amount of Final Payment must be submitted within 15 days of the effective date of Final Payment, under Section 8.8, above.

(4) Strict compliance with these Claim submission deadlines is necessary to ensure that any dispute may be mitigated as soon as possible, and to facilitate cost-efficient administration of the Project. **Any Claim that is not submitted within the specified deadlines will be deemed waived by Contractor.**

12.3 City’s Response. City will respond within 45 days of receipt of the Claim with a written statement identifying which portion(s) of the Claim are disputed, unless the 45-day period is extended by mutual agreement of City and Contractor or as otherwise allowed under Public Contract Code section 9204. However, if City determines that the Claim is not adequately documented, City may first request in writing, within 30 days of receipt of the Claim, any additional documentation supporting the Claim or relating to defenses to the Claim that City may have against the Claim. If Contractor fails to submit the additional documentation to City within 15 days of receipt of City’s request, the Claim will be deemed waived.

(A) **Additional Information.** If additional information is thereafter required, it may be requested and provided upon mutual agreement of City and Contractor.

(B) **Non-Waiver.** Any failure by City to respond within the times specified above may not be construed as acceptance of the Claim in whole or in part, or as a waiver of any provision of these Contract Documents.

12.4 Meet and Confer. If Contractor disputes City’s written response, or City fails to respond within the specified time, within 15 days of receipt of City’s response, or within 15 days of City’s failure to respond within the applicable 45-day time period under Section 12.3, respectively, Contractor may notify City of the dispute in writing sent by registered or certified mail, return receipt requested, and demand an informal conference to meet and confer for settlement of the issues in dispute. If Contractor fails to dispute City’s response in writing within the specified time, Contractor’s Claim will be deemed waived.

(A) **Schedule Meet and Confer.** Upon receipt of the demand to meet and confer, City will schedule the meet and confer conference to be held within 30 days, or later if needed to ensure the mutual availability of each of the individuals that each party requires to represent its interests at the meet and confer conference.

(B) **Location for Meet and Confer.** The meet and confer conference will be scheduled at a location at or near City’s principal office.

(C) **Written Statement After Meet and Confer.** Within ten working days after the meet and confer has concluded, City will issue a written statement identifying which portion(s) of the Claim remain in dispute, if any.

(D) **Submission to Mediation.** If the Claim or any portion remains in dispute following the meet and confer conference, within ten working days after the City issues the written statement identifying any portion(s) of the Claim remaining in dispute, the Contractor may identify in writing disputed portion(s) of the Claim, which will be submitted for mediation, as set forth below.

12.5 Mediation and Government Code Claims.

(A) **Mediation.** Within ten working days after the City issues the written statement identifying any portion(s) of the Claim remaining in dispute following the meet and confer, City and Contractor will mutually agree to a mediator, as provided under Public Contract Code section 9204. Mediation will be scheduled to ensure the mutual availability of the selected mediator and all of the individuals that each party requires to represent its interests. If there are multiple Claims in dispute, the parties may agree to schedule the mediation to address all outstanding Claims at the same time. The parties will share the costs of mediation equally, except costs incurred by each party for its representation by legal counsel or any other consultants.

(B) **Government Code Claims.**

(1) Timely presentment of a Government Code Claim is a condition precedent to filing any legal action based on or arising from the Contract.

(2) The time for filing a Government Code Claim will be tolled from the time Contractor submits its written Claim pursuant to Section 12.2, above, until the time that Claim is denied in whole or in part at the conclusion of the meet and confer process, including any period of time used by the meet and confer process. However, if the Claim is submitted to mediation, the time for filing a Government Code Claim will be tolled until conclusion of the mediation, including any continuations, if the Claim is not fully resolved by mutual agreement of the parties during the mediation or any continuation of the mediation.

12.6 Tort Claims. This Article does not apply to tort claims and nothing in this Article is intended nor will be construed to change the time periods for filing tort-based Government Code Claims.

12.7 Arbitration. It is expressly agreed, under California Code of Civil Procedure section 1296, that in any arbitration to resolve a dispute relating to this Contract, the arbitrator's award must be supported by law and substantial evidence.

12.8 Damages. Contractor bears the burden of proving entitlement to and the amount of any claimed damages. Contractor is not entitled to damages calculated on a total cost basis, but must prove actual damages. Contractor is not entitled to recovery of any alleged home office overhead. The Eichleay Formula or similar formula may not be used for any recovery under the Contract. Contractor is not entitled to special, incidental, or consequential damages, including home office overhead or any form of overhead not directly incurred at the Worksite; lost profits; loss of productivity; lost opportunity to work on other projects; diminished bonding capacity; increased cost of financing for the Project; extended capital costs; non-availability of labor, material or equipment due to delays; or any other indirect loss arising from the Contract.

- 12.9 Other Disputes.** The procedures in this Article 12 will apply to any and all disputes or legal actions, in addition to Claims, arising from or related to this Contract, unless and only to the extent that compliance with a procedural requirement is expressly and specifically waived by City. Nothing in this Article is intended to delay suspension or termination under Article 13.

Article 13 - Suspension and Termination

- 13.1 Suspension for Cause.** In addition to all other remedies available to City, if Contractor fails to perform or correct work in accordance with the Contract Documents, City may immediately order the Work, or any portion of it, suspended until the cause for the suspension has been eliminated to City's satisfaction.
- (A) **Failure to Comply.** Contractor will not be entitled to an increase in Contract Time or Contract Price for a suspension occasioned by Contractor's failure to comply with the Contract Documents.
- (B) **No Duty to Suspend.** City's right to suspend the Work will not give rise to a duty to suspend the Work, and City's failure to suspend the Work will not constitute a defense to Contractor's failure to comply with the requirements of the Contract Documents.
- 13.2 Suspension for Convenience.** City reserves the right to suspend, delay, or interrupt the performance of the Work in whole or in part, for a period of time determined to be appropriate for City's convenience, and not due to any act or omission by Contractor or its Subcontractors. Upon notice by City pursuant to this provision, Contractor must immediately suspend, delay, or interrupt the Work and secure the Project site as directed by City except for taking measures to protect completed or in progress Work as directed in the suspension notice. The Contract Price and the Contract Time will be equitably adjusted by Change Order to reflect the cost and delay impact occasioned by such suspension for convenience. However, the time for completing the Project will only be extended if the suspension causes or will cause delay in Final Completion.
- 13.3 Termination for Default.** Contractor may be deemed in default for a material breach of or inability to perform the Contract, including Contractor's refusal or failure to supply sufficient skilled workers, proper materials, or equipment to perform the Work within the Contract Time; refusal or failure to make prompt payment to its employees, Subcontractors, or suppliers or to correct rejected work; disregard of laws, regulations, ordinances, rules, or orders of any public agency with jurisdiction over the Project; lack of financial capacity to complete the Work within the Contract Time; or responsibility for any other material breach of the Contract requirements.
- (A) **Notice.** Upon City's determination that Contractor is in default, City may provide Contractor and its surety written notice of default and intent to terminate the Contract.
- (B) **Termination.** Within seven calendar days after notice of intent to terminate for default has been given, unless the default is cured or arrangements to cure the default have been made and memorialized in writing, to City's satisfaction, City may terminate the Contract by written notice to Contractor with a copy to Contractor's surety.
- (C) **Waiver.** Time being of the essence in the performance of the Work, if Contractor's surety fails to arrange for completion of the Work in accordance with the Performance Bond, within seven calendar days from the date of the notice of termination, Contractor's surety will be deemed to have waived its right to complete the Work under the Contract, and City may immediately make arrangements for the completion of the Work through use of its own forces, by hiring a replacement contractor, or by any other

means that City determines advisable under the circumstances. Contractor and its surety will be jointly and severally liable for any additional cost incurred by City to complete the Work following termination. In addition, City will have the right to use any materials, supplies, and equipment belonging to Contractor and located at the Worksite for the purposes of completing the remaining Work.

(D) **Wrongful Termination.** If a court of competent jurisdiction or an arbitrator later determines that the termination for default was wrongful, the termination will be deemed to be a termination for convenience, and Contractor's damages will be strictly limited to the compensation provided for termination for convenience under Section 13.4, below. Contractor waives any claim for any other damages for wrongful termination including consequential damages, lost opportunity costs or lost profits.

13.4 Termination for Convenience. City reserves the right to terminate all or part of the Contract for convenience upon written notice to Contractor. Upon receipt of such notice, Contractor must: immediately stop the Work, including under any terms or conditions that may be specified in the notice; comply with City's instructions to protect the completed Work and materials; and use its best efforts to minimize further costs. Subject to City's directions in the notice, Contractor must not place further orders or enter into new subcontracts for materials, equipment, services or facilities, except as may be necessary to complete any portion of the Work that is not terminated. Contractor must also promptly cancel, all existing subcontracts that relate to performance of the discontinued Work.

(A) **Compensation to Contractor.** In the event of City's termination for convenience, Contractor waives any claim for damages, including for loss of anticipated profits from the Project. The following will constitute full and fair compensation to Contractor, and Contractor will not be entitled to any additional claim or compensation:

(1) *Completed Work.* The value of its Work satisfactorily performed to date, based on Contractor's schedule of values and unpaid costs for items delivered to the Project site that were fabricated for incorporation in the Work;

(2) *Demobilization.* Actual and substantiated demobilization costs; and

(3) *Markup.* Five percent of the total value of the Work performed as of the date of notice of termination or five percent of the value of the Work yet to be completed, whichever is less, which is deemed to cover all overhead and profit to date.

13.5 Effect of Any Contract Termination. Upon any termination pursuant to this Article, City may enter upon and take possession of the Project and the Work. City may also take possession of, for the sole purpose of completing the Work, all of Contractor's tools, equipment and appliances, and all materials on the Worksite or stored off the Worksite that will be incorporated in the Work. Regardless of any Contract termination, Contractor's obligations for portions of the Work already performed will continue and the provisions of the Contract Documents will remain in effect as to any claim, indemnity obligation, warranties, guarantees, submittals of as-built drawings, instructions, or manuals, or other such rights and obligations arising prior to the termination date.

Article 14 - Miscellaneous Provisions

14.1 Assignment of Unfair Business Practice Claims. Under Public Contract Code section 7103.5, Contractor and its Subcontractors agree to assign to City 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. section 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 Contract or any subcontract. This assignment will be effective at the time City tenders Final Payment to Contractor, without further acknowledgement by the parties.

- 14.2 Provisions Deemed Inserted.** Every provision of law required to be inserted in the Contract Documents is deemed to be inserted, and the Contract Documents will be construed and enforced as though such provision has been included. If it is discovered that through mistake or otherwise that any required provision was not inserted, or not correctly inserted, the Contract Documents will be deemed amended accordingly.
- 14.3 Waiver.** City's waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of the Contract Documents will not be effective unless it is in writing and signed by City. City's waiver of any breach, failure, right, or remedy will not be deemed a waiver of any other breach, failure, right, or remedy, whether or not similar, nor will any waiver constitute a continuing waiver unless specified in writing by City.
- 14.4 Titles, Headings, and Groupings.** The titles and headings used and the groupings of provisions in the Contract Documents are for convenience only and may not be used in the construction or interpretation of the Contract Documents or relied upon for any other purpose.
- 14.5 Statutory and Regulatory References.** With respect to any amendments to any statutes or regulations referenced in these Contract Documents, the reference is deemed to be the version in effect on the date that that bids were due.

END OF GENERAL CONDITIONS

Special Conditions

1. **Insurance Requirements.** The insurance requirements under Section 4.3 are modified for this Contract, as set forth below. Except as expressly stated below, all other provisions in Section 4.3 are unchanged and remain in full force and effect.

1.1 Builders Risk Insurance Waived. The builder's risk insurance policy requirement set forth in subsection 4.3(A)(3) of the General Conditions is hereby waived and does not apply to this Contract.

2. **Work Days and Hours.** Work hours and noise pose a special concern for projects in residential neighborhoods. The City is very concerned for its residents and will diligently enforce the restrictions below.

2.1 Work Hours. 7:00 a.m.-5:00 p.m. local time, weekdays, 9:00 a.m. – 5:00 p.m. on Saturdays, 9:00 – 4:00 p.m. Sundays. Advance authorization required prior to weekend work occurring.

2.2 Equipment and Material Delivery and Off-Haul Hours. No equipment or material may be delivered or off-hauled except between the hours of 7:00 a.m. and 5:00 p.m. No equipment that has a safety back up beeper may be operated before 7:00 a.m. on any day.

2.3 Work Days Only. Work will only be performed on Work Days, as defined in the General Conditions, unless Contractor requests otherwise from City in writing at least 2 working days in advance, and City approves the request in its sole discretion.

2.4 Noise Limitation. No non-construction noise will be allowed, this includes amplified music, radio or other noise not due to construction activities.

3. **Road Closures.** The following conditions apply to closing traffic lanes in order to perform project work.

- Contractor may close down one direction of traffic between the hours of 9:30 am and 2:30 pm only.
- Contractor must submit a site specific traffic control plan that illustrates how traffic, including bicycles and pedestrians will be managed during the closure periods. Plan is to be stamped by a California registered Civil or Traffic Engineer.
- Road closures will not be allowed prior to the City reviewing and accepting the submitted traffic control plan.
- Lane closures will require that a dedicated, certified flagger be on site to control traffic. Flagger must be certified by an approved agency or association.

4. **Submittals for Quality Assurance.** In the Technical Specifications, the City may specify quality assurance requirements, including qualifications for special skills and experience required of the Contractor. For any specified skill, the Contractor may use a subcontractor that specializes in the work and meets the performance requirements or the Contractor may self-perform the work, subject to demonstrating the necessary skill, experience, and/or certifications to perform the work.

The Contractor will submit verification that the materials and labor skills meet the specified requirements prior to implementing the specific work through the submittal process.

5. Lines and Grades Verification.

All Work must be done to the lines, grades, and elevations indicated on the Drawings and Specifications, and in accordance with all applicable codes and laws. Contractor is required to verify forms and other work comply with lines, grades and elevations. Contractor must check the forms in the presence of the City's Project Inspector. This verification does not remove any responsibility of the contractor to correct work that does not meet project requirements or applicable regulations.

6. Pre-Construction Conference. City will designate a date and time for a pre-construction conference with Contractor following Contract execution. Project administration procedures and coordination between City and Contractor will be discussed, and Contractor must present City with the following information or documents at the meeting for City's review and acceptance before the Work commences:

- 6.1** Name, 24-hour contact information, and qualifications of the proposed on-site superintendent;
- 6.2** List of all key Project personnel and their complete contact information, including email addresses and telephone numbers during regular hours and after hours;
- 6.3** Staging plans that identify the sequence of the Work, including any phases and alternative sequences or phases, with the goal of minimizing the impacts on residents, businesses and other operations in the Project vicinity;
- 6.4** If required, traffic control plans associated with the staging plans that are signed and stamped by a licensed traffic engineer;
- 6.5** Draft baseline schedule for the Work as required under Section 5.2, to be finalized within 10 days after City issues the Notice to Proceed;
- 6.6** Breakdown of lump sum bid items, to be used for determining the value of Work completed for future progress payments to Contractor;
- 6.7** Schedule with list of Project submittals that require City review, and list of the proposed material suppliers;
- 6.8** Plan for coordination with affected utility owner(s) and compliance with any related permit requirements;
- 6.9** Videotape and photographs recording the conditions throughout the pre-construction Project site, showing the existing improvements and current condition of the curbs, gutters, sidewalks, signs, landscaping, streetlights, structures near the Project such as building faces, canopies, shades and fences, and any other features within the Project area limits; and
- 6.10** Any other documents specified in the Special Conditions or Notice of Award.

7. Construction Manager Role and Authority. CSG Consultants, Inc. is the Construction Manager for this Project. The Construction Manager will assist City in the management of the construction of the Project. The Construction Manager may perform services in the areas of supervising and coordination of the work of Contractor and/or other contractors, scheduling the Work, monitoring the progress of the Work, providing City with evaluations and recommendations concerning the quality of the Work, recommending the approval of progress payments to Contractor, or other services for the Project in accordance with the Construction Manager's contract with City.

- 7.1 Communications.** Contractor must submit all notices and communications relating to the Work directly to the Construction Manager in writing, as follows:

Nourdin Khayata
CSG Consultants, Inc.
550 Pilgrim Drive
Foster City, CA 94404
(650) 522-2524
nourdin@csgengr.com

With a copy to the Engineer:

John Raaymakers
City of Cupertino
10300 Torre Avenue
Cupertino, CA 95014
(408) 777-3100
johnr@cupertino.org

- 7.2 On-Site Management and Communication Procedures.** The Construction Manager will provide and maintain a management team on the Project site to provide contract administration as an agent of City, and will establish and implement coordination and communication procedures among City, the Design Professional, Contractor, and others.
- 7.3 Contract Administration Procedures.** The Construction Manager will establish and implement procedures for reviewing and processing requests for clarifications and interpretations of the Contract Documents, Shop Drawings, samples, other submittals, schedule adjustments, Change Order proposals, written proposals for substitutions, payment applications, and maintenance of logs.
- 7.4 Pre-Construction Conference.** Contractor will attend the Pre-Construction Conference, during which the Construction Manager will review the Contract administration procedures and Project requirements.
- 7.5 Contractor's Construction Schedule.** The Construction Manager will review Contractor's construction schedules and will verify that each schedule is prepared in accordance with the requirements of the Contract Documents.

END OF SPECIAL CONDITIONS

Project Forms

Contractor must use the Project forms provided with these Contract Documents, as specified in the Contract Documents, in addition to any City-required forms provided at the pre-construction conference. The following forms are included in the Project manual:

Substitution Request Form

Indemnity Agreement (Site Investigation)

Release of Claims Form

Substitution Request Form

This Substitution Request Form must be used for each requested substitution, including pre-bid and post-award requests. Reference Section 12 of Instructions to Bidders and/or Section 7.7 of the General Conditions for applicable substitution request requirements. The form must be completed fully and legibly as directed using additional pages if needed, dated, signed and submitted with all attachments via _____ <email/mail/other> to _____ <name and title> at _____ <email/address>.

1. Bidder/Contractor Name: _____

2. Subcontractor/supplier Name (if applicable): _____

3. Precisely identify by Specification, Drawing and/or detail number(s) the specified item that is the subject of this request (the "Specified Item"): _____

4. Identify and describe the proposed substitution ("Proposed Substitution"): _____

5. Explain the reason for requesting substitution of the Specified Item: _____

6. Explain why the Proposed Substitution is equal or superior to the Specified Item. Attach manufacturer's literature, including complete technical data and laboratory test results, if applicable. _____

7. Describe the differences between the Proposed Substitution and the Specified Item:

8. Provide complete and specific information on changes to Drawings and Specifications that will be required for the Proposed Substitution, attaching separate sheets, including drawings, as needed:

9. Explain how the Proposed Substitution will affect dimensions shown on the Drawings:

10. Are the manufacturer's guarantees and warranties on the Proposed Substitution equal or superior to those on the specified items? ___ Yes / ___ No

If yes, describe each difference in detail:

11. If approved, what effect will the substitution have on other contractors, trades, or suppliers?

12. Will granting the requested substitution cause any schedule delay? ___ Yes / ___ No

If yes, explain:

13. What is the estimated increase or decrease in the Contract Price if the Proposed Substitution is approved?

Increase cost by \$ _____ or Decrease cost by \$ _____ or No change _____

14. If the Proposed Substitution has a color or pattern, provide a color board showing Proposed Substitution in relation to the other adjacent colors and patterns.

15. List each document attached to this Substitution Request Form:

_____	_____
_____	_____
_____	_____
_____	_____

By signing below, the Bidder or Contractor submitting this request for substitution certifies that the function, appearance, and quality of the Proposed Substitution is equivalent or superior to those of the Specified Item.

Submittal Date: _____

Submitted by:

Bidder/Contractor Name

For Use by City:

____ Accepted ____ Accepted as Noted

Signature

____ Not Accepted ____ Received Too Late

Name / Title

By: _____
City's Representative

Address

Date: _____

City/State/Zip

Remarks: _____

Telephone: _____

Date: _____

Email: _____

END OF DOCUMENT

**Indemnity Agreement
(Site Investigation)**

This Indemnity Agreement for site investigation ("Agreement") is entered into by and between the City of Cupertino ("City") and _____, a licensed contractor and potential bidder ("Bidder") for the City's _____ Project ("Project"), and is effective upon approval and execution by City, below. In consideration of City's permitting Bidder to have access to, and to conduct investigations, tests and/or inspections on, the Project Site ("Site"), Bidder hereby agrees as follows:

1. To the fullest extent permitted by law, Bidder will indemnify, defend, and hold harmless City, its Council, officers, officials, employees, agents, volunteers and consultants (individually, an "Indemnitee," and collectively the "Indemnitees") from and against any and all liability, loss, damage, claims, causes of action, demands, charges, costs and expenses (including, without limitation, attorney fees, expert witness fees, paralegal fees, and fees and costs of litigation or arbitration) (collectively, "Liability") of every nature arising out of or in connection with investigation of the Site, including, but not limited to, testing, inspections, ingress or egress (collectively, "Site Investigation"), by Bidder, its employees, prospective or current subcontractors, representatives, or agents regardless of any contributory negligence by any Indemnitee.

2. Bidder assumes all risk for any injury or damages arising from Bidder's entry onto or activities at the Site, and fully waives and releases the City from any liability for any injury or damages arising from or pertaining to existing conditions at the Site. Bidder 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 or her favor at the time of executing the release, which if known by him or her, must have materially affected his or her settlement with the debtor.

3. Bidder will promptly repair any damage to the Site or adjacent property resulting from the Site Investigation, and comply with and be subject to all other requirements set forth in section 8.4, of the Instructions to Bidders (Pre-Bid Investigation).

4. Bidder has attached a certificate(s) of insurance evidencing insurance coverage that meets or exceeds the insurance requirements included in the Project General Conditions, using a form or forms acceptable to the City.

5. This Agreement is fully effective and binding on Bidder regardless of whether Bidder submits a bid for the Project, and regardless of whether Bidder is awarded a contract for the Project.

Bidder Business Name

Date

Signature

Signature

Name/Title (If Corporation: Chairman, President or Vice President)

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

Agreed and Approved by the City of Cupertino:

Signature

Date

Name/Title

Release of Claims

If required by the City of Cupertino for the above-referenced project ("Project"), this Release of Claims form must be completed as indicated, signed and submitted with Contractor's payment application pursuant to Section 8.9 of the Contract General Conditions. Unless otherwise specified, all defined terms in this Release of Claims form have the same meaning as stated in Article 1 of the Contract General Conditions.

Contractor Name: _____
Payment Application Number: _____
Amount Requested: \$ _____

1. Undisputed Amounts. Upon receipt of all undisputed amounts ("Undisputed Amounts") from the City of Cupertino ("City") for Work included in the above-referenced payment application, Contractor releases all claims against the City that relate to the Undisputed Amounts. Contractor's release is a full, final, and general release of all claims, demands, actions, causes of action, obligations, costs, additional compensation, extension of the Contract Time, expenses, damages, losses and liability against the City, its City Council, collectively and individually, and all of City's officers, officials, employees, consultants, inspectors, agents, representatives, assignees or transferees with respect to the Undisputed Amounts.

2. Civil Code Waiver. With respect to the above release for the Undisputed Amounts, Contractor waives the provisions of Civil Code section 1542, which states:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

3. Disputed Claims. Pursuant to Public Contract Code section 7100, Contractor's release and waiver of the claims related to the Undisputed Amounts does not extend to disputed contract claims in stated amount excluded by Contractor, as follows:

Claim No. Date Amount Claimed Description

[Information may be attached on a separate page]

4. Legal Effect. By signing below, Contractor agrees that this Release of Claims will operate as a complete defense for City against any later attempts to seek recovery or damages of any kind against City that relate to the Undisputed Amounts.

5. Authorization and Execution. This Release of Claims must be signed by Contractor's authorized representative. If Contractor is a partnership this Release of Claims must be signed in the partnership name by a general partner with authority to bind the partnership. If Contractor is a corporation this Release of Claims must be signed with the legal name of the corporation,

followed by the signature and title of two officers of the corporation with full authority to bind the corporation to the terms of the Release of Claims, under California Corporation Code section 313. Each individual signing below warrants that he or she is fully authorized to execute this Release of Claims on behalf of Contractor and that it will be binding against Contractor.

Contractor hereby agrees to all terms and conditions of this Release of Claims:

Contractor Business Name

Date

Signature

Signature

Name/Title (If Corporation: Chairman, President or Vice President)

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

Agreed and Approved by the City of Cupertino:

Signature

Date

Name/Title

SECTION 01 36 00 – FIELD ENGINEERING & SURVEY WORK

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section includes specifications for survey services for layout of the Work and for field measurement of work quantities to be determined by surveys.
- B. This Section includes the responsibilities of the Contractor and the City respectively, in terms of survey services.
- C. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 LINES AND GRADES

- A. All control monuments, bench marks, stakes or markers required to establish the lines and grades required for the completion of the Work shall be the responsibility of the Contractor. These would include, but are not limited to, primary horizontal and vertical control, secondary horizontal and vertical control, rough grade, slope stakes, topographic surveys for quality calculations, and construction surveys for layout of civil improvements.

1.03 SURVEYS FOR LAYOUT AND PERFORMANCE

- A. General: The Contractor shall perform all surveys for layout and performance of the Work, produce the field notes, and make all necessary calculations and drawings necessary to carry out such work. The Contractor shall check the relative positions of all monuments and benchmarks to be used. The Contractor shall check such relative positions each time the Contractor uses such monument or benchmark.
- B. Datum: The Contractor shall be responsible for correctly locating all lines and grades required for the construction of the Work from the established reference points and elevations furnished on the Contract Drawings and from published federal, state, or city records which reference the vertical datum.
- C. Equipment and Personnel: The Contractor's instruments and other survey equipment shall be accurate, suitable for the surveys required in accordance with recognized professional standards, and in proper condition and adjustment at all times. The surveys shall be performed under the direct supervision of a Professional Land Surveyor licensed to practice land surveying in California. All surveys and layouts shall be field checked and calculations shall be checked. Attention is directed to Document 0700 General Conditions.
- D. All field notes, sketches and field books will be presented to the Engineer within 2 weeks of construction staking. Contractor's surveyor shall furnish copies of the field notes within 48 hours of performing staking.
- E. Use by the Engineer: The Engineer may at any time use line and grade points and markers established by the Contractor. The Contractor's surveys are a part of the Work and may be checked by the Engineer or representatives of the Engineer at any time. The Contractor shall be responsible for any lines, grades, or measurements which do not comply with specified or proper tolerances, or which are otherwise defective, and for any resultant defects in the Work. The Contractor shall conduct re-surveys or check surveys to correct errors indicated by review of the field notebooks.

1.04 SURVEYS FOR MEASUREMENT FOR PAYMENT

- A. When the Technical Specifications or the Engineer requires items of work to be measured by surveying methods, the Contractor shall perform the surveys. Perform all such surveys, including control surveys run for establishing the measurement reference lines, in the presence of the Engineer who will witness the surveying operation by signing the field notes or keeping duplicate field notes, at the Engineer's option.

1.05 SURVEYING ACCURACY AND TOLERANCES IN SETTING SURVEY STAKES

- A. Control traverse field surveys and computations, including surveys of main control lines to determine alignment of major structure components, shall be performed to an accuracy of at least 1:25000.
- B. The tolerances generally applicable in setting survey stakes shall be as set forth below. Such tolerances shall not supersede stricter tolerances specifically required by the Contract Documents, and shall not otherwise relieve the Contractor of responsibility for measurements in compliance therewith.
- C. Tolerances: Tolerances in setting survey stakes shall not exceed the following:

Kind of Survey Stake or Markers	On Error Tolerant
Markers on hubs and monuments on centerline And offset centerlines	0.01 ft.
Intermediate stakes or markers on centerlines and offset centerlines for: Rough excavation and embankment for roadways, and work not otherwise provided	0.10 ft.
Trimming of excavation and embankment unless otherwise provided	0.10 ft.
Structures and building construction	0.01 ft.
Equipment installation	As required by manufacturer
Trimming or preparation of earth sub-grade for roadways, concrete pipe, and other concrete structures	0.05 ft.
Steel pipe, and work not otherwise provided	0.05 ft.
Steel reinforcement, concrete pipe, and other formed concrete	0.02 ft.

1.06 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Submit name and address of Surveyor or professional engineer to City, including changes as they may occur.
- C. On request of The City, submit documentation to verify accuracy of field engineering work.
- D. Submit certificate signed by registered Civil Engineer or Land Surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.

E. Record Drawings:

1. At project completion, submit complete and accurate full-size hardcopy red-line mark-ups showing all changes and deviations from the bid set documents.
2. Show as-built locations, by coordinates, of all utilities onsite with top of pipe and invert elevations (where applicable) at grade and alignment changes.
3. Completed record drawing mark-ups shall be dated, signed and certified as correct by the Licensed Surveyor or Civil Engineer. The record drawings are not deemed complete until accepted in writing by the City.

1.07 QUALITY ASSURANCE

- A. Qualifications of Surveyor or Engineer: Engage a registered Civil Engineer or licensed Land Surveyor acceptable to both Contractor and Owner and who is qualified to perform land surveying. Furnish to Owner prior to start of work, the name and license (or registration number) issued by the State of California, Board of Registration for Professional Engineers and Land Surveyors. Provide notice to Owner during course of construction should identification of individual responsible for this work change, and obtain approval of Owner for the replacement.
- B. All field engineering services furnished during the course of this project shall be under the direct supervision and control of the named individual Civil Engineer or Land Surveyor.

PART 2- PRODUCTS (NOT USED)

PART 3- EXECUTION

3.01 SURVEY REFERENCE POINTS

- A. Existing horizontal and vertical control points for the Project are those designated on drawings.
- B. Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.
 1. Make no changes or relocations without prior written notice to The City.
 2. Report to The City when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 3. Identify and protect all survey monuments on the site discovered during construction, which are not referenced on the project drawings. Tie out such monuments and notify The City prior to allowing them to be disturbed.
 4. Replace permanent boundary markers disturbed during construction with new permanent monuments and file the required Record of Survey or Corner Record in accordance with the applicable State and County laws, at no additional cost to the Owner.

3.02 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two permanent horizontal and vertical control points on the site, remote from the building area referenced to data established by survey control points.

1. Record locations, with horizontal and vertical data, on Project Record Documents, including description of monuments in place.
- B. Establish lines and levels, locations and dimensions, by instrumentation or similar technical appropriate means:
 1. Site Improvements:
 - a. Provide stakes and elevations for grading, fill and soil placement.
 - b. Utility lines, including, but not limited to, storm drains, sanitary sewers, and electrical lines. Provide adequate horizontal control to locate lines and provide vertical control in proportion to slope of line as required for accurate construction.
 4. Provide grade stakes and elevations as required to construct paved areas, and other areas as required.
 - a. Calculate and layout subgrade elevations and intermediate controls as required to provide smooth transitions between the spot elevations indicated on the plans.
 - b. From time to time, verify the layout of all work by the same methods.
 5. Provide batter boards or other similar control for drainage, utility, and other onsite structures as required.

3.03 RECORDS

- A. Maintain a complete, accurate surveyor's log of all control and survey work as it progresses. Make this log available for reference.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. The work performed under Section 01 36 00, "Field Engineering & Survey Work" will be measured on a lump sum basis.

4.02 PAYMENT

- A. The lump sum contract price paid for Field Engineering & Survey Work shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 01 36 00

SECTION 01 55 26 TRAFFIC CONTROL REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Measures and requirements to control traffic. The Contractor shall supply, place, and maintain all necessary traffic control devices during construction in accordance with the applicable requirements of the City of Cupertino, the California Manual of Uniform Traffic Control Devices, and the traffic control plans approved by the City.

1.02 SUBMITTALS

- A. The Contractor shall submit traffic control plans to the Engineer for approval five (5) working days prior to the pre-construction meeting. Traffic control plans shall conform to the requirements in item number 24 below. All cost and expense for traffic control shall be included in the bid prices for various bid items and no special compensation shall be allowed.
- B. A traffic control plan consistent with the following generally applicable conditions must be approved by the Public Works Department prior to the pre-construction meeting. The Contractor shall supply, place, and maintain all necessary traffic control devices in accordance with the California Manual of Uniform Traffic Control Devices and the following conditions:
- Traffic control plans will include a schedule of construction showing each phase of work and the anticipated method of handling traffic for each phase. Traffic control plans will include a scaled drawing of the street, lane configuration, parking, sidewalk, work area, and the location of signs and cones, etc., to warn, direct, and guide the traffic. For all major intersections, the traffic control plan shall reflect actual (not typical) intersection layout and indicate islands, medians, lane lines, bike lanes, nearby driveways, and note all pavement and lane widths.
 - In general, Contractor shall maintain all vehicular, pedestrian, and bike movements. No total closure of any arterial or collector street will be permitted. City may allow closure of local residential streets but Contractor shall always maintain local and emergency access.
 - The Contractor shall maintain one lane of traffic in each direction at all times on all streets. The clear width of the lane shall be a minimum of 10 feet.
 - A minimum four feet clear sidewalk shall be maintained unless the work makes closure unavoidable, in which case the sidewalk may be closed while working, subject to the approval of the Engineer. However, an alternate pedestrian facility must be provided for the duration of the closure. At intersections, work will be permitted at one corner at a time so pedestrian movements can be maintained through the intersection.

PART 2 - PRODUCTS

- A. All traffic control devices shall conform to Section 12 of the Caltrans Standard Specifications. They are to be in good condition and sufficiently clean so as to be easily visible to traffic.
- B. Flashing arrow boards shall be Type A or Type II as described in Section 6F.56 of the California Manual of Uniform Traffic Control Devices.
- C. Signs to be used for traffic control shall conform to the requirements of the California Manual of Uniform Traffic Control Devices.

PART 3 - EXECUTION

- 1. The Contractor shall conduct operations and schedule cleanup so as to cause the least possible obstruction and inconvenience to traffic, pedestrians, cyclists and adjacent property owners. All work areas shall be swept clean at the end of each day's work and at other times when directed by the Engineer. A mobile street sweeper shall be used wherever practical and dust shall be suppressed to the satisfaction of the Engineer.
- 2. The Contractor shall protect open excavations, trenches, and such during construction with fences, covers, and railings as required, together with signs, lights, and other warning devices sufficient to maintain safe pedestrian, bicycle and vehicular traffic to the satisfaction of the Engineer.
- 3. Damage done by the Contractor during the course of the work to adjacent City, public or private property shall be repaired in kind, or as directed by the Engineer, at the Contractor's expense. This includes the repair of traffic loop detectors, striping, signing, curb markings, etc. Loop detectors must be repaired within one week of the damage.
- 4. The Contractor shall remove all forms, debris, and undesirable material from the job site at the end of each work day.
- 5. The work of restoration, striping and signing, and cleanup, at each location, shall be diligently pursued to completion and at no location shall the work be left partially completed for more than seven working days. Unless authorized by the Engineer, all construction and restoration including striping, signing, curb markings, etc. shall be completed within 15 working days from start of work at any specific location, except loop detectors which must be repaired within seven days.
- 6. No stockpiling of materials or parking of equipment during non-working hours will be allowed on City property, i.e., streets, alleys, parking lots, sidewalks, etc.
- 7. The Contractor's employees are subject to all parking regulations in effect in the City of Cupertino.
- 8. All open trench and excavations must be backfilled and paved with temporary asphalt concrete or non-skid steel plated at the end of each work day. The Contractor shall place 18 inches cold cutback around the edges of steel plates to eliminate the vertical edges.
- 9. The Contractor shall not remove the barricades in the street at any given location until the asphalt concrete patching adjacent to the gutter or the overlay has been done and a hazard to bicycles, pedestrians and motorists no longer exists.

10. Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor at his expense.
11. The Contractor shall place barricades 50 feet on center at the gutter joints and provide one working flasher for each barricade and shall insure that each flasher is maintained in working condition while in use. The Contractor shall not remove the barricades in the street at any given location until the asphalt concrete patching adjacent to the gutter and/or gutter overlay has been done and the hazard to bicyclists and motorists no longer exist.
12. Contractor shall maintain access to all driveways except when actually doing construction within the driveway boundaries, at which time partial access will be maintained unless alternate arrangements can be made with the property owners or tenants in advance. If the driveway to any garage or parking area is to be closed for construction work, prior written approval must be obtained from the property owners and the Engineer. Notice shall be posted by the Contractor 72 hours in advance stating the approximate time the driveway will be closed and reopened.
13. City of Cupertino Truck Routes for all hauling shall be used, as described in Section 10 of the Special Provisions.
14. Contractor shall obtain a Transportation permit from the Public Works Department for any vehicle which exceeds weight or dimensions prescribed in the California Vehicle Code.
15. The Contractor shall provide a certified professional traffic control crew that is independent from the construction activity. This traffic control crew shall be responsible to the Contractor for implementing the traffic control measures detailed in this Contract. The crew is subject to the approval of the Engineer.
16. All signs shall be placed in positions where they convey their message most effectively or as shown on the approved traffic control plan.
17. Type II and III barricades with working flashers shall be used. At least one working flashing light must be installed on each barricade for night work. Flashing lights must be maintained in good working order throughout the duration of the work. Crosswalk closing barricades shall be Type II with a 6" orange border at the base.
18. Signs that are attached to existing poles shall not cause any damage to the poles when they are attached or removed. All of the hardware that is used when attaching signs to existing poles shall be completely removed from the poles when the signs are removed. If a construction sign is required in an area where it cannot be attached to an existing pole, it shall be attached to a 4" x 4" wooden pole. The distance from the ground surface to the bottom of the sign shall be seven (7) feet.
19. A flag-type high level warning device with three or more flags shall be used for each direction of traffic affected, generally placed within the taper area.
20. Flashing arrow boards are required for lane shifts and reductions and may be required for nighttime work.
21. Dated "No Parking Tow Away" signs shall be posted a minimum of 48 hours in advance of all work requiring that cars not be parked on the street. Date and time of work shall be written on signs in two-inch-high letters with a ¼-inch felt black marker. Signs shall be

posted 50 feet on center and removed immediately after the work is completed. The Contractor must notify Cupertino Code Enforcement Officers at (408) 777-3182 with locations of posting to verify forty eight (48) hour notice.

22. Work shall not restrict visibility of any traffic control device.
23. No work will be permitted within 1500 feet of school grounds until after 8:30 a.m. on school days. Other special restrictions may be required at heavily used school crossings or school commute routes beyond 1500 feet from the school grounds as deemed necessary for student safety by the Engineer.
24. No closure of lanes on arterial and collector streets will be permitted between the hours of 7 and 9 a.m. and 3:30 and 7 p.m.
25. If work will impact transit stops or transit routes, Contractor shall be required to contact Santa Clara Valley Transportation Authority or other affected transit companies to address relocation of facilities or rerouting of buses prior to submitting traffic control plan. Traffic control plan should indicate what actions are being taken with regard to transit services.
26. All signs and other warning devices shall be provided by the Contractor and shall become his property after completion of the Contract.
27. The above requirements are a minimum and do not limit the Contractor's responsibility of doing all that is practical and necessary to ensure the safety of workers, pedestrians, bicyclists, and motorists. The Contractor shall conform to the above traffic control requirements which are generally applicable to most common situations. Based on the nature of a job, additional conditions or exceptions to the above conditions may be necessary.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The work performed under this section will be measured on a lump sum basis.

4.2 PAYMENT

- A. The contract lump sum price paid for Traffic Control and Construction Area Signs shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing and disposing of the components of the traffic control system and preparing required traffic control plans, complete in place, as specified in these specifications, and as directed by the Engineer.
- B. The cost of providing, installing and maintaining signs, lights, caution tape, delineators, flares, barricades and other facilities as directed by the Engineer for the convenience and direction of public traffic shall be included in the lump sum price paid for Traffic Control and Construction Area Signs and no separate payment will be made therefore.

END OF SECTION 01 55 26

SECTION 01 56 39 – TREE PROTECTION

PART 1 - GENERAL

1.01 SUMMARY

A. RELATED DOCUMENTS

1. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.
3. City of Cupertino Protected Trees, City of Cupertino Municipal Code Chapter 14.18 (see Appendix)
4. City of Cupertino, Standards for Protection of Trees During Grading and Construction Operations

B. DESCRIPTION OF WORK

1. Protection and operational requirements of working around existing vegetation, as shown on the plans, to include, but not be limited to, the following:
 - a. Existing Tree Protection (above and below ground portions)
 - b. Protective Fencing and Signage
 - c. Irrigation of Existing Trees
 - d. Tree Root Management
 - e. Hiring of Arborist (must be ISA Certified) for oversight of tree protection where required

1.02 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Tree Protection Fencing Plan which indicates project site methods to be employed and procedures for compliance with the tree protection requirements.
- C. Tree Protection Fencing Schedule which details the sequence of installation and subsequent adjustment of protection measures when construction must occur within the limits of the tree protection measures.

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL TREE PROTECTION

Contractor shall notify the Engineer three (3) full Working Days in advance of any work requiring digging around or within the drip-line of existing trees. No cutting of any part of any tree, including roots, shall be done without securing approval and direct supervision from the Engineer.

Contractor shall tag and identify existing trees which are to remain within or adjacent to the project limits prior to start of Work. Provide regular watering of existing landscaping affected by the project throughout the construction period.

Protect all existing trees at all times from damage by workers or equipment. A six-foot (6') high temporary chain link fencing acceptable to Engineer, shall be placed at the dripline of existing trees, or if possible, one and one-half (1.5) times the radius of the dripline out from the trunk of the tree. In addition, wrap all trees with straw waddles up to the first branches, then wrap "snow fencing" around the waddles on all trees in the construction zone to protect them from bark damage caused by construction equipment. If construction is to continue during winter months (December 1 through March 31), four (4) tree stakes are to be installed around each tree trunk. The required straw waddle is then to be wrapped around the stakes and the snow fencing around the waddle. This winter system is to prevent excessive moisture around the tree's trunk when rain tends to soak the waddle.

Place three inches (3") of mulch around existing trees to be preserved (out to their drip-line) in areas that will be impacted during construction. Bark shall be placed prior to any construction. This will help maintain moisture content and prevent compaction if vehicle accidentally drives under the tree within the fencing area.

Grading shall not create drainage problems for trees by channeling water into them, or creating sunken areas.

1. Open trenching in the root zone of any public tree is prohibited except in cases where the trenching falls outside the drip-line of the tree involved.
2. Exceptions will be allowing if, in the opinion of the Arborist, the impact of trenching upon the tree will be negligible.
3. When trenching is allowed, the Contractor must first cut roots along both sides of the proposed trench, as directed by the Arborist, with a Vermeer root cutter prior to any trenching to avoid tugging or pulling of roots.

When construction occurs within drip-line of existing trees, Contractor is to place excavated soil and other materials beyond the drip line. When this is not possible, with the approval of the Engineer, place soil on plywood, a tarp, or thick bed of mulch. This is to help prevent cutting into the soil surface when the backhoe or tractor blade refills the trench or removes any excess material.

If trenching is allowed and specifically approved by the Engineer within the root zone, refill open trenches quickly, within hours of excavation. If this is not possible and weather is hot, dry, or windy, Contractor must keep root ends moist by covering them with wet burlap. If temperature is eighty degrees Fahrenheit (80°F) or greater, the burlap must be inspected every hour and re-wet as necessary to maintain a constant cool moist condition. If temperature is below eighty degrees Fahrenheit (80°F), the burlap must be inspected every four (4) hours and re-wet as necessary to maintain a constant cool moist condition. Small roots can dry out and die in ten (10) to fifteen (15) minutes. Larger roots can succumb in an hour or less under unfavorable weather conditions.

When roots two inches (2") or larger must be cut, shovel by hand near the roots and saw the roots. Accidentally broken roots should be sawed about two inches (2") behind the ragged end. Crushed or torn roots are more likely to allow decay to begin; sharply cut roots produce a flush of new roots helping the tree to recover from its injury.

All grading within the drip-line of trees shall be done with light, approved equipment under the direct supervision of the Arborist. The original grade at base of existing trees is not to change. If necessary, dry wells are to be used if grade is to rise.

No cutting of any part of private and City trees, including roots, shall be done without direct supervision of a Certified Arborist (Certification of International Society of Arboriculture). The Certified Arborist is to be hired by the Contractor at no cost to the City. The Certified Arborist shall submit a written report of findings and recommendations to the Engineer. The Contractor shall replace any tree(s) that the Engineer directs to be removed, due to as a result of the construction. Engineer will determine species, size, and spacing.

Materials, equipment, temporary buildings, fuels, paints, and other construction items are not to be placed within the drip-line of existing trees.

3.05 IRRIGATION OF EXISTING TREES

- A. Contractor shall provide watering as required of any trees within the work zone that need additional watering to maintain health due to the activities of the Work.
 - 1. Trees that are disconnected from their regular water supply shall receive particular attention. Such trees include but are not limited to trees along the creek, or in proximity to the zone that will be dewatered.
 - 2. Watering may be required during summer, early fall (September and October), and times of elevated temperature or sustained winds.
 - 3. Contractor shall provide watering to trees as directed by the Engineer or City's arborist/representative to maintain tree health.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. The work performed under Section 01 56 39, Tree Protection, will be measured on a lump sum basis.

4.02 PAYMENT

- A. The contract lump sum price paid for Tree Protection shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in protecting existing trees, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 01 56 39

SECTION 01 57 50

TEMPORARY WATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes requirements for the Water Pollution control Program for water pollution prevention and control, including associated erosion and sediment control.

1.02 RELATED WORK

- A. Section 31 10 00 Site Clearing
- B. Section 02 41 19 Selective Demolition
- C. Section 31 20 00 Earthwork
- D. Section 31 25 16 Fiber Rolls
- E. Section 01 58 00 Temporary Erosion Control

1.03 REFERENCES

- A. State of California, Department of Transportation (Caltrans), 2010 Standard Specifications Section 13, "Water Pollution Control."
- B. Water pollution control work shall conform to the requirements in the Caltrans "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Plan (WPCP) Preparation Manual" and the "Construction Site Best Management Practices (BMPs) Reference Manual," and addenda thereto, hereafter referred to respectively as the "Preparation Manual" and the "Construction Site BMP Manual" and collectively as the "Manuals" except as otherwise authorized by RWQCB in the proposed SWPPP for this project. Copies of the Manuals and the Permits may be obtained from the Department of Transportation, Sacramento, California 9581. Copies of the Manuals may also be obtained from Caltrans' Internet Web Site at: <http://www.dot.ca.gov/hq/construc/stormwater/>.
- C. Santa Clara Valley Water District (SCVWD) Stream Maintenance Program including Best Management Practices, May 2002 and subsequent addenda
- D. Regional Water Quality Control Board (RWQCB) and State Water Quality Control Board (SWQCB) requirements and the most current version of the State of California Construction General Permit.
- E. National Pollutant Discharge Elimination Permit (NPDES) Municipal Stormwater Permit, per the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit, Order R2-2009-0074, NPDES Permit No. CAS612008, October 2009 and any subsequent updates or revisions.
- F. C.3 Stormwater Handbook, Santa Clara Valley Urban Runoff Pollution Prevention Program, April 2012

- G. Bay Area Air Quality Management District (BAAQMD) guidelines.

1.04 SUBMITTALS

- A. As part of the water pollution control work, a Water Pollution Control Program, hereafter referred to as the "WPCP," is required for this contract. The WPCP shall conform to the provisions in the Manuals, the requirements of the applicable codes, regulations and permits, and the contract documents.
 - 1. The Contractor shall submit to the Engineer a cost break-down for the contract lump sum item of water pollution control, including the cost of compliance with the WPCP.
 - 2. The Contractor shall not perform any clearing and grubbing, demolition, or other construction activities on the project, until such program has been submitted to and accepted by SWRCB and authorization secured.
- B. A copy of the WPCP, together with updates, revisions and amendments shall be kept at the construction site.
- C. The Contractor shall develop a Temporary Water Pollution Control Schedule that shall describe the timing of grading or other work activities that could affect water pollution. The Temporary Water Pollution Control Schedule shall be updated by the Contractor to reflect any changes in the Contractor's operations that would affect the necessary implementation of water pollution control practices.

1.05 DESCRIPTION

- A. COMPLIANCE
 - 1. Contractor shall be responsible for implementation of the project WPCP, including installation and repair of all BMPs.
- B. Contractor Responsibilities
 - 1. Maintain sufficient BMP materials on hand to implement the Water Pollution Control Program throughout the duration of the project, replace any deficient BMPs.

1.06 WATER POLLUTION CONTROL MAINTENANCE PROGRAM

- A. The Contractor shall furnish sufficient personnel, materials and adequate equipment to perform the water pollution control maintenance work immediately and to work continuously until its completion. Water pollution control maintenance work shall consist of maintaining temporary water pollution control measures throughout the duration of the contract.

1.07 WATER POLLUTION CONTROL IMPLEMENTATION

- A. The Contractor shall have a year-round program for implementing, inspecting and maintaining water pollution control practices for wind erosion control, tracking control, non-storm water control, and waste management and materials pollution control and for compliance with the WPCP requirements.

- B. Upon approval of the WPCP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, maintaining, removing and disposing of the water pollution control practices included in the WPCP and any amendments. Unless otherwise directed by the Engineer, the Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Doc. 00700 General Conditions and Doc. 00800 Special Conditions and the most current code requirements. Requirements for installation, construction, inspection, maintenance, removal, and disposal of water pollution control practices are specified in the Manuals.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Materials shall be as specified in the most current CASQA BMP Construction Handbook Fact Sheets, the Water Pollution Control Program, the Manuals, and these specifications, and the provisions of the General and Special Conditions Documents 00700 and 00800.

PART 4 - MEASUREMENT AND PAYMENT

- A. The work performed under this Section will be measured on a lump sum basis.
- B. The contract lump sum price paid for Temporary Water Pollution Control shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing, constructing, maintaining, removing, and disposing of water pollution controls, and all associated work, as shown on the plans, as specified in these Specifications, and as directed by the Engineer.

END OF SECTION 01 57 50

SECTION 01 58 00 TEMPORARY EROSION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Measures to control erosion.

1.02 RELATED WORK:

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.
- B. SECTION 02 41 19 – SELECTIVE DEMOLITION
- C. SECTION 31 10 00 – SITE CLEARING
- D. SECTION 01 56 39 – TEMPORARY TREE PROTECTION

1.03 SUBMITTALS:

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.

PART 2 - PRODUCTS

2.01 TEMPORARY CONCRETE WASHOUT

- A. Except as otherwise specified, temporary concrete washout shall conform to the 2010 Caltrans Standard Specifications.

2.02 TEMPORARY CONSTRUCTION ENTRANCE

- A. Except as otherwise specified, temporary construction entrances shall conform to the 2010 Caltrans Standard Specifications.

2.03 TEMPORARY COVER ON SLOPE & STOCKPILE

- A. Except as otherwise specified, temporary covers on slopes and stockpiles shall conform to the 2010 Caltrans Standard Specifications.

2.04 TEMPORARY EROSION CONTROL BLANKET

- A. Except as otherwise specified, temporary erosion control blanket shall conform to the 2010 Caltrans Standard Specifications.

2.05 TEMPORARY DRAINAGE INLET PROTECTION

- A. Except as otherwise specified, temporary drainage inlet protection shall conform to the 2010 Caltrans Standard Specifications.

2.06 TEMPORARY SILT FENCE

- A. Except as otherwise specified, temporary drainage inlet protection shall conform to the 2010 Caltrans Standard Specifications.

2.07 TEMPORARY FIBER ROLL

- A. Temporary Fiber Roll is not included in the work of this Section.

PART 3 - EXECUTION

3.01 TEMPORARY CONCRETE WASHOUT

- A. Except as otherwise specified, temporary concrete washout shall conform to plan sheets EC-1 of the Drawings and the 2010 Caltrans Standard Specifications.

3.02 TEMPORARY CONSTRUCTION ENTRANCE

- A. Except as otherwise specified, temporary construction entrances shall conform to plan sheets EC-1 of the Drawings and the 2010 Caltrans Standard Specifications.

3.03 TEMPORARY COVER ON SLOPE & STOCKPILE

- A. Except as otherwise specified, temporary covers on slopes and stockpiles shall conform to plan sheets EC-1 of the Drawings and the 2010 Caltrans Standard Specifications. Work shall consist of constructing, anchoring, and maintaining stockpile covers as shown on the plans and as directed by the Engineer.
- B. Installation: Fabric or plastic sheeting shall be placed and anchored as shown on the plans. Abutting edges shall overlap as detailed. Rock bags or equivalent weights shall be placed on the overlap area and along the toe of the stockpile. Anchoring temporary cover by using staples or wooden lath and anchors may be allowed instead of rock bags as determined by the Engineer. The Contractor shall submit details for any alternative anchoring system to the Engineer for approval prior to installation. Non-abutting edges shall be embedded 6 inches in native soil.
- C. Temporary cover damaged as a result of the Contractor's operations shall be replaced by the Contractor at Contractor's expense.
- D. When no longer required for the purposed as determined by the Engineer, temporary cover shall be removed. Removed facilities shall become the property of the Contractor and shall be removed from the site of the work and disposed of appropriately.

3.04 TEMPORARY EROSION CONTROL BLANKET

- A. Except as otherwise specified, temporary erosion control blanket shall conform to plan sheets EC-1 of the Drawings, and the 2010 Caltrans Standard Specifications.

3.05 DRAINAGE INLET PROTECTION

- A. Except as otherwise specified, temporary drainage inlet protection shall conform to plan sheets EC-1 of the Drawings and the 2010 Caltrans Standard Specifications.

3.06 TEMPORARY SILT FENCE

- A. Except as otherwise specified, temporary silt fence shall conform to the 2010 Caltrans Standard Specifications.

PART 4 - MEASUREMENT AND PAYMENT

4.1 PAYMENT

- A. Payment for all work in this section shall be considered as included in the lump sum price paid for Temporary Water Pollution Control and no separate payment will be made therefore.
- B. Work to install Fiber Rolls is specifically excluded from the work of this Section.

END OF SECTION 01 58 00

SECTION 01 71 33 - PROTECTION OF ADJACENT CONSTRUCTION AND UTILITIES

PART 1- GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. This Section includes requirements for coordination with and protection of existing utilities.
- B. Locate and protect from damage existing utilities and other facilities that are to remain in place and existing utilities and other facilities that are to be relocated by others.
- C. Protect from damage new utilities and other facilities installed within the area of the Work during or prior to the Contract.
- D. Consultant shall not be responsible for construction means, methods or techniques, or for safety measures, precautions or programs at the project site.

1.03 LOCATION AND PROTECTION OF EXISTING UTILITIES

- A. Existing utilities indicated on the Contract Drawings are approximate location based on record information. Additional utilities may exist. Locate and identify all underground structures, facilities, and piping prior to commencing any Work which may compromise said utilities. Maintain existing utilities and protect from damage as necessary to satisfy the requirements of jurisdictional utility companies and related codes and regulations. Refer to potholing specified elsewhere in this Section for additional requirements in regard to locating utilities. Refer to General Conditions for requirements for locating facilities not shown or facilities in a different location from that indicated.
- B. Do not disconnect or shut down any part of the existing utilities and services, except by permission of authorities having jurisdiction. Submit schedule of estimated shut-down time in order to obtain such permission, and notify all interested parties, neighbors, utilities, and municipal and county authorities, as required.
- C. Utilities to be removed shall not be removed until shut-down time can be kept to a minimum. Do not remove an existing utility line or service until the replacement line, crossover, or capping is ready to be performed.
- D. Provide shoring, underpinning, and structural support for existing utility lines and structures which become suspended or otherwise unsupported because of adjacent excavation operations.
- E. Excavate, including potholing, in proximity of existing underground facilities using methods as required by the utility companies and as specified, whichever is more protective of utilities.
- F. Protect active underground utilities from damage. If underground utilities are damaged in any way, notify the Owner and affected utilities immediately for corrective action. In case of emergency involving utilities which participate in the Underground Service Alert-Northern California (USA) at 1-800-227-2600 and notify the Owner of the assigned ID number or

emergency issue. Comply with instructions of affected utility company and pay all expenses of repair made in connection with such damages.

1.05 NOTIFICATIONS AND POTHOLING FOR EXISTING UTILITIES

- A. Notify, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure, the Underground Service Alert-Northern California (USA) at 1-800-227-2600, and utility companies that do not participate in USA which have underground facilities within the limits of the work. Notify USA at least 2 working days, but not more than 14 calendar days prior to performing excavation or other work close to underground facility. Notify other utility companies in accordance with each utility's notification requirements. Have USA and other utility companies locate and mark their facilities within the area of excavation or other work. Maintain such markings in accordance with utility requirements, i.e. have markings renewed, as applicable.
- B. Potholing for Utilities and Other Facilities: Prior to any excavation or other subsurface work, excavate, expose, and verify the location of existing utility mains and laterals and other existing underground facilities which may be affected by the Work.
 - 1. At a minimum, pothole and accurately locate all marked or inferred facilities located with less than five (5) feet of clearance to the nearest point of proposed trenching, excavation, shoring, pile or other subsurface temporary or permanent facility.
 - 2. Survey and record the size, location, elevation, and alignment of potholed existing underground utilities and other facilities for inclusion in as-built drawings.
- C. Do not proceed with excavation or other subsurface work until surrounding utilities and underground facilities have been located by potholing or other positive means. Determine the method and equipment required to perform potholing without damage to existing facilities. At minimum, utilize hand digging in the vicinity of high risk utilities and where recommended by USA guidelines.
- D. Immediately notify the facility owner of utilities or underground facilities located with less than one (1) foot of clearance to the nearest point of proposed trenching, excavation, shoring, pile or other subsurface temporary or permanent facility.
- E. Backfill potholes and exploratory excavations in accordance with Section 312000 Earth Moving, and replace in kind any improvements removed during the potholing operation including pavement, curbs, sidewalks, or other improvements.

1.06 HIGH RISK FACILITIES

- A. If the existence of certain underground facilities, referred to herein as "high risk" facilities, is indicated in the Contract Documents, take special precautions to protect the health, safety and welfare of workers and of the public. High risk facilities requiring special precautions include: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipelines greater than 6 inches in diameter or pipelines operating at pressures greater than 60 pounds per square inch (gage); underground electric supply system conductors or cables, with potential to ground of more than 300 V, either directly buried or in a duct or conduit which do not have concentric grounded or other effectively grounded metal shields or sheaths.

- B. If these high risk facilities are not located on the Contract Drawings in both alignment and elevation, perform no work in the vicinity of the facilities until the facility's owner or the owner's representative has located and identified the facility by potholing, probing or other means.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. The work performed under Section 01 71 33, Protection of Adjacent Construction and Utilities, will be measured on a lump sum basis as Utility Location.

4.02 PAYMENT

- A. The contract lump sum price paid for Utility Location shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in locating and protecting adjacent construction and utilities, including all potholing, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 01 71 33

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. The work of this Section consists of providing all necessary labor, materials, tools, equipment and incidentals to complete the demolition work specified herein; the extent of selective demolition work is indicated on drawings.
- B. Types of Selective Demolition Work: Demolition requires the selective removal and off-site disposal of the following:
 - 1. Temporary removal and/or protection of existing elements and equipment items indicated "to remain" or "preserve and protect".
 - 2. Removal and disposal of asphalt concrete pavement and dike, PCC curb, gutter and pavement, cobblestone surfacing, pavers, pilaster, wooden headers, retaining walls -pipe, drainage structures, fence, signs and elements, indicated "remove".
- C. Limits of Selective Demolition include all areas within the project Limits of Work
- D. Related Work Specified Elsewhere: As applicable, related work specified elsewhere may include, but is not limited to, the following:
 - 1. SECTION 31 10 00 – SITE CLEARING
 - 2. SECTION 31 20 00 – EARTHWORK

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Schedule: Submit estimated timeline schedule (gantt chart) indicating proposed methods and sequence of operations for selective demolition work to Owner's Representative for review prior to commencement of work. Include coordination of shut-off, capping, and continuation of utility services as required, together with details and/or written plans for dust and noise control. Re-submit updated schedules per Owner's Representative request.
- C. Demolition Plan which indicates project site methods to be employed, sequence of equipment, procedures, disposal sites and proposed haul routes. Specify safety measures in accordance with applicable codes including signs, barriers, and temporary pedestrian sidewalks. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.

- D. Coordinate with Owner with respect to Owner's continuing occupation of portions of existing site and make necessary provisions as applicable.
- E. Permits and notices authorizing demolition.
- F. Copy of manifests showing delivery of disposed materials in accordance with permit conditions, within 24 hours from time of delivery.
- G. Record Documents: Provide copies of all approved submittals, specified herein, for record purposes in accordance with the requirements of Document 00700, General Conditions.

1.04 JOB CONDITIONS

- A. Visit and examine the project site to determine the extent of demolition and disposal to be performed. Inspect existing conditions that will affect the execution of the Work.
- B. Facilities that will remain in place, and vehicular / pedestrian traffic on public streets shall be protected and maintained.
- C. Protection of Utilities:
 - 1. Protect active sanitary sewer, water, gas, electric, communication, and other utilities, storm drainage and irrigation lines indicated or, when not indicated, found or otherwise made known to the Contractor before or during demolition work. If utility is damaged, immediately notify the City and the utility owner for corrective action.
 - 2. Arrange with and perform work required by utility companies and municipal departments for discontinuance or interruption of utility services due to demolition work.
- D. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
- E. Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within site may occur by Owner's removal and salvage operations prior to start of selective demolition work.
- F. Open depressions and excavations occurring as part of this work shall be barricaded and posted with warning lights when accessible through adjacent property or through public access. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
- G. Storage or sale of removed items on site is not permitted.
- H. Protections: Provide temporary fencing and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.
- I. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.

- J. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner. Restore damaged finishes to match adjacent undamaged work.
- K. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- L. Explosives: Use of explosives is not permitted.
- M. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.
- N. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, acceptable to governing authorities.
- O. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.
- P. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.
- Q. Noise and Dust Abatement: Comply with requirements specified in Document 00700, General Conditions and Document 00800 Special Conditions, and the following:
 - 1. Provide continuous noise and dust abatement as required to prevent disturbance and nuisance to the public and workers and to the occupants of adjacent premises and surrounding areas. Dampen or cover areas affected by demolition operations as necessary to prevent dust nuisance.
 - 2. When a certain level of noise is unavoidable because of the nature of the work or equipment involved, and such noise is objectionable to the occupants of adjacent premises, make arrangements with the jurisdictional authorities to perform such work or operate such equipment at the most appropriate time periods of the day.

1.05 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI A10.6 Safety Requirements for Demolition Operations
- B. State of California, Department of Transportation (Caltrans), Standard Specifications, Section 15, Existing Facilities.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide temporary or permanent materials as required for the proper execution of the Work in this section.

2.02 BACKFILL

- A. Materials used for backfill shall conform to the requirements for backfill of SECTION 31 20 00 – EARTHWORK.

2.03 MARKING PAINT

- A. Marking paint shall be a good quality, oil-based spray marking paint or a good quality, oil-based paint marker.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph any existing conditions which could be misconstrued as damage resulting from selective demolition work and file a record copy with the Owner's Representative prior to starting work.

3.02 PREPARATION

- A. Install all construction fencing and gates prior to commencement of work under this section.
- B. Establish and identify acceptable temporary debris stockpile locations and secure appropriate waste containers on-site prior to commencement of work under this section.
- C. Protect existing stone/concrete bounds and monuments. All disturbed benchmarks, bounds/monuments shall be reset by a Land Surveyor registered in the State of California, at the Contractor's sole expense.
- D. Call Underground Service Alert at 1-800-422-4133 to obtain a Dig Alert ID Number, 2 working days prior to the start of excavation.
- E. Call "Call Before You Dig" at 1-800-AT-FIBER for information on fiber optic cables, 2 working days prior to the start of excavation.

3.03 DEMOLITION

- A. Demolish and remove AC as shown on the plans, including sawcutting, complete removal and disposal.
- B. Demolish and remove existing pilaster, as shown on the plans. Mailboxes within pilaster will be demolished and removed. Electrical systems within pilasters shall be disconnected and capped per State code.
- C. Demolish and remove existing fence, as shown on the plans, as specified in the Standard Specifications and these technical specifications, and as directed by the City.
- D. Demolish and completely remove underground utilities as shown on the plans. Where utilities are shown to abandon in place, grout solid as directed with Controlled Low Strength Material (CLSM). CLSM shall be 1 sack cement sand slurry with a compressive strength of no less than 50 psi and no greater than 150 psi.

- E. Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved fill material, gravel or sand, free of trash and debris, stones over 6" diameter, roots or other organic matter. See Section 31 20 00 – EARTHWORK for compaction requirements.
- F. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.04 SALVAGE MATERIALS

- A. Historic or archeological artifacts and other articles of historic significance remain the property of the Owner. Notify Owner's Representative if such items are encountered and obtain acceptance and direction before proceeding with any further work regarding method of removal and salvage for Owner.

3.05 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from demolition operations from project site. Transport and legally dispose of materials off site on a daily basis and as dumpsters become full.
- B. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution. Notify Owner's Representative immediately.
- C. Burning of removed materials is not permitted.

3.06 CLEAN-UP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site.
- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Items of selective demolition work will be measured per the unit indicated in the bid list.

4.02 PAYMENT

- A. The contract prices paid for the various items of selective demolition work indicated in the bid list shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in these various items of selective site demolition, complete and in place, as shown on the plans, including disposal of such items, as specified in these specifications, and as directed by the Engineer.
- B. Payment for removal of storm drain pipe shall be considered as included in the payment

for remove drainage inlet and no separate payment will be made therefore.

- C. Payment for removal and sawcutting of asphalt concrete shall be considered as included in the payment for earthwork and no separate payment will be made therefore.
- D. Payment for sawcutting of PCC concrete shall be considered as included in the payment for the various items of concrete removal and no separate payment will be made therefore.

END OF SECTION 02 41 19

SECTION 02 82 00 MAIL BOX RELOCATION

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. All work for relocation of mail boxes required to complete the project.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

- A. Where mail is delivered to residents by means of roadside mail boxes, the Contractor shall maintain access to these mail boxes through the course of construction. Due to the existing location of mailboxes, the Contractor shall, in some cases, be required to move some of the boxes to locations. Upon completion of construction, the Contractor shall be required to relocate the moved boxes to a permanent location.
- B. The residents shall be provided with mailbox facilities at least equal to or better than those existing prior to construction.
- C. In all cases, the temporary and permanent locations of all moved boxes shall be in accordance with US Postal Service requirements with regard to height, distance from roadway, and accessibility. It shall be the Contractor's responsibility to contact the US Postal Service and obtain information regarding their requirements.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The work performed under this section will be measured on a per unit basis.

4.2 PAYMENT

- A. The contract unit price paid for Relocate Mail Box shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in relocating mail boxes to both temporary and permanent locations, complete in place, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 02 82 00

SECTION 02 82 10 RESTORATION OF LANDSCAPE, IRRIGATION AND HARDSCAPE

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. All work for restoration of planting, irrigation and hardscape items required to complete the project.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

- A. Where irrigation facilities, planting and hardscape items such as walk and area lighting, pavers, borders, etc, are disturbed by the project construction, they shall be restored in kind and to the satisfaction of the Engineer.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The work performed under this section will be measured on lump sum basis.

4.2 PAYMENT

- A. The contract lump sum price paid for Restore Landscape, Irrigation and Hardscape shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in the restoration of landscaping, irrigation and hardscape facilities, complete in place, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 02 82 10

SECTION 02 83 00 ADJUST UTILITY BOX TO GRADE

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. All work for the raising or adjusting existing utility facilities such as manholes, water meter boxes, valve boxes, sewer clean-outs, monument boxes, and monitoring well covers to the finish grade of the resurfaced asphalt pavement.
- B. Facilities located in areas to be cold planed or keycut shall be lowered first and then adjusted to finish grade after completion of the resurfacing work.
- C. All such work shall conform to the applicable provisions of the State of California, Department of Transportation, Standard Specifications (Caltrans) dated 2010; these Technical Provisions; typical sections; and as directed by the Engineer.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 NOTIFICATION

- A. Non-city owned utilities exist within the limits of construction and may be included in the quantity for adjusting utility covers to grade as part of this contract. If this work is included, the Contractor shall be responsible for contacting owners of non-city owned utilities seven (7) days prior to beginning the resurfacing work to inform them of the construction schedule. Non-city owned utilities may include, but not be limited to, San Jose Water Company, California Water Company, Cupertino Sanitary District, Sunnyvale Sanitary District, PG&E, and Pacific Bell.

3.2 PREPARATION

- A. The Contractor shall properly locate and tie all existing facilities to be raised in advance of paving operations. Each facility is to have a minimum of two tie off points. A copy of all utility cover tie-down measurements for each utility cover on each street in the project shall be supplied to the City representative prior to the commencement of any paving work.

3.3 PROTECTION OF FACILITIES

- A. Care shall be taken to keep frames and covers clean. The Contractor shall completely protect with heavy plastic or other suitable material all utility covers or other items which are visible on the surface and will be covered by his operations. This shall be completed prior to the start of operations and approved by the Engineer. Any materials that adhere to the frames and covers shall be removed.

3.4 TEMPORARY PATCHING

- A. On streets to be cold planed or keycut, all utility covers within the planing limit shall be lowered prior to milling.
- B. Lowered utility lids shall be temporarily patched using a cold-patch asphaltic material. Patches shall be made to be flush with the adjacent pavement surface.
- C. Contractor shall keep on hand sufficient patching material to continuously maintain all patches and correct any which shift or otherwise deteriorate prior to milling. Shifted or dislodged patches which constitute a drop of .10 feet or greater shall be repaired in the same day that the problem is brought to the contractor's attention.

3.5 ADJUSTMENT

- A. Facilities damaged by the Contractor shall be replaced at the Contractor's expense. Facilities (box and lid or frame and cover) found existing in a damaged condition, and reported to the Engineer before disturbing, shall be replaced by the Contractor with materials furnished by the Owner.

3.6 TOLERANCES

- A. The concrete around adjusted facilities shall be left 1-1/2 inches lower than the adjacent pavement. The concrete surface shall be tack coated with 0.10 gallons per square yard and paved with 3/8 inch Type A HMA. Immediately after placement, the surface shall be sand sealed. Excessive sand on the surface after sealing shall be removed by the Contractor, as directed by the City Engineer.
- B. The surface of the adjusted facilities shall be true to the new pavement surface to within 1/8 inch deviation. This tolerance shall apply in a single direction only, either up or down. In addition, the adjusted facility shall not vary to the high tolerance on one side and the low tolerance on the other (i.e. the total aggregate tolerance on both sides shall be limited to the 1/8 inch variation). This variation shall apply to the adjacent patch paving around the facility as well, such that neither the paving nor facility vary by more than the stated tolerances.

3.7 SCHEDULE

- A. All facilities shall be adjusted to finish grade within 72 hours after the placement of the final surface paving on each individual street segment. If several lifts of pavement are to be placed, the facilities shall be raised if the paving operation ceases for more than 72 hours.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The work performed under this section will be measured on a per unit basis for the various facilities being adjusted from actual count.

4.2 PAYMENT

- A. The contract unit prices paid for Adjust Manhole to Grade, Adjust Water Meter Box to Grade, Adjust Cleanout to Grade and Adjust Water Valve Box to Grade shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in adjusting these facilities to grade, including lowering and raising, complete in place, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 02 83 00

SECTION 03 20 00 - CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Division 0 and 1, and general provisions of Contract, including General & Special Conditions and all Specification sections, may apply to work of this section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Reinforcing steel bars, wire fabric and accessories for cast-in-place concrete.
 - 2. Support chairs, bolsters, bar supports, and spacers for supporting reinforcement.
- B. Related Sections include the following:
 - 1. Section 03 31 00 – Structural Cast-in-Place Concrete

1.03 REFERENCES

- A. ACI 315 - Details and Detailing of Concrete Reinforcing.
- B. ASTM A82 – Cold Drawn Steel Wire for Concrete Reinforcement.
- C. ASTM A185 – Welded Steel Wire Fabric for Concrete Reinforcement.
- D. AWS D1.4 - Structural Welding Code for Reinforcing Steel.
- E. CRSI – Manual of Practice.
- F. CRSI 63 – Recommended Practice for Placing Reinforcing Bars.
- G. CRSI 65 – Recommended Practice for Placing Bar Supports, Specifications and Nomenclature.

1.04 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.

1.05 QUALITY ASSURANCE

- A. Perform concrete reinforcement work in accordance with CRSI Manual of Standard Practice, and Documents 63 and 65.
- B. Conform to ACI 301.
- C. Submit mill test certificates of supplied concrete reinforcing, indicating physical and chemical analysis for each heat or melt of reinforcing steel shall be submitted with each

shipment to the site. All sizes of reinforcing for the project shall have a test report. Where reinforcing is to be welded, mill test reports shall verify the weldability of the steel.

1.06 DELIVERY AND STORAGE

- A. Reinforcing shall be delivered to site properly bundled and tagged. Store reinforcing steel off the ground and as required to prevent excessive rusting. Protect reinforcing from any coating that will interfere with bond. Do not use damaged or reworked materials.

PART 2 - PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel:
 - 1. ASTM A615, Grade 60, deformed bar, unless noted otherwise.
 - 2. ASTM A706, deformed bars where reinforcement is to be welded.
 - 3. Shall be new, free from rust, scale, oil, and dirt.

2.02 ACCESSORIES

- A. Tie Wire: Minimum 16 gage annealed type.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.
- C. Where supports bear on earth, use concrete blocks. For surfaces exposed to view, stainless steel support chairs, spacers, or bolsters shall be used.
- D. The use of wood or organic supports or spacers inside the forms is not permitted.
- E. Mechanical Splices: Lenton Standard Coupler (A2), capable of providing a Type 2 (specified ultimate) splice per ACI 318, as manufactured by Erico or equal with prior approval.
- F. Headed Reinforcement: Lenton Terminator (D6), capable of providing the equivalent of a hooked bar development, as manufactured by Erico or equal with prior approval.

2.03 FABRICATION

- A. Fabricate concrete reinforcing in accordance with ACI 301.
- B. Weld reinforcement in accordance with AWS D1.4. As a minimum, use E70 electrodes.
- C. Reinforcing splices not indicated on drawings shall be located at points of minimum stress and reviewed and accepted by the City prior to placement.
- D. In case of fabrication errors do not rebend reinforcement in a manner that will damage or weaken the material.

PART 3 - EXECUTION

3.01 PLACEMENT

- A. Reinforcing steel shall be placed in accordance with the Construction Drawings, the reviewed shop drawings, and the requirements of the references. Place, support and secure reinforcement against displacement due to workmen and the placement of concrete. Do not deviate from required position.
- B. Maintain concrete cover around reinforcing as follows unless noted otherwise:

Item	Coverage
Concrete Exposed to Earth or Weather	2 inches
Concrete Formed Against Earth	3 inches

- C. Obstructions: Where conduits, piping, inserts, sleeves, etc., interfere with placing of reinforcing steel, obtain acceptance from the City for resolution before placing concrete.
- D. Tying: Push in tie wire so that concrete placement will not force the wire ends to the surface of exposed concrete.
- E. Splicing: Locate splices as specified in the Construction Drawings. Stagger splices in adjacent bars wherever possible.
- F. Field Bending: All reinforcing shall be bent cold. Assure that minimum bend radiuses are maintained. Do not rebend reinforcement within 6 inches of previously bent areas without approval from the City. Reinforcing partially embedded in concrete shall not be field bent.

3.02 FIELD QUALITY CONTROL

- A. Schedule inspections with Special Inspectors and City a minimum of two working days prior to placing concrete.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT AND PAYMENT

- A. The work included in this specification section will not be measured separately for payment. Full compensation for the work of this section will be considered as included in the prices for work performed under other contract items listed in the schedule of bid prices in the Bid Form, and no additional compensation will be allowed.

END OF SECTION 03 20 00

SECTION 03 31 00 - STRUCTURAL CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Division 0 and 1, and general provisions of Contract, including General & Special Conditions and all Specification sections, may apply to work of this section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Structural cast-in-place concrete required for this Work is indicated on the drawings and includes, but not necessarily limited to: retaining walls and manhole base pads.
- B. Related Sections include the following:
 - 1. Section 03 20 00 - Concrete Reinforcement

1.03 REFERENCES

- A. ACI 308 - Standard Practice for Curing Concrete.
- B. ACI 309 - Guide for Consolidation of Concrete.
- C. ASTM C33 - Concrete Aggregates.
- D. ASTM C94 - Ready-Mixed Concrete.
- E. ASTM C150 - Portland Cement.
- F. ASTM C309 - Liquid Membrane-Forming Compounds

1.04 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Submit to the City, the proposed concrete mix designs stamped by a structural or civil engineer currently licensed in the State of California. The submittal should include a history of uses and test reports and product data sheets. All materials, source of materials, admixtures and their proportions. Shrinkage limits of mix design. Whether mix is appropriate for pumping and pump or hose size required to deliver concrete.
- C. Submit curing method for review by the City.

1.05 SUBMITTALS AT PROJECT CLOSEOUT

- A. Accurately record actual locations of embedded items, utilities, and components which are concealed from view. Submit to the City at project closeout.

- B. All test and inspection reports and all transit mix delivery slips.

1.06 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301.
- B. Maintain one copy of latest construction documents on site, including design drawings, approved shop drawings and permit drawings, and special inspection and testing agreement.
- C. Acquire cement and aggregate from same source for all work.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

- A. Cement: ASTM C150, Caltrans Standard Specifications Section 90, Type II, and shall be provided by one manufacturer.
- B. Water: Clean, potable, and not detrimental to concrete.

2.02 ADMIXTURES

- A. No admixtures shall be allowed without written acceptance by the City. Admixtures that have a negative impact on concrete finish shall not be used. When more than one admixture is used, admixtures shall be compatible. Provide letter from admixture manufacturer that it is appropriate for proposed mix design.
- B. Air Entrainment: ASTM C260; "Daravair", "Micro-Air", manufactured by W.R. Grace, Master Builders or equal.

2.03 ACCESSORIES

- A. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days. SIKA Grout 212 or approved equal.
- B. Epoxy Grout: Two-part epoxy adhesive product that conforms to the requirements of Simpson SET-XP High Strength Epoxy (ICC ESR-2508) by Simpson Strong Tie or equal product with prior written approval of the City. Installation shall be in strict conformance with the manufacturer's recommendations.

2.04 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ASTM C94.
- B. Addition of water to the mix after leaving the plant is not permitted.
- C. Provide concrete to the following criteria:
 - 1. Normal Weight Aggregate.
 - 2. Water/Cement Ratio (maximum): 50 percent by weight.
 - 3. Aggregate Size (maximum): 1-1/2 inch.

4. Slump: 4 inches.
5. Drying Shrinkage Limit: 0.04 percent. Drying shrinkage limit is percentage of change in length after 21 days of drying when tested per ASTM C157.

2.05 RETAINING WALL REFLECTORS

- A. Reflectors for retaining walls shall be Plastic Concrete Barrier Mount Reflector, 3"x4", Flex Hinge, 2-Sided, Yellow as manufactured by Global Equipment Company or approved equal.

2.06 JOINT FILLER STRIPS

- A. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify requirements for concrete cover over reinforcement.
- B. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

3.02 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301.
- B. In depositing concrete in piers, walls or thin sections, provide openings in forms, elephant trunks, tremies or other recognized devices, to prevent segregation and accumulation of partially hydrated concrete on forms or metal reinforcement above level of concrete being placed. Such devices shall be installed so that concrete will be dropped vertically. Unconfined vertical drop of concrete from end of such devices to placement surface shall not exceed 6 feet.
- C. Concrete shall be thoroughly consolidated during placement, and shall be worked around reinforcement and embedded fixtures with mechanical vibrators.
- D. Notify City and Special Inspector minimum two working days prior to commencement of operations. Do not place concrete until forms and reinforcement as well as other required inspections have occurred and the Special Inspector is present to perform observations and testing during placement.
- E. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.
- F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

3.03 CONCRETE FINISHING

- A. Provide formed vertical concrete surfaces to be left exposed with a smooth formed finish, unless noted otherwise. Coordinate with City.

- B. Concealed concrete surfaces can be rough formed, unless noted otherwise.

3.04 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.05 FIELD QUALITY CONTROL

- A. Provide free access to Work and cooperate with City, City's representatives, and Special Inspector.
- B. Submit proposed mix design of each class of concrete to special inspection and testing firm for review prior to commencement of Work.

3.06 PATCHING

- A. Allow City and City's representative to inspect concrete surfaces immediately upon removal of forms.
- B. Honeycomb or embedded debris in concrete is not acceptable. Notify City upon discovery.
- C. Patch imperfections in accordance with ACI 301 and satisfaction of City.

3.07 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the City.
- C. No additional compensation will be allowed for repair of defective concrete.

3.08 RETAINING WALL REFLECTORS

- A. Retaining wall reflectors will be installed on the wall as shown on the plans and in accordance with the manufacturer's recommendations.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Construct Concrete Retaining Wall shall be measured on a linear foot basis.

4.02 PAYMENT

- A. The contract price paid per linear foot for Construct Retaining Wall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for

doing all the work involved in constructing retaining wall, including excavation and backfill, class 3 permeable material, reinforcing bars, dowels, post pockets, perforated plastic pipe, construction joints, construction joint filler material, and wall reflectors, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

- B. Payment for concrete materials and work for manhole base pads shall be considered as included in the contract unit price paid for Concentric Manhole, and no additional compensation will be allowed therefore.

END OF SECTION 03 31 00

SECTION 06 10 63 – EXTERIOR ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SUMMARY

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.
- B. Section Includes:
 - 1. Wood fences

1.02 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Product Data: For preservative-treated wood products.
- C. Material Certificates: For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained

PART 2 – PRODUCTS

2.01 LUMBER, GENERAL

- A. General: Comply with DOC PS 20 and with grading rules of lumber grading agencies certified by ALSC's Board of Review as applicable. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by ALSC's Board of Review.
 - 1. Factory mark each item with grade stamp of grading agency.
 - 2. For items that are exposed to view in the completed Work, omit grade stamp and provide certificates of grade compliance issued by grading agency.
 - 3. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content:
 - 1. Boards: 19 percent
 - 2. Dimension Lumber: 19 percent
 - 3. Timber: No limit

2.02 LUMBER

- A. Dimension Lumber: No. 1 Construction or No. 2 grade and any of the following species as best matching the existing facility. To the extent practicable, contractor shall revise existing fence components.

1. Hem-fir or hem-fir (North); NLGA, WCLIB, or WWPA.
 2. Douglas fir-larch, Douglas fir-larch (North), Douglas fir-south; NLGA, WCLIB, or WWPA.
 3. Mixed southern pine; SPIB.
 4. Redwood; RIS.
- B. Boards, as best matching the existing facility:
1. Douglas fir, C & Btr finish or C Select; NLGA, WCLIB, or WWPA.
 2. Hem-fir, C & Btr finish or C Select; NLGA, WCLIB, or WWPA.
 3. Redwood, Heart B or Construction Heart; RIS.
 4. Southern pine, B & B finish; SPIB.
 5. Western red cedar, Grade B; NLGA, WCLIB, or WWPA.
- C. Boards, as best matching the existing facility:
1. Eastern white pine, Idaho white, lodgepole, ponderosa, or sugar pine; Premium or No. 2 Common (Sterling) grade; NeLMA, NLGA, WCLIB, or WWPA.
 2. Mixed southern pine; No. 2 grade; SPIB.
 3. Hem-fir or hem-fir (North); Select Merchantable Construction or No. 2 Common grade; NeLMA, NLGA, WCLIB, or WWPA.

2.03 POSTS

- A. To the extent practicable, contractor shall reuse existing fence components. Dimension Lumber Posts: Construction or No. 2 grade and any of the following species:
1. Douglas fir-larch, Douglas fir-larch (North), Douglas fir-south; NLGA, WCLIB, or WWPA.
 2. Mixed southern pine; SPIB.
 3. Northern species; NLGA.
 4. Eastern softwoods, NeLMA.
 5. Western woods; WCLIB or WWPA.
- B. To the extent practicable, contractor shall reuse existing fence components. Timber Posts: Balsam fir, Douglas fir-larch, Douglas fir-larch (North), eastern hemlock tamarack (North), hem-fir, southern pine, western hemlock, or western hemlock (North); No. 2, NeLMA, NLGA, SPIB, WCLIB, or WWPA.
- C. Timber Posts: Southern pine; No. 2, SPIB.

2.04 PRESERVATIVE TREATMENT

- A. Pressure treat boards and dimension lumber with waterborne preservative according to AWPA U1; Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
- B. Pressure treat timber with waterborne preservative according to AWPA U1; Use Category UC4a.
- C. After treatment, redry dimension lumber to 19 percent maximum moisture content.
- D. Mark treated wood with treatment quality mark of an inspection agency approved by ALSC's Board of Review.
 - 1. For items indicated to receive a stained or natural finish, omit marking and provide certificates of treatment compliance issued by inspection agency.
- E. Application: Treat all wood unless otherwise indicated.

2.05 FASTENERS

- A. General: Provide fasteners of size and type indicated, acceptable to authorities having jurisdiction, and that comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate. To the extent practicable, contractor shall reuse existing fence components.
 - 1. Use fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or ASTM F 2329 unless otherwise indicated.
 - 2. For pressure-preservative-treated wood, use stainless-steel fasteners.
- B. Postinstalled Anchors: Stainless-steel, chemical or torque-controlled expansion anchors with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing according to ASTM E 488, conducted by a qualified independent testing and inspecting agency.
 - 1. Stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

2.06 METAL ACCESSORIES

- A. Galvanized-steel sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G185 (Z550) coating designation.

PART 3 – EXECUTION

3.01 INSTALLATION, GENERAL

- A. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit work to other construction; scribe and cope as needed for accurate fit.

- B. Framing Standard: Comply with AF&PA WCD1 unless otherwise indicated.
- C. Install metal framing anchors to comply with manufacturer's written instructions.
- D. Do not splice structural members between supports unless otherwise indicated.
- E. Apply copper naphthenate field treatment to comply with AWPA M4, to cut surfaces of preservative-treated lumber.
- F. Securely attach exterior rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. "Fastener Schedule for Structural Members" and "Alternate Attachments" in ICC's International Residential Code for One- and Two-Family Dwellings.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Relocate Wood Fence shall be measured by linear foot.

4.02 PAYMENT

- A. The contract price paid per foot for Relocate Wood Fence shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with the relocation of wood fence, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 06 10 63

SECTION 10 14 53 – TRAFFIC & PARKING SIGNAGE

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. The work of this Section consists of furnishing all necessary labor, materials, tools, equipment and incidentals required for the application for signage, as indicated on the Contract Drawings and as specified herein.

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 0700, General Conditions, Submittals.

1.04 REFERENCES

- A. The State of California Department of Transportation (Caltrans) Standard Specifications (hereafter Caltrans Standard Specifications)
- B. The State of California Department of Transportation (Caltrans) Standard Plans (hereafter Caltrans Standard Plans)
- C. The California MUTCD 2014 Edition

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Signage materials shall conform to the requirements in Caltrans Standard Specifications, **Section 56**.
- B. Roadside signage shall be furnished by the contractor per Caltrans Standard Plans and the California MUTCD 2014 Edition.

PART 3 – EXECUTION

3.01 SIGNAGE

- A. Signage shall be installed and constructed as shown on the drawings.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Relocate Roadside Signs shall be measured on a unit basis and shall include all signs relocated in or along public roadways.

4.02 PAYMENT

- A. The unit price paid for Relocate Roadside Signs shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with relocating roadside signs, including removal, posts, and foundations, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 10 14 53

SECTION 31 10 00 – SITE CLEARING

PART 1 - GENERAL

1.01 SUMMARY

A. RELATED DOCUMENTS

1. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.
2. State of California, Department of Transportation (Caltrans), Standard Specifications 2010:
 - a. Section 15 Existing Highway Facilities.
 - b. Section 16 Clearing and Grubbing.

B. RELATED SECTIONS

1. SECTION 01 56 39 – TREE PROTECTION
2. SECTION 02 41 19 – SELECTIVE DEMOLITION
3. SECTION 31 20 00 – EARTHWORK
4. SECTION 32 90 00 – PLANTING WORK

C. DESCRIPTION OF WORK

1. Extent of site clearing and grubbing as shown on drawings.
2. Site clearing work may include, but is not limited to:
 - a. Removal of vegetation designated for removal.
 - b. Topsoil stripping and stockpiling.
 - c. Clearing and grubbing of weeds and/or existing turf, and organic layer.
 - d. Dust Control.

D. SUBMITTALS

1. Submit, under the provisions of Document 00700 General Conditions, Submittals, the following information:
 - a. Stockpiling Plan which indicates project site methods, sequence of equipment, locations, and approximate quantities of soil stockpiles.

E. JOB CONDITIONS

1. The Contractor shall visit and examine the project site to determine the extent of clearing, grubbing, removal, disposal, and general work to be done.

2. The City should be notified at least two (2) working days prior to any site clearing.
3. Traffic: Conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.
4. Protection of Existing Improvements: Provide protections necessary to prevent damage to existing improvements.
5. Protect improvements on adjoining properties and on Owner's property.
6. Restore damaged improvements to their original condition, as acceptable to parties having jurisdiction.
7. Protection of Existing Trees and Vegetation per SECTION 01 56 39 – TREE PROTECTION.
8. Provide temporary guards to protect trees and vegetation not designated for removal per SECTION 01 56 39 – TREE PROTECTION.
9. Provide temporary protection to trees and vegetation to remain from herbicide application through the use of plywood shield during spraying.
10. If existing irrigation system is interrupted, water trees and other vegetation to remain within limits of contract work as required to maintain their health during course of construction operations per SECTION 01 56 39 – TREE PROTECTION.
11. Trenching or excavation that is scheduled to occur within the dripline of trees/vegetation not designated for removal shall be done by hand per SECTION 01 56 39 – TREE PROTECTION.
12. Contractor shall repair or replace trees and vegetation not designated for removal which are damaged by construction operations, in a manner acceptable to Owner's Representative. This can include the Contractor having to hire a licensed arborist to repair any such damages to trees and shrubs per the discretion of the Owner's Representative or to replace the tree in kind.
13. Topsoil: Topsoil is defined ASTM D 5268, pH range of 6.0 to 6.8, fertile, friable, natural topsoil of sandy loam character, without admixture of sub-soil material, obtained from a well drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign materials.

PART 2 - PRODUCTS

- A. The Contractor shall furnish all materials, tools, equipment, facilities, and services as required for performing site clearing and other site preparation work.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Call Local USA Underground not less than two working days before performing Work.

1. Request underground utilities to be located and marked within and surrounding construction areas.

3.02 PROTECTION

- A. Locate, identify and protect utilities indicated to remain, from damage.
- B. Protect trees, plant growth, and features designated to remain, as final landscaping, per SECTION 01 56 39 – TREE PROTECTION.
- C. Protect bench marks, and existing structures from damage or displacement.
- D. Carefully remove all items to be salvaged, and store on City property where indicated or as directed by the City.

3.03 SITE CLEARING

- A. Remove volunteer trees, shrubs, grass and other vegetation, improvements, or obstructions interfering with installation of new construction and remove items noted for removal on the plans. Remove and dispose of such items off site or premises, unless otherwise noted or directed. Removal includes digging out stumps and roots.
- B. Carefully and cleanly prune roots per SECTION 01 56 39 – TREE PROTECTION.
- C. Clearing: Clear site of trees, shrubs and other vegetation designated for removal. Provide protection of trees to remain per SECTION 01 56 39 – TREE PROTECTION.
- D. Grubbing: Excavate, remove and dispose of all roots, stumps, and other vegetation to a minimum depth of 24" only where indicated on the plans. Measured depth shall be from existing ground surface or new finished grade, whichever is lower. Refer to SECTION 01 56 39 – TREE PROTECTION and elsewhere in the contract documents for allowable grubbing techniques beneath or adjacent to existing tree drip lines.
- E. Removal of Existing Improvements & Pavements: Remove existing improvements necessary to permit construction, and other work as indicated.
- F. Temporary Removal of Existing Improvements: Carefully remove, stockpile and protect existing elements that will interfere with construction operations as necessary. These items shall be re-installed when timing is appropriate in a condition similar to, or better than, their original condition. Removal of abandoned underground piping or conduit interfering with construction is included under this section.
- G. Dust Control: Creation of dust shall be minimized as necessary by sprinkling, or other EPA approved method and as acceptable to the Engineer.
- H. Topsoil Stripping may be performed in areas of creek widening or areas to be paved, for re-use in Top Dressing Fill if approved by the Engineer in advance. After removal of all vegetative material, rocks and debris, strip approved topsoil to a minimum depth of four inches (4") in a manner to prevent intermingling with underlying subsoil or other objectionable material.
- I. Stop topsoil stripping at the driplines of trees and vegetation not designated for removal per the SECTION 01 56 39 – TREE PROTECTION.

- J. Stockpile topsoil in storage piles in areas shown, or where they will cause the least disturbance to construction operations. Construct storage piles to freely drain surface water. Treat storage piles as necessary to prevent erosion by wind or water. Monitor and control dust at all times.
- K. All topsoil (including any remaining vegetation) which is not classified as suitable fill material shall be excavated down to suitable fill material, except in plant bed areas.
- L. Stockpiling of items removed in conjunction with site clearing operations by the Contractor will only be allowed when the material will be re-used on site. Contractor shall remove and dispose of all other materials from the site on the same day as the site clearing operation occurs.

3.04 CLEAN UP

- A. Removal from Owner's Property: Remove all waste materials and unsuitable and excess topsoil from Owner's property and dispose of off site in legal manner. Site is to be maintained in a clean condition at all times.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. All work performed under SECTION 31 10 00 – SITE CLEARING will be measured on a lump sum basis.

4.02 PAYMENT

- A. The contract lump sum price paid for Site Clearing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved, complete and in place, as shown on the plans, including disposal, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 31 10 00

SECTION 31 13 13 – SELECTIVE TREE REMOVAL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The work of this section consists of providing all necessary labor, tools, equipment, and incidentals to remove trees as described in the Technical Specifications and shown on the Drawings.

1.02 RELATED SECTIONS

- A. Related Work Specified Elsewhere: As applicable, related work specified elsewhere may include, but is not limited to, the following:
 - 1. DOCUMENT 00700 – GENERAL CONDITIONS
 - 2. SECTION 01 36 00 – FIELD ENGINEERING AND SURVEY
 - 3. SECTION 01 56 39 – TREE PROTECTION

1.03 PROJECT CONDITIONS

- A. The Contractor shall attend a walk-through of the site with the Engineer to confirm trees that are to be removed. The walk-through shall also establish the acceptability of proposed means and extent of removing and means and methods that will be used to protect existing trees to remain.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 PROTECTING EXISTING PLANTS

- A. Contractor shall comply with all requirements and conditions in Section 01 56 39 – Tree Protection.

3.02 SELECTIVE REMOVAL OF TREES

- A. The Contractor shall give all notices required for performance and completion of tree removal including removal work, hauling, and disposal.
- B. Fell trees to prevent damage to adjacent structures and to those trees and shrubs designated to remain. Remove stumps and roots to a clear depth of 36” below existing grades in areas of lawn, and to full depth in areas of paving, building footings, or utility structures.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Remove tree shall be measured on a unit basis.
- B. Grind and remove stump shall be measured on a unit basis.

4.02 PAYMENT

- A. The unit price paid for Remove Tree shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in removing trees, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. The unit price paid for Grind and Remove Stump shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in grinding and removing stumps, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 31 13 13

SECTION 31 20 00 – EARTHWORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. The work of this Section consists of furnishing all necessary labor, materials, tools, equipment and incidentals required for, but not limited to excavation, trench excavation for underground utilities, drainage and placement of backfill, subgrade preparation for paving, rough grading, fine grading and compaction as shown on the Drawings and as specified herein.

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. The Contractor shall furnish certified test reports and analyses certifying that the materials proposed for use at the project site conform to requirements, and that all tests were conducted in accordance with the specifications.
- C. The Contractor shall prepare a work plan detailing the order of work, waste excavation minimization and material handling.
- D. Material Data – Contractor shall submit data which describes the engineering properties of the proposed imported fill to the Owner for acceptance of fill choice prior to purchasing.

1.04 REFERENCES

- A. Caltrans Standard Specifications, 2010 Edition
- B. State of California, Department of Environmental Protection Regulations
- C. ASTM C136: Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
- D. ASTM C231: Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
- E. ASTM D422: Standard Test Method for Particle-Size Analysis of Soils
- F. ASTM D1556: Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
- G. ASTM D1557: Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb./cu. ft.)
- H. ASTM D2487: Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)

- I. ASTM D3740: Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
- J. ASTM D4318: Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- K. ASTM D2922: Standard Test Methods for Density of Soil and Soil-Aggregate In Place by Nuclear Methods (Shallow Depth)
- L. ASTM D3017-78: Standard Test for Moisture Content of Soil and Soil-Aggregate In Place by Nuclear Methods

1.05 QUALITY ASSURANCE

- A. The Owner reserves the right to approve materials to be used in construction. Do not use materials which, after approval, have become unfit for use.
- B. Field testing of compacted soil may be done by the Owner in accordance with ASTM D1556 or ASTM D2922, using the nuclear method, for the Owner's sole convenience. The Owner may perform compaction tests one time at no expense to the Contractor. Re-tests necessary because of inadequate compaction, or readiness will be performed at the Contractor's sole expense. Copies of the density test results shall be submitted to the Owner.
- C. Maximum Dry Density: The maximum dry density of the material shall be as determined by ASTM D1557. Moisture density relations of soil shall be determined by ASTM D1557.
- D. Moisture Content: The ratio, expressed as a percentage of the weight of water for a given soil mass to the weight of solid particles, shall be determined by ASTM D1557.
- E. Dry Density: The weight of soil solids per unit of total volume of soil mass shall be determined by ASTM D1557.
- F. Air Content: The total calculated air content of controlled density fill shall be determined by ASTM C231 immediately after discharge from the mixer.
- G. Perform work as specified herein and in accordance with Section 19, "Earthwork" of the State of California Department of Transportation, Standard Specifications, dated 2010.
- H. If at any time, the Contractor encounters impacted soil or groundwater, as indicated by visual discoloration, noticeable odor, or evidence of asbestos fibers, the Contractor shall immediately notify the Owner.
- I. If at any time, the Contractor encounters any potential historical artifacts, including glass, ceramics, wooden structures or skeletal remains, the Contractor shall stop work and immediately notify the Owner.
- J. The Contractor is responsible for performing excavation to meet applicable OSHA safety standards and requirements
- K. The Contractor is responsible for determining the equipment and construction methods necessary to efficiently perform the work.

1.06 EXISTING SITE CONDITIONS

- A. Locations of existing pipelines, utilities and substructures shown on the Contract Drawings are approximate. It shall be the Contractor's responsibility to contact all owners of lines and structures that may interfere with the work. Contact Underground Service Alert (1-800-642-2444) and CenturyLink (1-800-AT-FIBER) at least 2 working days before commencing work. Cooperate with the Owner and utility agencies to keep services and facilities in operation. Repair damaged substructure to the satisfaction of the Owner at no additional cost to Owner. Do not interrupt existing utilities serving facilities occupied and used by others, except when permitted in writing by the Owner or private utility owner(s) and then only after acceptable temporary utility services have been provided.
- B. Above ground utilities adjacent to excavations shall be protected by the Contractor using methods approved by the owner of the facility.

1.07 DEFINITIONS

- A. Roadway Excavation: Removal of materials, regardless of the nature of the material encountered, the moisture content thereof, and the type of equipment required for excavating to the top of subgrade as shown on the plans. Common Excavation will include the removal of pavement bases, granular material, soil, rubble, saturated or unsaturated mixtures of unsatisfactory soils and organics (peat, muck, etc.) and any other material encountered within the limits of new construction.
- B. Utility Trench Excavation: Removal of material, regardless of the nature of the material encountered, the moisture content thereof, and the type of equipment required for excavating utility trenches as shown on the plans. Utility trench excavation will include the removal of pavement bases, granular material, soil, rubble, saturated or unsaturated mixtures of unsatisfactory soils and organics (peat, muck, etc.) and any other material encountered within the limits of new construction.
- C. Degree of Compaction: A percentage of the maximum density obtained by the test procedure presented in ASTM D1557, Method C.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Satisfactory Soils.
 - 1. Fill. Fill shall be equivalent to ASTM D 2487 soil classification groups SM, SC, ML, CL, OL, or a combination of these group symbols. Fill can be comprised of Native Soil material generated from onsite excavation or imported fill as long as the soil meets the satisfactory soil specifications herein. Fill should be free of organic material and debris, should not contain rocks or clods that are greater than 3 inches in largest dimension. Fill should have a plasticity index of 16 or less. All soils proposed for use as Fill should be approved by the Owner prior to purchasing or delivery to the site or placement. See submittal requirements
- B. Unsatisfactory Soils.

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1. Fill. ASTM D 2487 soil classification groups GW, GP, GM, GC, SW, SP, MH, CH, OH, and PT, or a combination of these group symbols. Other unacceptable soils would include rip-rap.
 - a. Unsatisfactory soils also include satisfactory soils not maintained within 4 percent of optimum moisture content at time of compaction
- C. Fill. Suitable soil excavated from the project site and imported materials which meet the satisfactory soil materials specifications.
- D. Bedding material for culverts, pipes and utilities shall be sand or fine gravel with less than ten percent fines and shall conform to the provisions in ASTM D2487 (Class 1).
- E. Class 3 permeable material for retaining walls shall conform to section 68-2.04F(4), "Class 3 Permeable Material," of the 2010 Caltrans Standard Specifications.
- F. Tracer Tape (Detection Tape or Warning Ribbon)
 1. Provide Magnetic Terra Tape Sentry-Line or approved equal at least as wide as the pipe:

<u>Identification</u>	<u>Type and Minimum width</u>	<u>Color</u>
Gas Line	12" Sentry Line 1350	Yellow
Water Line/Irrigation Main	4" Sentry Line Extra Stretch 540	Blue
Electrical Line	4" Sentry Line Extra Stretch 540	Red
Signal Lines	4" Sentry Line Extra Stretch 540	Orange
Fiber Optics Line	4" Sentry Line Extra Stretch 540	Orange
Sanitary Sewer	10" Sentry Line Extra Stretch 540	Green
Storm Drain	12" Sentry Line Extra Stretch 540	Green

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Existing Underground Lines and Services: Carefully uncover, support and protect lines and services. Care should be exercised in protecting lines against damage. Do not cut, remove or damage these items without prior written approval from the Utility; otherwise the Contractor shall repair or replace the items at the Contractor's expense, to the satisfaction of the Utility. Remove unclaimed utilities as directed.
- B. Utilization of Excavated Materials: Material removed from excavations shall be used in the construction of fills, embankments, subgrades, and similar purposes, unless the material is deemed unsuitable by the Owner.
- C. Surplus soil or soil deemed unsuitable for backfill shall be stockpiled separately. No excavated material shall be used on site without authorization from the Owner. Material authorized to be used on site shall be stockpiled as acceptable to the Owner. No excavated material shall be disposed of or stockpiled in such a manner as to obstruct the flow of any stream, impact wetlands, endanger a partly finished structure, impair the efficiency or appearance of any structure, or be detrimental to the completed or in-progress work in any way.

- D. Vertical Tolerance. Vertically layout and finish-grade the earthwork area to within 0.30 feet of the elevation(s) shown on the Drawings, and to smoothly transition vertically with the existing ground lines.
- E. Horizontal Tolerance. Horizontally layout and construct the earthwork to within 0.5 feet of the true horizontal position indicated on the drawings, and smoothly transition horizontally with the existing ground lines. The principal edges of earthwork shall be constructed straight or smoothly curved as indicated on the drawings without readily noticeable waviness.
- F. Grading Tolerance. Construct slopes within 5 percent of the designed slope ratio. Slopes shall be even, i.e., not convex nor concave when viewed up-and-down and across the face of the slope.
- G. If at any time during site preparation, excavation, or other ground disturbances associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner and the Owner if the discovery contains human remains, or the Owner if the discovery contains no human remains.

3.02 DUST CONTROL

- A. Dust Control shall be in accordance with the Caltrans Standard Specifications Section 18. The Contractor shall keep the entire site of work, inclusive of pedestrian and vehicular routes through the work areas, continuously free of dust, by watering as follows:
 - 1. Supply water and apply at locations necessary to control dust from excavated areas, from stacked materials, and from other materials in the amount as directed by the Owner.
 - 2. The Contractor's dust control activities shall be in accordance with the applicable OSHA, Cal/OSHA, and State of California, Department of Environmental Protection regulations.
 - 3. Use of soil binders shall be subject to conformance with all project requirements and prior acceptance by the Owner.

3.03 EXCAVATION

- A. The Contractor shall perform excavation of every type of material encountered within the limits of the work, to the lines, grades, and elevations as specified herein and as indicated on the Contract Drawings.
- B. Cutting: Perform cutting to required elevations. Where unsuitable material is exposed at completion of planned cutting, perform further cutting as directed by Owner until material suitable for bearing is reached.
- C. Excavating
 - 1. General: Excavate to required elevations and dimensions, allowing ample space for form and material placement, inspection, and form removal. If the nature of the soil permits and Owner gives prior approval, excavation cuts for footings and grade beams may be made to correct dimensions and used as a concrete form. Degree of slope for open cut earth banks shall not exceed 2:1 horizontal to

- vertical rise in either dry or wet condition. Construction excavation shall not exceed 2 vertical to 1-1/2 horizontal slope.
2. Removing Material: Excavate all material encountered, except for existing services and permanent structures. Soil conditions at bottom of excavation shall be subject to Owner's approval. Surfaces shall be level, or sloped if required, clean, and clear of mud. Maintain them in good condition until overlying materials are placed.
 3. Suitable Bearing: Where unsuitable material is exposed at completion of planned excavation, perform further excavation as directed by Owner until suitable bearing is reached. Place and compact backfill as specified herein to correct elevations.
 4. Over Excavation: If materials are removed below required elevation, through error or careless excavating, corrective measures shall be performed by Contractor at his own expense.
 5. Surface Preparation for Fill Placement. Fill surfaces should be relatively clean and free of roots, or other debris which would compromise bonding between placed material and native or existing materials.
 6. Fill Placement. Place the fill according to specifications F and G listed next, and according to the Contract Drawings. Smoothly transition fill into the existing topography.
 7. Fill Placement Methods. Excavated surfaces and fill areas supporting the brushlayer slopes, and erosion control fabric shall be layer-placed in 8-inch thick (maximum loose) layers, wetted to at-least optimum moisture content in accordance with ASTM D1557 Method A, and mechanically compacted to achieve 90 percent of the maximum density.
 - a. Layers shall be horizontal.
 - b. Wet or dry the fill material as necessary to achieve proper moisture content and compaction.
 - c. The Contractor is responsible for achievement of proper compaction, as specified herein, during fill placement.
- D. Material Storage and Disposal: Select stripped, cut, and excavated material which can be used later; classify and stockpile each type separately. Dispose of unsuitable and excess material and debris at lawful off-site locations.
- E. Temporary support systems shall conform to the OSHA requirements.
- F. Excavation and fill shall be performed in a manner and sequence that will provide proper drainage at all times.
- G. Structure excavation shall conform to the provisions in Section 19-3, "Structure Excavation and Backfill" of the Caltrans Standard Specifications.

3.04 BACKFILL (GENERAL)

- A. Place backfill in layers not to exceed 8 inches of loose material, and compact each layer to at least 90 percent laboratory maximum density, in such a manner as to prevent wedging action or eccentric loading.
- B. Backfill excavations when installations have been completed, inspected, and approved. Concrete shall have attained sufficient strength to withstand pressure of earth and compacting operation. Before proceeding, excavations shall be free of forms, debris and other foreign materials.

3.05 BACKFILL, BEDDING AND FILL FOR CULVERTS, PIPES AND UTILITIES

- A. Bedding and Backfill Around Pipes and Utilities:
1. Before the initial layer of bedding is placed, the bottom surface of the trench shall be tamped or compacted by plate or other means to provide a base for the bedding.
 2. Before the pipe or conduit is laid, the bedding material shall be placed and compacted in conformance to the provisions in Section 19-3.02E, "Culvert Beddings," of the Caltrans Standard Specifications and per City Standard Detail 4-24. No jetting shall be permitted.
- B. Unless specified elsewhere, backfilling for underground utilities shall comply with the following:
1. Replace any unsuitable material with approved backfill material and compact as directed by the Owner and as specified herein. Approved backfill material shall include:
 - a. Approved native excavated material.
 - b. Imported Backfill
 2. Place and compact initial lifts in 6-inch layers maximum uncompacted thickness until 12 inches over pipe. Subsequent lifts may be up to 12 inches in depth prior to compaction. Bring up uniformly on both sides of pipe. Unless otherwise permitted by Owner, foundations for underground utilities and associated structures shall be compacted to not less than 95% of the maximum density as determined by ASTM D1557.
 3. Tracer tape (detection tape) shall be placed one foot above new and recently exposed buried utilities. Lay tape flat with three foot of overlap at the end of rolls.
- C. Keep construction equipment away from edges of excavation a distance equal to the depth of the excavation.
- D. Do not place stones or any material larger than 3 inches in backfill around pipes.
- E. Maximum Dry Density and Optimum Moisture Content:
The maximum dry density and optimum moisture content of non-granular soils (greater than 12 percent by weight passing through a No. 200 sieve) shall be determined by one of the methods described in ASTM D1557 (AASHTO T180).
- F. Moisture Control:
Field moisture tests shall be performed in accordance with ASTM Test D3017 (Nuclear Probe Method). At the time of compacting, backfill material and the surface on which it is to be placed shall be within -2 to +2 percent optimum moisture content and meet specified compaction requirements. Do not compact fill or backfill until it has attained the required moisture content. Add an accurately determined and carefully measured amount of water to the materials or surfaces which are too dry. Material containing an excess of moisture shall be dried by manipulation, aeration, drainage, or other means before being compacted.

3.06 CLASS 3 PERMEABLE MATERIAL FOR RETAINING WALLS

Class 3 permeable material shall be placed in accordance with section 68-2.03, "Construction," of the 2010 Caltrans Standard Specifications.

3.07 HAULING

No excavated material shall be hauled out of the project area without prior approval by the Owner.

3.08 EXCESS MATERIAL

All excavation material in excess of that used for backfilling, embankment and similar purposes, shall be handled in accordance with these specifications.

3.09 GRADING AND COMPACTION

A. Grading:

1. Grading shall conform to the Contract Drawings and the tolerances specified herein. Satisfactory excavated materials shall be transported to and placed in fill or embankment within the limits of the work. Unsatisfactory materials encountered within the limits of the work shall be excavated and replaced with satisfactory materials as directed by the Owner. Unsatisfactory materials shall be removed and disposed off-site.
2. The surface of all excavations, embankments, and subgrades shall be finished to a smooth and compact surface in accordance with the lines, grades, and cross sections or elevations shown on the Contract Drawings. The degree of finish for all graded areas to be paved within this contract shall be within 0.05 feet of the grades and elevations indicated. Ditches shall be finished in a manner that will result in effective drainage.
3. Subgrade shall be shaped to line, grade, and cross section, and compacted as specified. This operation shall include plowing, disking, scarifying existing track subgrade and all moistening or aerating required to obtain specified compaction and moisture content. Soft or otherwise unsatisfactory material shall be removed and replaced with excavated material or other approved material as directed. Low areas resulting from removal of unsatisfactory material shall be brought up to required grade with satisfactory materials, and the entire subgrade shall be shaped to line, grade, and cross section, and compacted as specified. After rolling, the surface of the subgrade shall not show deviation greater than 0.10 feet when tested with a 10-foot straightedge applied both parallel and at right angles to the centerline of the area. The elevation of the finished subgrade shall not vary more than 0.10 feet from the established grade and cross section.
4. Subgrades improperly compacted shall be re-opened to the depth directed by the Owner, then refilled and compacted to the density specified at the Contractor's expense.
5. Ditches and drains along subgrade shall be maintained as required to drain the subgrade effectively at all times. The finished subgrade shall not be disturbed by traffic or other operations and shall be protected and maintained by the Contractor in a satisfactory condition until embankment, subbase, base, or pavement is placed. The storage or stockpiling of materials on the finished subgrade will not be permitted. No subbase, base, or pavement shall be laid until the subgrade has been checked and approved, and in no case shall subbase, base, surfacing, or pavement be placed on a muddy, spongy, or frozen subgrade.

B. Compaction:

1. Proof-roll surfaces to determine if soft spots exist in the material using a loaded water truck or similar approved equipment. If wet or spongy areas are revealed, notify the Owner so that corrective measures may be determined. Soft spots shall

be removed and refilled until they meet the required compaction. Areas which support the paving, utility structures, buildings, or other structures shall be inspected during proof-rolling and approved by the Owner before further earthwork operations are performed.

2. Furnish satisfactory power-operated or power-driven hand operated equipment wherever possible to compact to requirements specified herein. Do not operate mobile equipment closer to foundation than a horizontal distance equal to the height of backfill above bottom of wall. Compaction shall be accomplished by sheep foot rollers, pneumatic-tired rollers, steel-wheeled rollers, vibrator compactors, or other approved equipment well suited to the type of material being compacted.
3. If the degree of compaction is unsatisfactory, make necessary adjustments until specifications are met. Material placed over layers not satisfactorily compacted shall be removed and the unsatisfactory areas re-compacted as directed by the Owner at the contractor's expense.
4. In addition to proof-rolling, the Owner shall perform field density tests in accordance with ASTM Test Designation D1556 (Sand-Cone Method). The exact locations and minimum number of field density tests shall be determined by the Owner, subject to the following general requirements:
 - a. One field density test shall be taken for every 300 linear feet for each lift of soil.
5. Unless otherwise noted, relative compaction of fill materials composing each layer of fill shall not be less than 95 percent as determined by ASTM D1556.
6. These compaction requirements do not apply to material placed in stockpiles or waste areas.

3.10 MAINTENANCE OF EXCAVATIONS

- A. The Contractor shall maintain excavations when they are open and take all precautions to keep them marked, barricaded and safe.
- B. When backfill is placed, sheeting and bracing shall be removed in stages so that the walls are supported by the shoring or by newly placed backfill.
- C. Attention is directed to the OSHA Standards for shoring.

3.11 FINISH GRADING AND CLEAN UP

- A. Spread topsoil and finish grade any disturbed soil areas to smoothly transition with the surrounding ground lines and structures.
- B. Once the earthwork has passed Final Acceptance inspection, promptly remove any temporary erosion control materials.
- C. Power wash any soiled paved areas.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Earthwork shall be measured by the cubic yard.

- B. Quantity of earthwork for payment excludes class 3 permeable material earthwork for trenching and backfilling for storm drainage facilities.

4.02 PAYMENT

- A. The contract price paid per cubic yard for Earthwork shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. The contract lump sum price for Earthwork shall be considered as a Final Pay Item as defined in Sections 1-1.07B Glossary, and 9-1.02C of the Caltrans Standard Specifications, except that "Department" shall be replaced with "City".
- C. Payment for class 3 permeable material for retaining walls shall be considered as included in the price paid per linear foot for Construct Retaining Wall and no separate payment shall be made therefore.
- D. Payment for earthwork for and backfilling for storm drainage facilities shall be considered as included in the items of payment for the storm drainage facilities and no separate payment will be made therefore.
- E. Costs associated with the handling and stockpiling of surplus or unsuitable material shall be considered as included in the prices paid for items to which they apply and no additional payment will be made.
- F. All costs associated with dust control will be considered as included in the prices paid for the items to which they apply and no additional payment will be made.
- G. No payment will be made for the excavation, fill, or backfill performed in excess of the planned or authorized dimensions and cross sections as shown on the project plans.

END OF SECTION 31 20 00

SECTION 32 01 90 PRUNING

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Measures and requirements for pruning trees.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

- A. Content applies to new plant installations only: i. If pruning of roots is required of existing plants or trees, Contractor must contact Project Manager and arrange for FMD Grounds to review the conditions and advise.
- B. If pruning of roots 2" in diameter or greater is required for the construction of the improvements, Contractor must seek approval from Design Professional prior to proceeding.
- C. Contractor shall remove only dead, dying, or broken branches as approved by FMD Grounds. Do not prune for shape.
- D. Contractor shall prune and thin trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Design Professional, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- E. Pruning of plant material shall be limited to fine pruning.
- F. Fine pruning is the removal of dead, diseased, injured, broken, rubbing, or crowded branches or twigs. Minor branches and branches that connect to the trunk may be fine pruned. Fine pruning should not result in large voids in the general outline or structure of the plant.
- G. Protruding branch stubs, left on the tree after pruning, is not acceptable. It will increase the possibility of decay and may result in the growth of undesirable shoots from the stub.
- H. The normal shape of the plant shall be left intact unless otherwise directed by the Design Professional. Additional pruning may be required on trees of special use or character.
 - 1. All pruning cuts on woody plants shall be made in accordance with standards set forth in the National Arborist Association's Pruning Standards for Shade Trees, Class I Fine Pruning. Improperly pruned shrubs and trees may result in rejection of plants by the Design Professional.
 - 2. Location of Pruning Cut
 - a. All pruning cuts by the Contractor shall be made sufficiently close to the parent limb so as not to have a protruding stub but shall be beyond the branch bark collar of the branch.

- b. Branch bark ridges and collars are areas or lines of bulging bark that usually are rougher and darker in color than surrounding bark. Branch bark ridges occur above the lateral on the parent limb, while the collar occurs below the lateral. Studies show that the branch bark ridges and the collar form a strong barrier between the branch and the trunk against decay. This barrier shall not be violated by a pruning cut.
- 3. Pruning Large Branches
 - a. If a cut is required on a limb greater than 1 inch (1") diameter, the Contractor shall consult the Design Professional for prior approval and instructions.
- 4. Treatment of Pruning Cuts
 - a. Treatment of pruning cuts with wound dressings and/or paints is not necessary for proper wound repair and shall not be applied to any pruning cuts or wounds

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The work performed under this section will be measured on a lump sum basis.

4.2 PAYMENT

- A. The contract lump sum price paid for Prune Existing Trees shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in pruning existing trees, complete in place, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 01 90

SECTION 32 11 23 - AGGREGATE BASE COURSES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. Aggregate base material and source quality control.
- B. Installation standards.
- C. Spreading of material.
- D. Compacting.
- E. Field quality control.

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Product Data: Submit source, gradation, R-value, sand equivalent, and durability for the proposed base material.
- C. Test Reports: Submit plant and field test reports as specified in Articles 2.02 and 3.05 herein.

1.04 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM C136: Test Method for Sieve Analysis of Fine and Coarse Aggregates
 2. ASTM D421: Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
 3. ASTM D1241: Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses
 4. ASTM D1557: Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
 5. ASTM D2419: Test Method for Sand Equivalent Value of Soils and Fine Aggregate
 6. ASTM D2844: Test Method for Resistance R-Value and Expansion Pressure of Compacted Soils

- 7. ASTM D2922: Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- 8. ASTM D3017: Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- 9. ASTM D3744: Test Method for Aggregate Durability Index
- B. State of California, Department of Transportation (Caltrans), Standard Specifications, 2010 edition:
 - 1. Section 17 Watering
 - 2. Section 26 Aggregate Bases

PART 2 - PRODUCTS

2.01 AGGREGATE BASE MATERIAL

- A. Aggregate for base course at the time the base material is deposited on the prepared sub grade or sub base shall conform with ASTM D1241 and the following requirements:

- 1. Class 2 Aggregate Base:
 - a. Class 2 aggregate base shall be free of vegetable matter, reclaimed asphalt, concrete, glass and other deleterious substances. Coarse aggregate, material contained on the No. 4 sieve, shall consist of material of which 25 percent by weight shall be crushed particles. ¾" Class 2 aggregate base shall conform to the following grading, determined in accordance with ASTM C136:

Percentage Passing Sieves

Sieve Sizes	1-1/2 inch Maximum	3/4-inch Maximum
2-inch	100	-----
1-1/2 inch	90-100	-----
1-inch	-----	100
3/4-inch	50-85	90-100
No. 4	25-45	35-55
No. 30	10-25	10-30
No. 200	2-9	3-9

- b. Class 2 aggregate base shall conform to the following additional requirements:

Tests	ASTM Test Method	Requirements
Resistance (R-Value)	D2844	78 min.
Sand Equivalent	D2419	30 min.

Durability Index D3744 35 min.

2. Where aggregate base is used as finish surfacing, it shall be virgin material.

2.02 SOURCE QUALITY CONTROL

- A. The Contractor shall perform sampling and tests of the aggregate base material in accordance with the ASTM Test Methods herein specified and provide copies of such tests to City, to determine compliance with specified requirements. Samples shall be taken from material as delivered to the site, and shall be prepared in accordance with ASTM D421, as applicable.
- B. Aggregate grading or sand equivalent test shall represent no more than 500 cubic yards of base material or one days production, whichever is the greater amount.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. The Contractor shall call for an inspection by the Owner and obtain written acceptance of the prepared sub grade or sub base before proceeding with the placement of aggregate base course.
- B. The sub grade or sub base to receive aggregate base course, immediately prior to spreading, shall conform to the compaction and elevation tolerances indicated for the material involved and shall be free of standing water and loose or extraneous material in accordance 31 20 00.

3.02 INSTALLATION STANDARDS

- A. Aggregate base shall be applied over the prepared sub grade or sub base and compacted (95% relative compaction unless otherwise noted) in accordance with Section 26 of the Caltrans Standard Specifications.
- B. Aggregate base shall have minimum uniform thickness after compaction of dimensions indicated. Where not indicated, compacted thickness shall be 6 inches.
- C. All compaction expressed in percentages in this section refers to the maximum dry density as determined by ASTM D1557.

3.03 SPREADING OF MATERIAL

- A. Aggregate for base shall be delivered as uniform mixture of fine and coarse aggregate and shall be spread in layers without segregation.
- B. Aggregate base material shall be free from pockets of large and fine material. Segregated materials shall be remixed until uniform.
- C. Aggregate base material shall be moisture-conditioned to at least 2% over optimum moisture content.

- D. Aggregate base 6 inches and less in thickness may be spread and compacted in one layer. For thickness greater than 6 inches, the base course aggregate shall be spread and compacted in two or more layers of uniform thickness not greater than 6 inches each per Caltrans Standard Specification Section 26.

3.04 COMPACTING

- A. Relative compaction of each layer of compacted aggregate base material shall be not less than 95 percent as determined by ASTM D1557.
- B. Thickness of finished base course shall not vary more than 3/4 inch from the indicated thickness at any point. Base that does not conform to this requirement shall be reshaped or reworked, watered, and recompact to achieve compliance with specified requirements.
- C. The surface of the finished aggregate base course at any point shall not vary more than 3/4 inch above or below the indicated grade.

3.05 FIELD QUALITY CONTROL

- A. The Owner may, for Owner's sole convenience, perform field tests to determine compliance with specified requirements for density and compaction of aggregate base material, and to determine moisture-content compliance of the installed base course.
- B. Testing frequency by Owner, if performed, is anticipated to be not less than one test for every 2,000 square feet of base course material, per layer or lift. Contractor shall accommodate and cooperate with such testing activity.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Class 2 Aggregate Base shall be measured by the cubic yard.

4.02 PAYMENT

- A. The contract price paid per cubic yard for Class 2 Aggregate Base shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with aggregate base, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 11 23

SECTION 32 12 16 - ASPHALT PAVING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.
- B. Section Includes:
 - 1. Cold milling of existing asphalt concrete pavement.
 - 2. Asphaltic concrete paving, wearing, binder and base course.
 - 3. Asphalt grinding and overlay
 - 4. Asphalt Seal

1.02 DESCRIPTION OF WORK

- A. Performance requirements:
 - 1. Paving: Designed for movement of garbage and fire trucks.

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Product Data: Submit product information for all proposed products.
- C. Design Data: Submit mix design per Section 39 for each asphalt concrete mix and seal coat to be used.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with Caltrans Standard Plans and Specifications.

1.05 ENVIRONMENTAL REQUIREMENTS

- A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 – PRODUCTS

2.01 FLEXIBLE PAVEMENT

- A. Asphalt Cement: As shown on plans and in accordance with Caltrans Standard Plans and Specifications.

2.02 ASPHALT PAVING MIX

- A. Use dry material to avoid foaming. Mix uniformly.

- B. Asphalt mix: HMA Type A, with the grading of the combined aggregate conforming to 1/2-inch grading, and as specified in Section 39 of the Caltrans Standard Specifications.
- C. Mix Temperature: In accordance with Caltrans Standard Plans and Specifications.

2.03 SOURCE QUALITY CONTROL AND TESTS

- A. Test samples in accordance with Caltrans Standard Plans and Specifications.

PART 3 – EXECUTION

3.01 GENERAL

- A. Protect all adjacent features to remain. Repair any damage or replace to satisfaction of Owner.

3.02 EXAMINATION

- A. Verify gradients and elevations of base.
- B. Verify compacted asphalt, subgrade and subbase is dry and ready to support paving and imposed loads as specified for the material involved. Remove loose and uncompacted material in accordance with Caltrans Standard Specification Section 39.

3.03 PREPARATION

- A. Apply primer in accordance with Caltrans Standard Plans and Specifications.
- B. Use clean sand to blot excess primer.
- C. Apply type SS1/SS1h tack coat in accordance with Caltrans Standard Plans and Specifications
- D. Asphalt binder used in HMA Type A must be PG 64-16.
- E. Coat surfaces of frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.
- F. Existing pavements shall be removed to clean straight lines, and seams shall be located at the edge of lanes and not in wheel paths.

3.04 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling (grinding). Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
 - 1. Mill to a depth of 2 inches.
 - 2. Patch surface depressions deeper than 1 inch after milling, before wearing course is laid.

3.05 INSTALLATION - ASPHALT PAVEMENT SINGLE COURSE

- A. Install work as shown on plans and in accordance with Caltrans Standard Plans and Specifications.
- B. Install utility boxes in correct position and elevation.
- C. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
- D. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.

3.06 ERECTION TOLERANCES

- A. Flatness: In accordance with Caltrans Standard Plans and Specifications.
- B. Scheduled Compacted Thickness: In accordance with Caltrans Standard Plans and Specifications.
- C. Variation from Indicated Elevation: In accordance with Caltrans Standard Plans and Specifications.
- D. Relative compaction to be 96% min.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Hot Mix Asphalt (Type A) shall be measured by the ton.
- B. Grind Asphalt Concrete Pavement shall be measured per square foot.

4.02 PAYMENT

- A. The contract price paid per ton for Hot Mix Asphalt (Type A) shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with hot mix asphalt, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. The contract price paid per square foot for Grind Asphalt Concrete Pavement shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with grinding asphalt concrete pavement, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer

END OF SECTION 32 12 16

SECTION 32 13 13 – CONCRETE PAVING

PART - 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. Drawings and general provisions of Contract, including General & Special Conditions and all Specification sections, may apply to work of this section.
- B. Work shall be in accordance with the Caltrans Standard Specification, Section 73: Concrete Curbs and Sidewalks.
- C. Section Includes:
 - 1. Concrete sidewalk, walkways, curb ramps, and related work
 - 2. Concrete curb, gutters, valley gutters, driveways and driveway conforms
- D. Related Work Specified Elsewhere: As applicable, related work specified elsewhere may include, but is not limited to, the following:
 - 1. SECTION 32 11 23 – AGGREGATE BASE COURSES
 - 2. SECTION 03 20 00 – CONCRETE REINFORCEMENT
 - 3. SECTION 03 31 00 – STRUCTURAL CAST-IN-PLACE CONCRETE

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Product Data: Submit data on joint filler, color, admixtures, mix designs, and curing compounds.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301
- B. Perform Work in accordance with Caltrans Standard Plans and Specifications
- C. Obtain cementitious materials from same source throughout

1.05 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.

- B. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

1.06 PERFORMANCE REQUIREMENTS

- A. Paving: Designed for movement of trucks up to 30,000 lbs.

PART - 2 PRODUCTS

2.01 FORM MATERIALS

- A. Form Materials: Conform to ACI 301.
- B. Isolation Joint Filler: ASTM D1752 Preformed Sponge Rubber or Cork Expansion type. Color shall match concrete color.

2.02 REINFORCEMENT

- A. Reinforcing Steel: As specified in Caltrans Standard Specification, Section 73: Concrete Curbs and Sidewalks.

2.03 CONCRETE MATERIALS

- A. Concrete Materials: As specified in Caltrans Standard Specification, Section 73: Concrete Curbs and Sidewalks.
- B. Base rock shall be per 32 11 23 Aggregate Base Courses. Backfill shall be per 31 20 00 Earthwork.

2.04 ACCESSORIES

- A. Curing Compound: ASTM C309, Type 1 or 1D, Class A or B.
- B. Preformed expansion joint filler must comply with Caltrans Standard Specification Section 73.
- C. Color for sidewalk and driveways and curb and gutter: Dispersing black, 1 lb per cubic yard mixed at batch plant.

2.05 CONCRETE MIX

- A. Select proportions for normal weight concrete in accordance with ACI 301 Method 1.
- B. Provide concrete to the following criteria:
 - 1. Compressive Strength: 3,000 psi at 28 days.
 - 2. Slump: 4 inches.
 - 3. Minimum Cement Content: 550 pounds/cu yd.
 - 4. Maximum Water/Cement Ratio: 50%.

2.06 SOURCE QUALITY CONTROL AND TESTS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Submit proposed mix design of each class of concrete to appointed firm for review prior to commencement of Work.
- C. Tests on cement, aggregates, and mixes will be performed to ensure conformance with specified requirements.
- D. Test samples in accordance with ACI 301.

PART - 3 EXECUTION

3.01 EXAMINATION

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Verify compacted subgrade and base are in accordance with the Geotechnical Investigation, in the appendix and are ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

3.02 SUBBASE

- A. Aggregate Subbase: Install as specified in Section 32 11 23 and in accordance with the Geotechnical Investigation, in the appendix.

3.03 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Coat surfaces of structures and frames with allowed bituminous agent to prevent bond with concrete pavement.
- C. Notify Owner minimum two work days prior to commencement of concreting operations. Confirm condition, compaction of subgrade before scheduling pour.

3.04 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.05 REINFORCEMENT

- A. Owner must review reinforcement before concrete is placed.

- B. Place reinforcement as indicated.
- C. Interrupt reinforcement at joints.
- D. Place reinforcement to achieve pavement alignment as detailed.

3.06 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301.
- B. Place curbs & gutters in accordance with Caltrans Standard Specification Section 73.

3.07 JOINTS

- A. Place isolation joints at 18 foot intervals maximum. Align sidewalk joints.
- B. Place isolation joint with full depth joint filler between paving components and building, utility manholes, walls, foundations, drains, stairways, or other appurtenances.
- C. Provide keyed, or saw cut contraction joints in hardened concrete, at 6 foot intervals, or as indicated on plans to a depth equal to 1 inch. Arrange joints to create square panels where possible and in accordance with plans, where applicable, and ACI 302.1R-10. Sidewalk contraction joints may be performed by scoring with a grooving tool and rounding corners with an edger tool to a depth of at least 1 inch, per Caltrans Standard Specification Section 73-1.03E.
- D. Scoring: shall match existing adjacent paving where it occurs and where feasible.

3.08 FINISHING

- A. Sidewalk Paving:
 - 1. Slopes less than 6 percent: Slip Resistant, medium broom finish.
 - 2. Slopes greater than 6 percent: Slip resistant, heavy broom finish.
 - 3. Radius to 1/4 inch radius.
 - 4. Trowel joint edges.
 - 5. Wood float.
- B. Direction of Texturing: Transverse to direction of travel.
- C. Place curing compound on exposed concrete surfaces immediately after finishing.
- D. Footings: exposed portions of concrete footings for fences, information kiosk, signposts and other amenity features shall be stained per Specification Section 32 13 16.

3.09 JOINT SEALING

- A. Separate pavement from vertical surfaces with thick joint filler per manufacturer's recommendation.

- B. Place joint filler in pavement pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- C. Extend joint filler from bottom of pavement to within 1/8 inch of finished surface.

3.10 TOLERANCES

- A. Maximum Variation of Surface Flatness: 1/8 inch in 10 ft.
- B. Maximum Variation from True Position: 1/8 inch.

3.11 FIELD QUALITY CONTROL

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Testing firm will take cylinders and perform slump tests in accordance with ACI 301.

3.12 PROTECTION

- C. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
- D. Do not permit pedestrian or vehicular traffic over pavement until 80 percent design strength of concrete has been achieved, or 7 days.
- E. Cure per Caltrans Standard Specification Section 73.

PART 4 - MEASUREMENT & PAYMENT

4.01 MEASUREMENT

- A. Construct Type A1-6 Curb and Gutter shall be measured on a linear foot basis.
- B. Construct Type A2-6 Curb and Gutter shall be measured on a linear foot basis.
- C. Construct Driveway shall be measured on a square foot basis.
- D. Construct Sidewalk, Walkway, and Driveway Conform shall be measured on a square foot basis.
- E. Construct Curb Ramp shall be measured per each.

4.02 PAYMENT

- A. The contract price paid per linear foot for Construct Type A1-6 Curb and Gutter shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing curb and gutter, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. The contract price paid per linear foot for Construct Type A2-6 Curb and Gutter shall include full compensation for furnishing all labor, materials, tools, equipment, and

incidentals for doing all the work involved in constructing curb and gutter, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

- C. The contract price paid per square foot for Construct Driveway shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing driveway, including curb and gutter adjacent to driveway, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- D. The contract price paid per square foot for Construct Sidewalk, Walkway, and Driveway Conform shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing sidewalk, walkways, and concrete driveway conforms, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- E. The contract price paid per square foot for Construct Curb Ramp shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in constructing curb ramp, including curb and gutter adjacent to curb ramp, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 13 13

SECTION 32 17 23 – STRIPING & PAVEMENT MARKINGS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. The work of this Section consists of furnishing all necessary labor, materials, tools, equipment and incidentals required for the application of traffic paint for pavement markings and striping and for markers as indicated on the Contract Drawings and as specified herein.
- B. Related Work Specified Elsewhere: As applicable, related work specified elsewhere may include, but is not limited to, the following:
 - 1. SECTION 32 12 16 - ASPHALT PAVING

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.

1.04 REFERENCES

- A. The State of California Department of Transportation (Caltrans) Standard Specifications (hereafter Caltrans Standard Specifications) following sections: Section 84, "Traffic Stripes and Pavement Markings," all applicable Articles as stated herein. Article 84-2.05, "Measurement" and Article 84-2.06, "Payment" are not applicable.
- B. The State of California Department of Transportation (Caltrans) Standard Plans for pavement marking symbols applicable to this Contract.
- C. The Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) 2009.
- D. Caltrans MUTCD 2012 California Supplement

1.05 QUALITY CONTROL

- A. Layout of Work
 - 1. Prior to the application of the pavement markings, the Contractor shall mark the location of all the pavement markings, and request inspection and approval of the layout before proceeding with the application work.

1.06 DEFINITIONS

- A. For the purpose of this Contract, the following pavement marking definitions apply:

1. Striping: A painted longitudinal line for separating traffic.
2. Pavement Marking: A painted symbol, crossing marking, parking stall, limit line, lettering or striping greater than 6 inches in width.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Pavement marking materials:
 1. Color of pavement markings shall be as shown on the Contract Drawings.
 2. Paint for pavement marking, striping, and platform paint shall be fast drying solvent borne thermoplastic traffic paint conforming to Caltrans Standard Specifications, Section 84-2.
 3. Pavement Markers shall be 2-way Retroreflective Markers with type, color, and placement conforming to Caltrans Standard Specifications, Section 85.

PART 3 – EXECUTION

3.01 APPLICATION

- A. Locations of traffic stripes, pavement markings and pavement markers shall be as shown on the Contract Drawings.
- B. Method of application of paint shall conform to the requirements of Caltrans Standard Specifications, Section 84-3, Painted Traffic Stripes and Pavement Markings, 2-coat with glass beads for painted stripes and pavement markings in parking lot and Section 84-2 for thermoplastic stripes and pavement markings elsewhere.
- C. Method of removal shall conform to the requirements of Caltrans Standard Specifications, Section 15-2, Existing Highway Facilities.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Striping and Pavement Markings will be measured on a lump sum basis and shall include all striping, pavement markings and legends required for the work.

4.02 PAYMENT

- A. The contract lump sum price paid for Striping and Pavement Markings shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in pavement markings including removal, establishing alignment and layout work, complete in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 17 23

SECTION 32 31 13 – CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.01 SUMMARY

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.
- B. Section Includes:
 - 1. Chain-link fences
 - 2. Swing gates

1.02 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design chain-link fences and gates, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Chain-link fence and gate framework shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7:
 - 1. Minimum Post Size: Determine according to ASTM F 1043 for framework up to 12 feet high, and post spacing not to exceed 10 feet for IC, electric-resistance-welded round steel pipe.
 - 2. Minimum Post Size and Maximum Spacing: Determine according to CLFMI WLG 2445, based on mesh size and pattern specified and on the following:
 - a. Wind Loads: 16 psf
 - b. Exposure Category: B
 - c. Fence Height: To match existing
 - d. Material Group: IC, electric-resistance-welded round steel pipe

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Product Data: Submit for each type of product indicated.
- C. Shop Drawings: Submit plans, elevations, sections, details, and attachments to other work.
- D. Samples: For each polymer-coated product and for each color and texture specified, in 6-inch lengths for components and full-sized units for accessories.

- E. Design Data: For chain-link fences and gate framework indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- F. Product Certificates: For each type of chain-link fence and gate, from manufacturer.
- G. Product Test Reports: For framing strength according to ASTM F 1043.
- H. Sample of special warranty.
- I. Operation and maintenance data.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with Caltrans Standard Plans and Specifications.

PART 2 – PRODUCTS

2.01 CHAIN-LINK FENCE FABRIC

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist. Comply with CLFMI Product Manual and with requirements indicated below:
 - 1. Fabric Height: To match existing
 - 2. Steel Wire Fabric: Wire with a diameter of 0.0907 inch.
 - a. Mesh Size: To match existing.
 - b. Zn-5-Al-MM Aluminum-Mischmetal-Coated Fabric: ASTM F 1345, Type III, Class 2, 1.0 oz./sq. ft.
 - 3. Aluminum Wire Fabric: ASTM F 1183, with mill finish, and wire diameter of 0.148 inch.
 - a. Mesh Size: To match existing.
 - 4. Selvage: Knuckled at both selvages

2.02 FENCE FRAMING

- A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F 1043 based on the following:
 - 1. Fence Height: To match existing.
 - 2. Light Industrial Strength: Material Group IC-L, round steel pipe, electric-resistance-welded pipe
 - a. Line Post: 1.9 inches in diameter.
 - b. End, Corner and Pull Post: 2.375 inches.
 - 3. Horizontal Framework Members: top rails complying with ASTM F 1043.

4. Brace Rails: Comply with ASTM F 1043.
5. Metallic Coating for Steel Framing:
 - a) Type A zinc coating.
 - b) Type B zinc with organic overcoat.
 - c) External, Type B zinc with organic overcoat and internal, Type D zinc-pigmented coating.
 - d) Type C, Zn-5-Al-MM alloy coating.
 - e) Coatings: Any coating above.

2.03 SWING GATES

- A. Metallic-General: Comply with ASTM F 900 for gate posts and single swing gate types.
 1. Gate Leaf Width: To match existing.
 2. Gate Fabric Height: 72 inches or less
- B. Pipe and Tubing:
 1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; manufacturer's standard protective coating and finish.
 2. Aluminum: Comply with ASTM B 429/B 429M; manufacturer's standard finish.
 3. Aluminum: Comply with ASTM B 429/B 429M; manufacturer's standard finish.
 4. Gate Frames and Bracing: Round tubular steel.
- C. Frame Corner Construction: Welded.
- D. Hardware:
 1. Hinges: Swing to match existing.
 2. Latches permitting operation from both sides of gate.
 3. Closer: Manufacturer's standard.

2.04 FITTINGS

- A. General: Comply with ASTM F 626.
- B. Finish:
 1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. zinc.
 2. Aluminum: Mill finish.

2.05 GROUT AND ANCHORING CEMENT

- A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout, recommended in writing by manufacturer, for exterior applications.
- B. Erosion-Resistant Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended in writing by manufacturer, for exterior applications.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
 - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 50 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
- D. Install chain-link fencing to comply with ASTM F 567 and more stringent requirements indicated.
- E. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- F. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
 - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Concealed Concrete: Top 2 inches below grade to allow covering with surface material.
- G. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567.
- H. Line Posts: Space line posts uniformly at maximum of 10 feet o.c.

- I. Chain-Link Fabric: Apply fabric to inside or outside of enclosing framework according to match existing configuration. Leave 1 inch between finish grade or surface and bottom selvage unless otherwise indicated.
- J. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.
- K. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Relocate Chain Link Fence shall be measured by the linear foot.

4.02 PAYMENT

- A. The contract price paid per linear foot for Relocate Chain Link Fence shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with relocating chain link fence, including chain link gates, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 31 13

SECTION 32 31 19 - DECORATIVE METAL FENCES AND GATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Ornamental steel fences.
- B. Related Requirements:
 - 1. Section 033053 "Miscellaneous Cast-in-Place Concrete" for concrete bases for gate operators, drives, and controls and post concrete fill.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For fencing.
 - 1. Include plans, elevations, sections, post spacing, details.
- C. Samples: For each fence material and for each color specified.
 - 1. Provide Samples 12 inches in length for linear materials.
 - 2. Provide Samples 12 inches square for bar grating.

1.04 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For gate operators to include in maintenance manuals.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.

PART 2 - PRODUCTS

2.01 MANUFACTURER

The fence system shall conform to Montage Plus standard picket space Ornamental Steel, Genesis design, extended picket bottom rail treatment, 2-Rail style manufactured by Ameristar Fence Products, Inc., in Tulsa, Oklahoma or approved equal.

2.02 MATERIAL

- A. Steel material for fence panels and posts shall conform to the requirements of ASTM A653/A653M, with a minimum yield strength of 45,000 psi and a minimum zinc (hot-dip galvanized) coating weight of 0.60 oz/ft², Coating Designation G-60.
- B. Material for pickets shall be 3/4" square x 18 Ga. tubing. The rails shall be steel channel, 1.5" x 1.4375" x 14 Ga. Picket holes in the rail shall be spaced 4.675" o.c. Fence posts shall be 2-1/2" x 16 Ga.

2.03 FABRICATION

- A. Pickets, rails and posts shall be pre-cut to specified lengths. Rails shall be pre-punched to accept pickets.
- B. Pickets shall be inserted into the pre-punched holes in the rails and shall be aligned to standard spacing using a specially calibrated alignment fixture. The aligned pickets and rails shall be joined at each picket-to-rail intersection by Ameristar's proprietary fusion welding process, thus completing the rigid panel assembly or approved equal welding method.
- C. The manufactured panels and posts shall be subjected to an inline electrode position coating (E-Coat) process consisting of a multi-stage pretreatment/wash, followed by a duplex application of an epoxy primer and an acrylic topcoat. The minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils (0.058 mm). The color shall be Black. The coated panels and posts shall be capable of meeting the performance requirements for each quality characteristic shown in the table below:

Coating Performance Requirements		
<u>Quality Characteristics</u>	<u>ASTM Test Method</u>	<u>Performance Requirements</u>
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 1,500 hours (Scribed per D1654; failure mode is accumulation of 1/8" coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625" ball).
Weathering Resistance	D822 D2244, D523 (60° Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

- D. The manufactured fence system shall be capable of meeting the vertical load, horizontal load,

and infill performance requirements for Commercial weight fences under ASTM F2408.

PART 3 - EXECUTION

3.01 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 100 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

1. Construction layout and field engineering are specified in Section 017300 "Execution."

3.02 INSTALLATION

Fence post shall be spaced according to the table below, plus or minus 1/4". For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer

Montage Plus – Post Spacing By Bracket Type						
Span	For GENESIS 8' Nominal (91.95" Rail)					
Post Size	2-1/2"	2-1/2"	2-1/2"	3"	2-1/2"	3"
Bracket Type	Montage Plus Universal (BB112)	Montage Plus Line Blvd. (BB114)	Montage Plus Flat Mount (BB111)		Montage Plus Swivel (BB113)*	
Post Settings ± 1/4" O.C.	95"	95"	95"	95-1/2"	*95"	*95-1/2"
*Note: When using BB113 swivel brackets on either or both ends of a panel installation, care must be taken to ensure the spacing between post and adjoining pickets meets applicable codes. This will require trimming one or both ends of the panel.						

3.03 FENCE INSTALLATION MAINTENANCE

When cutting/drilling rails or posts adhere to the following steps to seal the exposed steel surfaces; 1) Remove all metal shavings from cut area. 2) Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry. 3) Apply 2 coats of custom finish paint matching fence color. Failure to seal exposed surfaces per steps 1-3 above will negate warranty. Ameristar spray cans or paint pens or approved equal shall be used to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-Ameristar parts or components will negate the manufactures' warranty.

3.04 CLEANING

The contractor shall clean the jobsite of excess materials; post-hole excavations shall be scattered uniformly away from posts.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Ornamental Steel Fence shall be measured by the linear foot.

4.02 PAYMENT

- A. The contract price paid per linear foot for Ornamental Steel Fence shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated ornamental steel fence, including post pockets, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 31 19

SECTION 32 91 00 TOPSOIL

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Requirements for furnishing and placing topsoil.

PART 2 - PRODUCTS

- A. Topsoil
 - 1. Topsoil shall be friable and similar in physical characteristics to locally occurring topsoil. It shall be taken from a well-drained, arable site and shall not be delivered or moved in a muddy or frozen condition. It shall be reasonable free of subsoil. It shall contain no stones, clods, sticks, roots, or other extraneous matter greater than 1" in size and shall contain no materials toxic to plants.
 - 2. Upon request of the Design Professional, the Contractor shall send representative samples of the topsoil to a recognized commercial or government agency to be tested for pH, fertility and bulk density. Copies of the results and recommendations shall be furnished to the Design Professional by the Contractor.

PART 3 - EXECUTION

- A. Contractor shall grade park strip areas to a smooth, uniform surface plane with loose, uniformly fine texture. Thickness and finished grades of topsoil shall be as indicated on the plans. Roll and rake, remove ridges, and fill depressions to meet finish grades.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Topsoil will be measured on a per cubic yard basis.

4.2 PAYMENT

- A. The contract price paid per cubic yard for Topsoil shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing topsoil, complete in place, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 91 00

SECTION 32 93 00 PLANTS

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. All work for plants required to complete the project.

1.02 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- C. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples of each type of mulch.

1.04 INFORMATIONAL SUBMITTALS

- A. Product Certificates
- B. Sample Warranty

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of plants during a calendar year.

1.06 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Do not prune shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

- B. Handle planting stock by root ball.
- C. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1.08 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
 - b. Structural failures including plantings falling or blowing over.
 - 2. Warranty Period: From date of planting completion
 - a. Shrubs: 90 days

PART 2 - PRODUCTS

2.01 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.02 FERTILIZERS

- A. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
 - 1. Size: 10-gram tablets.
 - 2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

2.03 MULCHES

- A. Organic Mulch: Wood and bark chips

PART 3 - EXECUTION

3.01 PLANTING AREA ESTABLISHMENT

- A. General: Prepare planting area for soil placement, soil amendment by removing large rocks or debris and add well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 2 to 4 decisiemens /m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
- B. Placing Planting Soil: Blend planting soil in place
- C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.02 EXCAVATION FOR SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
 - 1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
 - 2. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
- B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil if amended.

3.03 SHRUB PLANTING

- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Set each plant plumb and in center of planting pit or trench with root flare 1 inch adjacent finish grades.
 - 1. Container-Grown Stock: Carefully remove root ball from container without damaging root ball or plant.
 - 2. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 3. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - a. Quantity: Two per plant

4. Continue backfilling process. Water again after placing and tamping final layer of soil.

3.04 PLANTING AREA MULCHING

- A. Mulch backfilled surfaces of planting areas and any exposed soil in planting area.

3.05 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
- D. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- E. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- F. Hand water all newly planted shrubs as required for the maintenance of plant health and vitality.

3.06 MAINTENANCE SERVICE

- A. Maintenance Service: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:

1. Maintenance Period for Shrubs: Three months from date of planting completion

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. The work performed under this section will be measured on a per unit basis.

4.02 PAYMENT

- A. The contract unit price paid for Plant Shrubs shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved

in planting shrubs, complete in place, including maintenance and watering, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 32 93 00

SECTION 33 05 13 - MANHOLES AND STRUCTURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. Section Includes:
 - 1. Modular precast concrete sanitary sewer manholes with tongue-and-groove joints with precast concrete grade rings to cover frame, covers, anchorage, and accessories.
 - 2. Bedding and cover materials.
 - 3. Adjusting existing structures to finished grade.
 - 4. Drainage Inlets

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals
- B. Shop Drawings: Indicate manhole locations, elevations, piping, and sizes and elevations of penetrations.
- C. Product Data: Submit cover and frame construction, features, configuration, and dimensions.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with California Plumbing Code.
- B. Perform Storm Drain Work in accordance with City of Cupertino Standards

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years experience.
- B. Registration and insurance in accordance with Cupertino Sanitary District regulations.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Comply with precast concrete manufacturer's instructions for unloading, storing and moving precast manholes.
- B. Store precast concrete manholes to prevent damage to public or private property. Repair property damaged from materials storage.

- C. Mark each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying labeling, "Sanitary Sewer" and "Storm Drain".

PART 2 - PRODUCTS

2.01 DRAINAGE INLETS

- A. Drainage Inlets shall conform to the City of Cupertino Standard Details or Caltrans Standard Plans as designated on the plans.
- B. Resilient flexible gaskets in accordance with ASTM C923.

2.02 MANHOLES

- A. Manholes shall conform to the City of Cupertino Standard Details for Concentric Manhole, including frames and covers.
- B. Manhole Sections: Reinforced precast concrete in accordance with ASTM C478 with resilient flexible gaskets in accordance with ASTM C923.
- C. Covers: Heavy Duty, Non Rocking, Solid, Pressure Type, Bolt down cover, labeled "D" or "Storm"
- D. Base Pad: Cast-in-place concrete of type specified in Section 03 31 00 Structural Cast-In-Place Concrete, leveled top surface.
- E. Shaft Construction: Concentric with eccentric cone top section; lipped male/female joints; sleeved to receive pipe sections.
- F. Pipe Entry: Furnish openings as indicated on Drawings.

2.03 BEDDING AND COVER MATERIALS

- A. Cover: Fill type as specified in Section 31 20 00 Earthwork and as indicated on plans.
- B. Soil Backfill from Above Pipe to Finish Grade: As specified in Section 31 20 00 Earthwork.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify items provided by other sections of Work are properly sized and located.
- B. Verify built-in items are in proper location, and ready for roughing into Work.
- C. Verify correct size of manhole excavation.

3.02 PREPARATION

- A. Coordinate placement of inlet and outlet pipe or sleeves required by other sections.

- B. Do not install structures where site conditions induce loads exceeding structural capacity of structures.
- C. Inspect precast concrete structures immediately prior to placement in excavation to verify structures are internally clean and free from damage. Remove and replace damaged units.
- D. Protect and adjust to finished grade all dry wells, drains, clean-outs, valve boxes, manholes etc.

3.03 PRECAST CONCRETE MANHOLE INSTALLATION

- A. Lift precast components at lifting points designated by manufacturer.
- B. When lowering manholes into excavations and joining pipe to units, take precautions to ensure interior of pipeline and structure remains clean.
- C. Set precast structures bearing firmly and fully on crushed stone bedding, compacted in accordance with provisions of Section 31 20 00 Earthwork and as shown on drawings.
- D. Assemble multi-section structures by lowering each section into excavation. Lower, set level, and firmly position base section before placing additional sections.
- E. Remove foreign materials from joint surfaces and verify sealing materials are placed properly. Maintain alignment between sections by using guide devices affixed to lower section.
- F. Joint sealing materials may be installed on site or at manufacturer's plant.
- G. Verify manholes installed satisfy required alignment and grade.
- H. Remove knockouts or cut structure to receive piping without creating openings larger than required to receive pipe. Install pipe boot as indicated on plan, KOR-N-SEAL, or equal.
- I. Cut pipe to finish flush with interior of structure.
- J. Shape inverts through manhole as shown on Drawings.

3.04 CAST-IN-PLACE CONCRETE INSTALLATION

- A. Prepare crushed stone bedding or other support system to receive base slab as specified for precast structures and as indicated on drawings.
- B. Erect and brace forms against movement in accordance with Section 03 31 00 Structural Cast-In-Place Concrete.
- C. Install reinforcing steel if required in accordance with Section 03 31 00 Structural Cast-In-Place Concrete.
- D. Place and cure concrete in accordance with Section 03 31 00 Structural Cast-In-Place Concrete.

3.05 FRAME AND COVER INSTALLATION

- A. Set frames using precast grade rings and mortar.
- B. Set frame and cover 2 inches above finished grade for manholes within unpaved areas to allow area to be graded away from cover beginning 1 inch below top surface of frame.

3.06 FIELD QUALITY CONTROL

- A. Test cast-in-place concrete in accordance with Document 00700, General Conditions, Submittals.
- B. Storm drain structure watertightness shall be tested with a head of 10 feet of water for 15 minutes per Caltrans Standard Specification Section 61 "Culvert and Drainage Pipe Joints" and the California Plumbing Code Section 1109 "Testing".
- C. When tests indicate Work does not meet specified requirements, remove work, replace to satisfaction of City representatives and retest.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Concentric Manhole, G3 Inlet and Drop Inlet-Curb Opening will be measured on a per each basis.
- B. Adjust Manhole to Grade will be measured on a per each basis.

4.02 PAYMENT

- A. The contract unit price paid for Concentric Manhole shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, including trench excavation and backfill, and pavement removal and restoration, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- B. The contract unit prices paid for Caltrans G3 Inlet and Drop Inlet-Curb Opening shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, including trench excavation and backfill, B2-6 curb for Caltrans G3 inlet, and pavement removal and restoration, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.
- C. The contract unit price paid for Adjust Manhole to Grade shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in adjusting manhole to grade, including pavement removal and restoration, complete and in place, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 33 05 13

SECTION 33 41 00 - STORM DRAINAGE

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. Section includes site storm sewerage drainage piping, fittings and accessories, and bedding; connection of drainage system to existing facilities
- B. Product Data: Submit data indicating pipe and pipe accessories.
- C. Manufacturer's Installation Instructions: Submit special procedures required to install products specified.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.03 SUBMITTALS

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Project Record Documents: Accurately record actual locations of pipe runs, connections, cleanouts, and invert elevations.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities to Owner.

PART 2 - PRODUCTS

2.01 STORM DRAINAGE

- A. Pipe Materials:
 - 1. RCP shall conform to section 65-2 of the 2010 Caltrans Standard Specifications.
 - 2. HDPE shall be Type C and shall conform to section 64-1 of the 2010 Caltrans Standard Specifications.
 - 3. Perforated plastic pipe for retaining wall drainage shall conform to section 68-2.02D, "Perforated Plastic Pipe," of the 2010 Caltrans Standard Specifications.
- B. Flared End Section Materials:
 - 1. Metal flared end sections shall conform to section 70-5.02A(1) of the 2010 Caltrans Standard Specifications.
- C. Concrete for Trench Dams:
 - 1. Concrete shall conform to Section 03 31 00 Structural Cast-In-Place Concrete

2.02 BEDDING AND COVER MATERIALS

- A. Bedding: Fill as specified in Section 31 20 00 Earthwork.
- B. Cover: Fill as specified in Section 31 20 00 Earthwork.

2.03 THRU THE CURB DRAINS

- A. Thru The Curb Drain shall consist of a Curb-O-Let Thru the Curb Drain and plastic pipe.
- B. Curb-O-Let Thru the Curb Drain shall be a TCD3RD or approved equal.
- C. Plastic pipe shall be 3" or 4" PVC Schedule 40 or Schedule 80.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify trench cut and excavation base is ready to receive work and excavations, dimensions, and elevations are as indicated on drawings.
- B. Contractor shall insure proper positive drainage to existing drainage structures at all times. If operation of any existing drainage structure or utility is interrupted by the contractor's work, contractor must have acceptable alternate methods in place prior to interruption.

3.02 PREPARATION

- A. Hand trim excavations to required elevations. Correct over excavation with sand backfill.
- B. Remove large stones or other hard matter capable of damaging piping or impeding consistent backfilling or compaction.

3.03 BEDDING

- A. Excavate pipe trench in accordance with Section 31 20 00 Earthwork for work of this section. Hand trim excavation for accurate placement of pipe to elevations indicated.
- B. Place bedding material at trench bottom, level materials in continuous layer not exceeding 6 inches compacted depth.
- C. Maintain optimum moisture content of bedding material to attain required compaction density.

3.04 INSTALLATION - PIPE

- A. Install pipe, fittings, and accessories in accordance with ASTM D2321. Seal joints watertight.
- B. Lay pipe to slope gradients noted on drawings with maximum variation from indicated slope of 1/8 inch in 10 feet.

- C. Install backfill at sides and compact fully before filling over top of pipe. Install top cover to minimum compacted thickness as indicated on plans, and compact to 95 percent unless otherwise noted. Refer to City Standard Detail 4-24 for additional information.
- D. Do not displace or damage pipe when compacting.
- E. Lay perforated pipe with the perforations down.

3.05 INSTALLATION-THRU THE CURB DRAINS

- A. Install Curb-O-Let Thru the Curb Drain plastic pipe and adaptors per manufacturer's recommendations.

3.06 FIELD QUALITY CONTROL

- A. Request Owner's inspection prior to placing backfill cover over pipe.
- B. Compaction testing will be performed in accordance with ASTM D2922.
- C. Watertightness shall be tested with a head of 10 feet of water for 15 minutes per Caltrans Standard Specification Section 61 "Culvert and Drainage Pipe Joints" and the California Plumbing Code Section 1109 "Testing".
- D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.
- E. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.
 - 1. Take care not to damage or displace installed pipe and joints during construction of pipe supports, backfilling, testing, and other operations.
 - 2. Correct damaged or displaced pipe. Repeat tests for corrected sections of pipe.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. The work performed for reinforced concrete pipe and HDPE pipe will be measured on a linear foot basis for the various sizes and types listed in the Bid Form.
- B. Thru The Curb Drain will be measured per each.

4.02 PAYMENT

- A. The contract price paid per linear foot for Reinforced Concrete Pipe and HDPE pipe of the various sizes and types listed in the Bid Form shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in excavating, installing reinforced concrete pipe and HDPE pipe and backfilling, complete in place, including pipe, fittings, concrete collars, connections to structures, trench dams, trench excavation, trench safety, and backfill; pavement removal and restoration of pavement and surfacing, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

- B. The contract unit price paid for Replace Thru The Curb Drain shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in placing or replacing thru the curb drains, complete in place, including, plastic pipe, adaptors and fittings, Curb-O-Let Thru the Curb Drain, 6" round inlet basin and grate, connections to structures, excavation and backfill; pavement removal and restoration of pavement and surfacing, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

- C. Payment for perforated pipe for retaining wall drainage shall be considered as included in the contract price paid per linear foot for Construct Retaining Wall and no separate payment will be made therefore.

END OF SECTION 33 41 00

SECTION 34 41 13 – TRAFFIC SIGNALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Divisions 0 & 1, including Doc. 00700 General Conditions and Doc. 00800 Special Conditions, and the technical specifications apply to this Section.

1.02 DESCRIPTION OF WORK

- A. Section includes furnishing and installing Caltrans Type 1-B Standard for future speed radar.
- B. Work shall comply with Section 86 of the most recent 2010 Caltrans Revised Standard Specifications and the 2010 Caltrans Standard Plans.

1.03 SUBMITTALS AND QUALITY ASSURANCE

- A. General: Submit under the provisions of Document 00700, General Conditions, Submittals.
- B. Refer to Caltrans Revised Standard Specifications, Section 86-1.01C, for submittal requirements.
- C. Refer to Caltrans Revised Standard Specifications, Section 86-1.01D, for Quality Assurance and Approvals. Replace the 1st paragraph in 86-1.01D(3) of the RSS for section 86 with: Deliver the material and equipment for testing to Caltrans Materials Engineering and Testing Services at 5900 Folsom Boulevard, Sacramento, CA.

PART 2 – PRODUCTS

2.01 STANDARDS, POLES, STEEL PEDESTALS AND POSTS

- A. See 2010 Caltrans Revised Standard Specification Sections 86-1.02J.

PART 3 - EXECUTION

3.01 GENERAL

- A. Install Caltrans Type 1-B Standard in accordance with section 86-2.01C of the 2010 Caltrans Revised Standard Specifications.

3.02 CAST-IN-DRILLED-HOLE CONCRETE PILE FOUNDATIONS

- A. Cast-In-Drilled-Hole Concrete Pile Foundations for traffic signal and lighting standards shall conform to the provisions in Section 86-2.01C(5)(d)(ii) "Cast-In-Drilled-Hole Concrete Pile Foundations," of the 2010 Caltrans Standard Specifications and these General Provisions.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Install Caltrans Type 1-B Standard will be measured per each.

4.02 PAYMENT

- A. The contract unit price paid for Install Caltrans Type 1-B Standard shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in furnishing and installing Caltrans Type 1-B standard, complete in place, including excavation and foundation, cast-in-drilled-hole pipe foundations, and reinforcement, as shown on the plans, as specified in these specifications, and as directed by the Engineer.

END OF SECTION 34 41 13