

THE CITY OF



PLEASANTON

DEPARTMENT OF ENGINEERING

**GENERAL PROVISIONS, NOTICE TO BIDDERS,
SPECIAL PROVISIONS, PROPOSAL AND CONTRACT
FOR**

**VALLEY AVENUE RECYCLED WATER MAIN EXTENSION
PROJECT NO. 16148**

**Bid Opening Date – Tuesday, October 25, 2016
2:00 pm**

Rebid with Reduced Scope

To be used in conjunction with the City Standard Specifications and Details dated January 2011, the State Standard Specifications and Plans dated May 2006, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished.

APPROVED

Stephen M. Kirkpatrick, City Engineer

No. 53367

Expires: 6/30/2017

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ATTACHMENTS

Attachment A: Technical Specifications

Section	Title
02201	Handling, Storage, Testing, and Disposal of Excavated Soil and Materials
15200	Valves, General
15201	Valve and Gate Actuators
16640	Cathodic Protection

Attachment B: City of Pleasanton Reclaimed Water Standard Details

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NOTICE TO BIDDERS

Proposals Sought: Time for Receipt

Sealed Bid Proposals will be received at the City Clerk's Office of the City of Pleasanton, Civic Center, 123 Main Street, Pleasanton, CA 94566, until 2:00 P.M., Tuesday, October 25, 2016, for work as described in the Plans and Specifications entitled:

VALLEY AVENUE RECYCLED WATER MAIN EXTENSION PROJECT NO. 16148

At the above mentioned time, date and address, the Bid Proposals will be publicly opened and read.

Scope of Work and Project Location

All bids previously rejected from September 2016 bidding and project scope reduced.

The work to be done in general shall consist of, but is not limited to, providing and installing: approximately 3475 lineal feet of 12-inch(12"), 270 lineal feet of 6-inch (6") recycled water and 6 service connections and various related appurtenances along Valley Avenue from Paseo Santa Cruz to Arroyo Del Valle bridge in Pleasanton including potholing operations, traffic control, providing and implementing water pollution control measures, trenching and backfill, pipeline testing and flushing, pavement restoration, landscaping restoration and other related work.

The base bid project is to be completed no later than March 30, 2017, in order to be ready for street reconstruction scheduled for April 2017 on Valley Avenue from Bernal to Hopyard.

The Engineer's cost estimate for the base bid project is \$1.0 million.

Copies of Plans and Specifications

Plans, Specifications and all Bid Proposal and Contract Documents may be obtained at the Engineering Division of the City of Pleasanton, Civic Center, 200 Old Bernal Avenue, at a cost of \$30.00 per set.

Bid Security and Contract Bonds

Each Bid Proposal shall be accompanied by cash, a cashier's check or a certified check, amounting to not less than ten percent of the bid, payable to the order of the City of Pleasanton or by a bond for that amount and payable in the form contained in this bid package. The successful Bidder will be required to furnish performance and payment bonds, each in an amount not less than one hundred percent (100%) of the contract price, and a maintenance bond not less than ten percent (10%) of the contract price.

Bids Received After Deadline

Bids received after the time established for receiving bids will not be considered. Except as provided in Section "Instruction to Bidders," no Bidder may withdraw a bid after the time

established for receiving bids or before the award and execution of the contract, unless the award is delayed for a period of ninety (90) calendar days after the date of the City's opening of bids.

Rejection of Bids

The City reserves the right to reject any or all bids and to determine which bid is, in the City's judgment, the lowest responsive and responsible bid of a Bidder or group of Bidders. The City also reserves the right to waive any inconsequential discrepancies in any bid and to delete certain items listed in the bid as set forth therein. Costs for developing, submitting, and presenting bids are the sole responsibility of the Bidder and claims for reimbursement will not be accepted by the City.

Contractor's License Classification

As provided in California Business & Professions Code Section 7028.15, the City has determined that at the time of bid, the Contractor shall possess a valid Class A General Engineering Contractor license. The contractor's failure to possess the specified license shall render the Bid as non-responsive and shall act to bar award of the contract to any Bidder not possessing said license at the time of bid, unless exempted by federal or state law.

Contractor's Department of Industrial Relations Registration

The Bidder and its Subcontractors must be registered and qualified to perform public work pursuant to section 1725.5 of the Labor Code, subject to limited legal exceptions under Labor Code section 1771.1.

This Contract will be subject to compliance monitoring and enforcement by the California Department of Industrial Relations, pursuant to Labor Code section 1771.4.

Substitution of Securities in Lieu of Retention

At the successful contractor's option, securities may be substituted for the required retention, in accordance with provisions of Section 22300 of California Public Contract Code.

Prevailing Wage

In accordance with California Labor Code Sections 1770 et seq., the Contractor shall pay general prevailing rate of per diem wages to all workers employed under this Contract.

Labor Nondiscrimination

The awarded Contractor shall comply with the requirements of the State of California's Standard Specification Code Section 7-1.01A(4) "Labor Nondiscrimination" under this contract.

Questions

Questions should be directed to Adam Nelkie, City Construction Manager, either in person at 200 Old Bernal Avenue, Pleasanton, California, by mail at P.O. Box 520, Pleasanton, California 94566-0802, or by phone at (925) 931-5650. Questions will only be answered by reference to

particular sections of these bid documents. If interpretation is deemed necessary, then the question shall be addressed in writing and a clarification shall be given to all prospective Bidders through addenda. To allow time for issuance of addenda, questions shall only be accepted prior to seven (7) calendar days before the bid opening date.

CITY OF PLEASANTON

Date: 10-3-16

By: 
Karen Diaz, City Clerk

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BID PROPOSAL

VALLEY AVENUE RECYCLED WATER MAIN EXTENSION PROJECT NO. 16148

DATE: _____

Proposal of _____ (hereinafter called "Bidder") a _____ organized and existing under the laws of the State _____, doing business as _____, to the City of Pleasanton, City Clerk, 123 Main Street, Pleasanton, California (hereinafter called "City").

Ladies and Gentlemen:

The Bidder, in compliance with the invitation for bids for the VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148 City of Pleasanton, having examined the Plans and Specifications and related documents and the premises of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and supplies, declares that this proposal is made without collusion with any other person, firm or corporation and agrees to construct the project in accordance with the contract documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Bid Proposal is a part.

A Notice of Award will be issued within fifteen (15) calendar days after completion of contract documents to begin material procurement and SWPPP. A Notice to Proceed starting contract working days will be issued no later than January 2, 2017 to ensure project completion by March 30, 2017. Bidder shall agree to commence work under this Contract within fifteen (15) calendar days after the date of written "Notice to Proceed" and fully complete the project within fifty (50) working days after start of work. Bidder shall pay as liquidated damages in the sum of \$2,000.00 per working day should the successful Bidder fail to complete the required contract work within the overall contract time limits unless the successful Bidder is granted a time extension.

Bidder acknowledges receipt of the following addendum:

<u>No.</u>	<u>Date</u>	<u>No.</u>	<u>Date</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Bidder to perform all of the work described in the Contract Documents for the total bid amount entered.

BASE BID

Item No.	Item Description	Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS		
2	Traffic Control	1	LS		
3	Storm Water Pollution Prevention Plan	1	LS		
4	Utility Potholes	50	EA		
5	12" Recycled Water Pipeline in Pavement/Hardscape	3475	LF		
6	6" Recycled Water Pipeline in Pavement/Hardscape	270	LF		
7	12" Gate Valves	2	EA		
8	6" Gate Valves	1	EA		
9	2" CAV Above Grade	3	EA		
10	End of Line Blowoff (Detail 1010)	2	EA		
11	Flushing Hydrant	1	EA		
12	2" Customer Services	6	EA		
13	6" Utility Undercrossing Detail 1 up to 2 ft Additional Vertical Depth	120	Lf		
14	12" Utility Undercrossing Detail 1 up to 2 ft Additional Vertical Depth	400	LF		
15	12" Utility Undercrossing Detail 1- 2 ft to 4 ft Additional Vertical Depth	360	LF		
16	6" Utility Undercrossing Detail 2 -2 ft to 4 ft Additional Vertical Depth	1	EA		
17	12" Utility Undercrossing Detail 2 up to 2 ft Additional Vertical Depth	1	EA		
18	Prepare Excavated Materials Management Plan	1	LS		

The following bid items are provided to pay for revised or additional work under the Contract Documents. Payment under these bid items shall be only with the written authorization of the City. These bid items have a quantity allowance provided in the bid schedule and the extended total for these items is included in the total bid amount.

BASE BID

Item No.	Item Description	Quantity	Unit of Measure	Unit Price	Total
19	Handling and Testing of Potentially Contaminated Material	10	CY		
20	Hauling and Disposal of Hazardous Soils - Kettleman Hills	10	CY		
21	Hauling and Disposal of Hazardous Soils - Vasco Road Landfill (Class 3 and Up Hazardous Materials)	10	CY		
22	6" Utility Undercrossing Detail 1- 2 ft to 4 ft Additional Vertical Depth	240	LF		
23	12" Utility Undercrossing Detail 1 - 4 ft to 6 ft Additional Vertical Depth	320	LF		
24	6" Utility Undercrossing Detail 2 up to 2 ft Additional Vertical Depth	1	EA		
25	12" Utility Undercrossing Detail 2 -2 ft to 4 ft Additional Vertical Depth	1	EA		
26	12" Utility Undercrossing Detail 2- 4 ft to 6 ft Additional Vertical Depth	1	EA		
27	Additional Horizontal Pipeline Fittings (6" or 12")	6	EA		
TOTAL BASE BID (Items 1 through 27)				\$	

Note: The Bidder acknowledges that, if awarded, the award will be based upon the TOTAL BASE BID named above and comprised of all bid items included in the BID PROPOSAL tables. The Bidder further acknowledges that quantities listed in both tables are for the purpose of comparing bids, and actual payment will be based upon actual quantities constructed.

Attached is a bid guaranty bond duly completed by a guaranty company authorized to carry on business in the State of California in the amount of at least ten percent (10%) of the total amount of the base bid, or alternately, there is attached a certified or cashier's check payable to the City in the amount of at least ten percent (10%) of the total amount of the bid.

If this Bid Proposal is accepted, bidder agrees to sign the contract and to furnish the performance bond, labor and materials bond, maintenance bond, and the required evidences of insurance within ten (10) working days after receiving written notice of the award of the contract. If bidder fails to contract as provided herein or fails to provide the bonds and/or evidence of insurance, the City may at its option, determine the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this Bid Proposal shall operate and the same shall be the property of the City of Pleasanton.

This Bid Proposal shall be good and may not be modified, withdrawn or canceled for a period of ninety (90) calendar days after the date of the City's opening of bids.

Bidder hereby certifies that the licensing information hereinafter stated is true and correct. Bidder further agrees, if the bid is accepted and a contract for performance of the work is entered into with the City, to so plan work and to prosecute it with such diligence that the work shall be completed within the time stipulated in the agreement. Under the penalty of perjury bidder affirms that, to the best of bidder's knowledge, the representations made in this bid are true.

Bidders are required by law to be licensed and regulated by the contractors' State License Board. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board.

It is a misdemeanor for any person to submit a bid to a public agency in order to engage in the business or act in the capacity of a contractor within this state without having a license therefore, except for specific cases outlined in Business and Professions Code, Section 7028.15.

_____ Name of Bidder	_____ Contractor's License Number
_____ Signature of Bidder	_____ Expiration Date
_____ Print Name	_____ Address of Bidder
_____ Title of Signatory	_____ ()
_____ State of Incorporation	_____ Telephone Number
_____ DIR Registration Number	_____ Contractor's Email Address

BID BOND FORM

Note: Bidders must use this form if a bid bond is to be used as bidder's security. This form is not necessary if cash, cashier's check made payable to the City, or certified check made payable to the City, accompanies the bid.

We, the undersigned, _____ as PRINCIPAL, and _____ a corporation organized and existing under and by virtue of the laws of the State of _____ and authorized to do business in the State of California as a surety, as SURETY, acknowledge ourselves jointly and severally bound to the CITY OF PLEASANTON for ten percent (10%) of the total bid amount.

Contractor's Bid \$ _____
10% Bid Bond \$ _____

The above amount to be paid to the CITY OF PLEASANTON as follows: If the PRINCIPAL'S bid for the work required for the project, described below,

**VALLEY AVENUE RECYCLED WATER MAIN EXTENSION,
PROJECT NO. 16148**

shall be accepted and the proposed contract awarded to the PRINCIPAL, and if the PRINCIPAL shall fail to execute the contract within the time specified in the Award and Execution of Contract section of this Contract Document, and to furnish the required faithful performance and labor and material bonds; otherwise, the obligation shall be void. Bid errors shall not constitute a defense to forfeiture.

If the City of Pleasanton brings suit upon this bond and judgment is recovered, the SURETY shall pay all costs incurred by the CITY OF PLEASANTON in bringing such suit, including reasonable attorney's fees.

IN WITNESS WHEREOF, we hereunto set our hands and seals this ___ day of _____, 2015.

Principal

By:

Surety:

By:

(Notarization of Surety's signature required)

(corporate seal)

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**CERTIFICATION OF BIDDER'S
EXPERIENCE AND QUALIFICATIONS**

The undersigned Bidder certifies that the Bidder is, at the time of the bidding, and shall be, throughout the period of the contract, licensed by the State of California to do the type of work required under the terms of the contract documents. Bidder further certifies that the Bidder is skilled and regularly engaged in the general class and type of work called for in the contract documents.

The Bidder represents that the Bidder is competent, knowledgeable and has special skills in the nature, extent and inherent conditions of the work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the particular facilities which may create, during the construction program, unusual or peculiar unsafe conditions hazardous to persons and property. Bidder expressly acknowledges that the Bidder is aware of such peculiar risks and has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the construction work with respect to such hazards.

Bidder has been engaged in the contracting business, under the present business name, for _____ years. Experience in work of a similar nature to that called for in the contract documents extends over a period of _____ years.

BIDDER'S CONTRACT EXPERIENCE

The Bidder shall list below three projects completed in the last seven (7) years of similar size and complexity that indicate the Bidder's experience as a Contractor.

1.

Project	Amount
Owner	Contact
Telephone	Completion Date

2.

Project	Amount
Owner	Contact
Telephone	Completion Date

3.

Project	Amount
Owner	Contact
Telephone	Completion Date

Name of Bidder _____

Signed this _____ day of _____, 20_____.

BIDDER'S LABOR CLASSIFICATIONS

California Prevailing Wages

<u>Craft - Operating Engineers</u>	<u>Craft - Laborers and Related Classifications</u>	<u>Craft - Traffic Control/Lane Closure (Laborer) Parking & Highway Improvement Painter (Laborer)</u>
Area 1b	Area 1c	Area 1d
Group 2 Micro Tunneling Machine	Construction Specialist Asphalt Ironers and Rakers	Traffic Control & Related Traffic Control Person I
Group 3 Asphalt Milling Machine Hydraulic Excavator up to 3 1/2 cu yds.	Concrete Diamond Chainsaw Pressure Pipe Layers	Traffic Control Person II Flag Person
Group 4 Combination Backhoe and Loader up to 3/4 cu yds. Grinding Machine Loader under 4 cu yds. Asphalt Paver Machine Roller Operator (Asphalt)	Labor Group 1 Asphalt Spreader Boxes All Types Compactors All Types	Striper & Related Classifications Group 1 Group 2
	Jack Hammer Operators Jacking\Boring Pipe over 12"	Group 3 Group 4
	Pressure Pipe Tester Trenchless Tech Laborer - Pipe Installation	Craft - Teamsters Group 1 Group 2 Group 3 Group 4
	Trenchless Tech Laborer - Camera Controller Pipe layers (Including Grade Checking)	
	Post Hole Diggers: Air, Gas and Electrical Power Broom Sweepers Power Tampers of all Types Except as Shown in Group 2	
	Labor Group 2 Asphalt Shovelers Concrete Labors Wet or Dry All Pneumatic; Air Gas and Electric Tools not Listed in Group 1-F Jacking of Pipe Under 12"	
	Labor Group 3 Construction Laborers Including: Bridge Labor, General Labor and Cleanup Workers Flagg Person and or Pedestrian Monitors Pavement Markers (Buttons)	

Davis Bacon Prevailing Wages

<u>Craft - Operating Engineers</u>	<u>Craft - Labors and Related Classifications</u>	<u>Crafts - Laborers; Traffic Control; Cement Mason & Truck Drivers</u>
Area 1	Area 1	Area 1
Group 3 Hydraulic Excavator up to 3 1/2 cu yds.	Construction Specialist	Traffic Control/Lane Closures
Group 4 Combination Backhoe and Loader up to 3/4 cu yds.	Asphalt Ironers and Rakers Concrete Diamond Chainsaw Pressure Pipe Layers	Escort Driver; Flag Person Traffic Control Person I Traffic Control Person II
Grinding Machine Loader under 4 cu yds. Asphalt Paver Machine	Labor Group 1 Asphalt Spreader Boxes All Types Compactors All Types	Cement Mason/Concrete Finisher Cement Mason/ Concrete Finisher
Roller Operator (Asphalt) Small Tractor Drag	Jack Hammer Operators Jacking\Boring Pipe over 12"	Highway Improvement (Parking Lot Striping/ Highway Marking) Group 1 Group 3
Group 6 Skidsteer Loader	Pressure Pipe Tester Power Broom Sweeper	Truck Drivers (Teamsters) Group 1 Group 2 Group 3 Group 5
Group 7 Self-Propelled Compactor	Labor Group 2 Asphalt Shovelers	
Group 8 Self-Propelled Power Sweeper Operator (Includes Vacuum Sweeper)	Concrete Labors Wet or Dry All Pneumatic; Air Gas and Electric Tools not Listed in Group 1-F Jacking of Pipe Under 12"	
Group 8-A Skidsteer Loader Bobcat 743 Mini Excavator under 25 Horse Power (Backhoe Trencher)	Labor Group 3 Construction Laborers General Labor Flag Person Pavement Markers (Buttons Setter)	

The Bidder shall list below the anticipated labor classifications completed by Bidder. List Subcontractor's classifications under List of Subcontractors.

B. BIDDER'S FINANCIAL RESPONSIBILITY

Reference is hereby made to the following banks and surety companies as to the financial responsibility and general reliability of the Bidder:

1. Name of Bank _____
Address _____
2. Name of Bank _____
Address _____
3. Surety Company _____
Address _____
4. Surety Company _____
Address _____

C. LIST OF SUBCONTRACTORS

In conformance with Section 8-1.01 of the Standard Specifications and Section 4104 of California Public Contract Code, the Bidder shall provide the following information for each Subcontractor to whom the Bidder proposes to subcontract portions of the work in an amount in excess of one-half of one percent of the total Bid Proposal OR \$10,000, whichever is greater.

1. Name of Subcontractor _____
Address _____ Phone No. _____
Individual, Partnership or Corporation _____
Dollar Value of work to be Performed _____
Work to be Performed _____
Labor Classification/s _____
DIR Registration # _____ Email _____
2. Name of Subcontractor _____
Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

3. Name of Subcontractor _____

Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

4. Name of Subcontractor _____

Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

5. Name of Subcontractor _____

Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

6. Name of Subcontractor _____

Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

7. Name of Subcontractor _____

Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

8. Name of Subcontractor _____

Address _____ Phone No. _____

Individual, Partnership or Corporation _____

Work to be Performed _____

Dollar Value of work to be Performed _____

Labor Classification/s _____

DIR Registration # _____ Email _____

Signature of Bidder: _____

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INSTRUCTIONS TO BIDDERS

General

The City of Pleasanton, hereinafter referred to as "City," will receive at the **City Clerk's Office of the City of Pleasanton, Civic Center, 123 Main Street, Pleasanton, California**, until the hour and day specified in the "Notice to Bidders," sealed Bid Proposals for furnishing materials, equipment and/or labor for performing the work described in these Contract Documents. All Bid Proposals shall be submitted in accordance with the provisions of the "Proposal Requirements and Conditions" set forth under Section 2 of the Standard Specifications of the State of California, except as modified herein.

Bid Proposal Form

All Bid Proposals shall be submitted on the Bid Proposal forms which are bound herein. All Bid Proposal forms shall be filled in completely in ink with all signature blocks signed by the Bidder. The completed Bid Proposal forms shall remain bound with the Contract Documents provided and shall be sealed in an envelope addressed to the City of Pleasanton, California and clearly labeled with identifying:

**VALLEY AVENUE RECYCLED WATER MAIN EXTENSION,
PROJECT NO. 16148
BID OPENING DATE: TUESDAY, OCTOBER 25, 2016**

Delivery of Bid Proposal

The Bid Proposal shall be delivered by the time and to the place set forth in the "Notice to Bidders." It is the Bidder's sole responsibility to see that his or her Bid Proposal is received in proper time. Any proposal received after the time fixed for opening of bids shall be returned to the Bidder unopened.

Opening of Bid Proposals

The Bid Proposals shall be publicly opened and read at the time and place fixed in the "Notice to Bidders."

Modifications and Alternative Proposals

Each Bidder represents that his or her Bid Proposal is based upon the materials and equipment described in the Contract Documents. Unauthorized conditions, limitations or provisions attached to a Bid Proposal will render it non-responsive and may cause its rejection. The completed Bid Proposal forms shall be without interlineations, alterations or erasures. Alternative Bid Proposals will not be considered unless written request has been submitted to the Engineer for approval at least seven (7) calendar days prior to the date for receipt of Bids. The request shall include the name of substitute material or equipment drawings, cut sheets, performance and test dates and any other data or information necessary for complete evaluation. If the Engineer approves any proposed substitution, such approval shall be set forth in an

Addendum. Oral, telegraphic, or telephonic Bid Proposals or modifications will not be considered.

Contractor's Department of Industrial Relations Registration

A bid will not be accepted nor any contract entered into without proof that the bidder and its subcontractors are registered with the California Department of Industrial Relations to perform public work pursuant to Labor Code Section 1725.5, subject to limited legal exceptions.

Discrepancies in Bid Proposals

In the event there is more than one bid item on a Bid Proposal form, the Bidder shall furnish a price for all items and failure to do so will render the Bid Proposal non-responsive and may cause its rejection. In the event there are unit price bid items on a Bid Proposal form and the "amount" indicated for a unit price bid item does not equal the product of the unit price and quantity, the unit price shall govern and the amount will be corrected accordingly. In the event there is more than one bid item on the Bid Proposal form and the total indicated on the Bid Proposal form does not agree with the sum of the amounts bid on the individual items, the price bid on the individual items shall govern and the total on the proposal will be corrected accordingly.

Bid Security

Each Bid Proposal shall be accompanied by cash, a cashier's check or a certified check, amounting to ten percent (10%) of the Bid, payable to the order of the City of Pleasanton or by a bond for that amount and so payable in the form contained in this bid package. The amount so posted shall be forfeited to the City if the successful bidder does not, within ten (10) working days not including Saturday, Sunday and legal holidays after date of postage of mailed written notice that the contract has been awarded, enter into a contract with the City for the work.

After the contract is duly entered into by the successful bidder, the amount of the deposit will be returned to the Bidder. All certified checks, cashier's checks, and cash deposits of the unsuccessful bidders will be returned to the bidders within two (2) weeks after the contract is entered into by the successful bidder.

Miscellaneous

For requirements on Bidder's examination of site, withdrawals of proposals, and disqualification of bidders, refer to Section 2 of the Standard Specifications of the State of California.

AWARD AND EXECUTION OF CONTRACT

General

Award and execution of Contract shall be in accordance with "Award and Execution of Contract" set forth under Section 3 of the Standard Specifications of the State of California except as modified herein.

Award of Contract: The City reserves the right to reject for any reason any or all Bid Proposals.

No Bidder shall modify, withdraw or cancel a responsive Bid Proposal or any part thereof for ninety (90) calendar days after the time designated for the opening of Bids in the "Notice to Bidders." Within this time period of ninety (90) days and if the City so chooses, the Contract shall be awarded to the lowest responsible Bidder.

In accordance with the provisions of California Business & Professions Code Section 7028.5, the City has determined that at the time that a bid is submitted, the bidder shall possess a valid Class A General Engineering Contractor license. Failure to possess the specified license shall render the bid as non-responsive and shall act to bar award of the Contract to any Bidder not possessing said license at the time of bid.

Execution of Contract: Within ten (10) working days, not including Saturday, Sundays and legal holidays, after date of postage of mailed notice of award to the lowest responsible Bidder, the following documents shall be submitted to the City.

- Executed contract
- Contract bonds as required by the forms contained herein including:
 - ◊ Faithful Performance Bond for 100% of contract price
 - ◊ Labor and Material Bond for 100% of contract price
 - ◊ Maintenance Bond for 10% of contract price
- Certificates of insurance
- Evidence of a current business license to conduct business in the City of Pleasanton

Failure to submit the above shall be just cause for forfeiture of the Bid Proposal security.

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CONTRACT

VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148

THIS CONTRACT is made and entered into this ____ day of _____, 20__ by and between _____, ("Contractor"), whose address is _____, and telephone number is _____ and the CITY OF PLEASANTON, a municipal corporation ("City").

WITNESSETH:

WHEREAS, the City has awarded to the Contractor a contract for **VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148**.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the parties agree as follows:

1. Work to be Performed:

The work to be done in general shall consist of, but is not limited to, providing and installing approximately 3475 lineal feet of 12-inch(12"), 270 lineal feet of 6-inch (6") recycled water and 6 service connections and various related appurtenances along Valley Avenue from Paseo Santa Cruz to Arroyo Del Valle bridge in Pleasanton including potholing operations, traffic control, providing and implementing water pollution control measures, trenching and backfill, pipeline testing and flushing, pavement restoration, landscaping restoration and other related work.

Said work is more particularly shown in the following documents which are on file with the Department of Community Development/Engineering Division of the City and are incorporated herein by this reference:

- A. Approved Plans and Specifications entitled the **VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148 dated October 2016** and addenda thereto, if any.
 - B. Contract Change Orders approved by the City Engineer, done in accordance with the Standard Specifications.
 - C. The elements of the proposal submitted to the City by the Contractor, which the City has accepted.
2. Compensation. The City shall pay the Contractor for work actually performed at the unit prices set out in the Contractor's proposal to the City as set forth in Exhibit A of this agreement and incorporated herein. The quantities of work stated therein are estimates

only; actual quantities will be measured for payment in accordance with the specifications.

3. Method of Payment.

A. Progress Payments. As of the twentieth day of each month, Contractor may submit for review a request for progress payment, listing the amount and value of work actually performed during the preceding month, or part thereof. Upon the City Engineer's review and approval, including adjustments if any, City shall make a progress payment to the Contractor.

B. 5% Retention. Five percent (5%) of the amount due shall be retained by the City as retention. The City shall retain five percent (5%) of the contract amount for thirty-five (35) days after the Notice of Completion for the work is recorded. The Contractor may elect to receive 100 percent of payments due under the contract documents from time to time, without retention from any portion of the payment by the City, by depositing securities of equivalent value with the City in accordance with the provisions of Section 22300 of the California Public Contract Code. Such securities, if deposited by the Contractor, shall be valued by the City, whose decision on valuation of the securities shall be final. Securities eligible for investment under this provision shall be limited to those listed in Section 16430 of the California Government Code.

C. Time of Payment. Requests submitted promptly as of the 20th day of each month will be paid by the 10th day of the following month.

4. Incorporation of Contract Documents. This Contract expressly incorporates all terms and conditions contained in the Contract Documents. In the event there is any conflict between this Contract and the Contract Documents, this Contract shall control.

5. Indemnification. Contractor shall indemnify, save and hold harmless from and defend the City Council and their agents, servants, employees and consultants against any and all claims, costs, demands, causes of action, suits, losses, expense or other detriment or liability arising from or out of acts or omissions of Contractor, its agents, sub-contractors, officials or employees, in connection with the execution of the work covered by this Contract or any amendments thereto.

5. Certification re: Workers' Compensation. In accordance with Section 1861 of the California Labor Code, each contractor to whom a public works contract is awarded shall sign and file with the awarding body the following certification prior to performing the work of the contract: "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

6. Department of Industrial Relations. Pursuant to Labor Code section 1771.1, if the Bidder and its Subcontractors must be registered and qualified to perform public work pursuant to section 1725.5 of the Labor Code, subject to limited legal exceptions.
9. Independent Contractor. The Contractor is an independent contractor retained by the City to perform the work described herein. All personnel employed by the Contractor, including subcontractors, and personnel of said subcontractors, are not and shall not be employees of the City.
10. Warranty Against Defects. Contractor hereby warrants all work done under this contract against all defects in materials and workmanship for a period of 12 months following City's acceptance of said work. If any defects occur within said 12 months, Contractor shall be solely responsible for the correction of those defects.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written.

CONTRACTOR:

By: _____
Its Authorized Agent

By: _____
Its Authorized Agent
(Second signature required if a corporation)

CITY OF PLEASANTON:

By: _____
Nelson Fialho, City Manager

ATTEST:

Karen Diaz, City Clerk

APPROVED AS TO FORM:

Daniel G. Sodergrenl, City Attorney

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CONTRACTOR'S BOND FOR FAITHFUL PERFORMANCE

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ as Principal, and _____ incorporated under the laws of the State of _____, and licensed to do business in California to execute bonds and undertakings, as Surety, are held firmly bound unto the City of Pleasanton, a municipal corporation of the State of California, in the sum of:

_____ DOLLARS, (\$ _____) for which payment, well and truly to be made, said Principal and Surety bind themselves, their administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that:

WHEREAS, the Principal has entered into a certain contract with the City of Pleasanton to do and perform the following work or to wit:

VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148

as required by the plans and specifications, pursuant to the award made to said contractor by the Council of the City of Pleasanton on _____, 20__, as will more fully appear by reference to the minutes of said Council of said City of said date.

NOW, THEREFORE, if the Principal shall well and truly perform the obligations agreed to be performed under Contract, comply with all the provisions of the City Code and shall construct all the modification in a proper and workerlike manner in accordance with all of the requirements of the City of Pleasanton and to the satisfaction of the City Engineer, then the above obligation shall be void; otherwise to remain in full force and effect.

No cancellation or termination of this bond by the Surety shall be effective unless thirty (30) days prior written notice thereof has been delivered to the City Engineer, provided that no cancellation or termination shall affect any liability incurred or accrued hereunder prior to the expiration of said thirty (30) day period or any work performed under Contract prior to receipt of such notice.

Bond No. _____

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, and to be taxed as costs and included in any judgment rendered.

The surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder of the plans accompanying the same shall in anyway affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition.

Appropriate modifications shall be made in such form if the bond is being furnished for the performance of an act not provided for by Contract.

This bond is executed in accordance with the rules, regulations, standards, specifications and policies of the City of Pleasanton.

IN WITNESS WHEREOF, the Principal(s) and Surety have caused these presents to be executed, and corporate names and seals to be hereunto attached by proper officers hereunto duly authorized, the day and year first hereinabove written.

Contractor

Surety

By: _____

By: _____

By: _____

By: _____

Date Signed: _____

Surety Address

Surety's Phone No.

(attach acknowledgments)

LABOR AND MATERIAL BOND

WHEREAS, the City of Pleasanton, State of California, and _____ (hereinafter designated as "principal") have entered into an agreement whereby principal agrees to install and complete certain designated public improvements, which agreement, dated _____, 20____, and identified as the **VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148**, is hereby referred to and made a part hereof, and

WHEREAS, under the terms of said agreement, principal is required before entering upon the performance of the work, to file a good and sufficient payment bond with the City of Pleasanton to secure the claims to which reference is made in Title 15 (commencing with Section 3082) of Part 4 of Division 3 of the Civil Code of the State of California.

NOW, THEREFORE, said principal and the undersigned, as corporate surety, are held firmly bound unto the City of Pleasanton and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of the aforesaid agreement and referred to in the aforesaid Civil Code in the sum of _____ dollars (\$_____), for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that said surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, to be awarded and fixed by the court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall insure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 15 (commencing with Section 3082) of Part 4 of Division 3 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said agreement or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the principal and surety on the date set forth above.

Principal
By: _____

Surety
By: _____

(Signature of Principal and Surety must be notarized)

CONTRACTOR'S BOND FOR ONE YEAR MAINTENANCE

VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the City of Pleasanton has awarded and Contractor is about to execute a Contract for the above-referenced Project ("Contract") and the terms thereof, which are incorporated herein by reference, require the furnishing of a bond with said Contract providing for maintenance for a period of one (1) year from the date of acceptance by the City Council of said contract by the Contractor.

NOW, THEREFORE, WE, _____, as Contractor, and _____, as Surety, are held firmly bound unto the City of Pleasanton, as Agency in the penal sum of:

_____ DOLLARS, (\$_____), lawful money of the United States of America, said sum being ten percent (10%) of the estimated amount payable by Agency under the terms of the contract, for payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that if the above bounden _____, Principal(s), within a period of one (1) year after the completion and acceptance of the project fulfills the provisions of the Contract and complies with any necessary repairs or replacement of faulty materials to the **VALLEY AVENUE RECYCLED WATER MAIN EXTENSION, PROJECT NO. 16148** and related facilities, then the above obligation shall be void; otherwise to remain in full force and effect.

No cancellation or termination of this bond by the Surety shall be effective unless thirty (30) days prior written notice thereof has been delivered to the City Engineer, provided that no cancellation or termination shall affect any liability incurred or accrued hereunder prior to the expiration of said thirty (30) day period or any work performed under any Contract issued by the City.

This bond is executed in accordance with the rules, regulations, standards, specifications and policies of the City of Pleasanton.

Bond No. _____

IN WITNESS WHEREOF, the Principal(s) and Surety have caused these presents to be executed, and corporate names and seals to be hereunto attached by proper officers hereunto duly authorized, the day and year first herein-above written.

Contractor

Surety

By: _____

By: _____

By: _____

By: _____

Date Signed

Surety Address:

Surety Phone No. () _____

(attach acknowledgments)

GENERAL PROVISIONS

Unless otherwise stated in these Contract Documents or deemed inapplicable by the Engineer, the General Provisions of the State of California Standard Specifications are hereby incorporated with the following General Provisions.

SECTION 1. DEFINITIONS AND TERMS

As used in these Contract Documents unless the context otherwise requires, the following terms have the meanings indicated:

Addenda: Are written or graphic instruments, clarifications or corrections, issued prior to the execution of the contract, which modify or interpret the Contract Documents.

Bidder: Any individual, partnership or corporation submitting a Bid Proposal for the work described in the Contract Documents.

Bidding Documents: Includes the Notice to Bidders, the Bid Proposal, Bid Bond, Contractor's Information Forms including the Contractor's past experience, financial responsibility and Subcontractors, and Instructions to Bidders.

City: The City of Pleasanton.

City Standard Specifications and Standard Details: Means the January 2011 edition of the City's Standard Specifications and Standard Details.

Contractor: Any individual, partnership or corporation that has entered into a Contract with the City to perform the work described in the Contract Documents.

Contract Documents: Includes the Bidding Documents, the Award and Execution of Contract Requirements, the Contract, the Labor and Material Bond, the Performance Bond, the Maintenance Bond, the City General Provisions, the Special Provisions, Project Plans, the City of Pleasanton Standard Specifications, and Standard Details, the State Standard Specifications and Plans, all Addenda issued by the City and all Change Orders executed by the City.

Engineer: The City Engineer of the City of Pleasanton, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

General Provisions: Those Specifications that apply to all projects unless specifically modified by Special Provisions.

Project Plans: Drawings specifically prepared for a particular project.

Special Provisions: Specifications specifically prepared for a particular project.

State Standard Specifications and Standard Plans: Means the May, 2006 edition of the Standard Specifications and Standard Plans of the State of California, Department of

Transportation. Any reference therein to the State of California or a State agency, office or officer shall be interpreted to refer to the City or its corresponding agency, office or officer acting under this contract.

Subcontractor: Any individual, partnership or corporation that has contracted with the Contractor to provide labor, equipment and/or materials described in the Contract Documents which is an amount in excess of one-half of one (1) percent of the Contractor's total Bid or \$10,000, whichever is less.

Work: Material, equipment and labor to be provided to City by Contractor as defined by the Contract Documents.

SECTION 2. SCOPE OF WORK

The Work presented in these Contract Documents shall be done in accordance with: 1) the Special Provisions and Project Plans, 2) the City Standard Specifications and Standard Details and 3) the State Standard Specifications and Standard Plans. In case of conflicting portions, the above order of precedence shall prevail. In case of conflict between the specifications and drawings, the specifications shall prevail.

SECTION 3. CONTROL OF WORK AND MATERIALS

3-01. Protection of Workers in Trench Excavations: As required by Section 6705 of the California Labor Code and in addition thereto, whenever work under the Contract involves the excavation of any trench or trenches 5 feet or more in depth, the Contractor shall submit for acceptance by the City or by a registered civil or structural engineer, employed by the City, to whom authority to accept has been delegated, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation, of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by the Contractor, and all costs therefore shall be included in the price named in the Contract for completion of the Work as set forth in the Contract Documents. Nothing in this Section shall be construed to impose tort liability on the City, the Engineer, nor any of their officers, agents, representatives, or employees.

3-02. Substitution of Materials; Assignment of Certain Rights: In accordance with the provisions of Section 3400 of the California Public Contract Code, a Contractor shall be provided a period of not less than 35 days after award of the contract for submission of data substantiating a request for a substitution of "an equal" item.

In accordance with Section 4552 of the Government Code, the Bidder shall conform to the following requirements: In submitting a bid to a public purchasing body, the Bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 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 purchase of goods, materials, or services by

the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the Bidder.

SECTION 4. LEGAL RELATIONS AND RESPONSIBILITY

4-01. Travel and Subsistence Payments:

- (a) As required by Section 1773.1 of the California Labor Code the Contractor shall pay travel and subsistence payments to each worker needed to execute the Work, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with this Section.
- (b) To establish such travel and subsistence payments, the representative of any craft, classification, or type of worker needed to execute the contracts shall file with the Department of Industrial Relations fully executed copies of collective bargaining agreements for the particular craft, classification or type of work involved. Such agreements shall be filed within 10 days after their execution and thereafter shall establish such travel and subsistence payments whenever filed 30 days prior to the call for bids.

4-02. State Wage Determination:

- (a) As required by Sections 1770 et seq., of the California Labor Code, the Contractor shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate of per diem wages are on file at the City's Engineering Counter, which copies shall be made available to any interested party on request. The Contractor shall post a copy of such determination at each job site.
- (b) As provided in Section 1775 of the California Labor Code, the Contractor shall, as a penalty to the City, forfeit \$50.00 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the City Engineer for such work or craft in which such worker is employed for any public work done under the contract by it or by any subcontractor under it.

4-03. Payroll Records; Retention; Inspection; Compliance Penalties; Rules and Regulations

- (a) As required under the provisions of Section 1776 of the California Labor Code, each Contractor and subcontractor shall keep an accurate payroll record, 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 by him or her in connection with the public work.

- (b) The payroll records enumerated in Paragraph 4-03(a), herein, shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:
1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
 2. A certified copy of all payroll records enumerated in Paragraph 4-03(a), herein, shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.
 3. A certified copy of all payroll records enumerated in Paragraph 4-03(a), herein, shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to subparagraph 4-03(b2), herein, the requesting party shall pay the costs of preparation by the Contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal offices of the Contractor.
- (c) Each Contractor shall file a certified copy of the records, enumerated in Paragraph 4-03(a) with the entity that requested the records within 10 days after receipt of a written request.
- (d) Any copy of records made available for inspection and copies furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement, shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the Contractor awarded the contract or performing the contract shall not be marked or obliterated.
- (e) The Contractor shall inform the body awarding the contract of the location of the records enumerated under Paragraph 4-03(a) including the street address, city and county, and shall, within five (5) working days, provide a notice of change of location and address.
- (f) In the event of noncompliance with the requirements of this Article, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this Article. Should noncompliance still be evident after the 10-day period, the Contractor shall, as a penalty to the state or political subdivision on whose behalf the Contract is made or awarded, forfeit \$25.00 dollars for each calendar day, or portion thereof, for each worker, until strict compliance is

effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. Responsibility for compliance with these Paragraphs 4-03(a) through 4-03(f) lies with the Contractor.

- (g) In conformance with State Bill 854 all contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement) as of projects awarded on or after April 1, 2015 unless exempted by federal or state law.

4-04. Apprentices: Attention is directed to Sections 1777.5 and 1777.6 and 1777.7 of the California Labor Code and Title 8, California Administrative Code Section 200 et seq. To insure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, the Contractor (and subcontractors) should, where some question exists, contact the Division of Apprenticeship Standards prior to commencement of the work. Responsibility for compliance with this Section 4.04 lies with the Contractor. The City policy is to encourage the employment and training of apprentices on its construction contracts as may be permitted under local apprenticeship standards.

4-05. Working Hours. The Contractor shall comply with all applicable provisions of Section 1810 to 1815, inclusive, of the California Labor Code relating to working hours. The Contractor shall, as a penalty of the City, forfeit \$25.00 for each worker employed in the execution of the contract by the Contractor or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and 40 hours in any one calendar week, unless such worker receives compensation for all hours worked in excess of eight (8) hours at not less than 1-1/2 times the basic rate of pay.

4-06. Workers' Compensation:

- (a) In accordance with the provisions of Section 1860 of the California Labor Code, the Contractor's attention is directed to the requirement that in accordance with the provisions of Section 3700 of the California Labor Code, every contractor will be required to secure the payment of compensation of his or her employees.
- (b) In accordance with the provisions of Section 1861 of the California Labor Code, each Contractor to whom a public works contract is awarded shall sign and file with the awarding body the following certification prior to performing the work of the contract: "I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

4-07. Prime Contractor Job Site Postings. Pursuant to Labor Code Section 1771.4, Contractor is required to post all job site notices prescribed by law or regulation. The contractor shall comply with all applicable provisions of section 16451 (d) of California labor Code relating to the posting of job site notices prescribed by regulation.

4-08. Insurance Requirements for Contractors: BIDDER'S ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW. IT IS HIGHLY RECOMMENDED THAT BIDDERS CONFER WITH THEIR RESPECTIVE INSURANCE CARRIERS OR BROKERS TO DETERMINE IN ADVANCE OF BID SUBMISSION THE AVAILABILITY OF INSURANCE CERTIFICATES AND ENDORSEMENTS AS PRESCRIBED AND PROVIDED HEREIN. IF AN APPARENT LOW BIDDER FAILS TO COMPLY STRICTLY WITH THE INSURANCE REQUIREMENTS, THAT BIDDER MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Contractor shall procure and maintain for the duration of this contract, including one year maintenance period, contract 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 the Contractor, the Contractor's agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Contractor's bid.

(a) Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office form number CG 00 01 (ED. 1/96) covering Commercial General Liability and name the City as additional insured.
2. Insurance Services Office form number CA 00 01 (Ed. 12/93) covering Automobile Liability, code 1 "any auto."
3. Workers' Compensation insurance as required by the Labor Code of the State of California and Employers Liability insurance, and an endorsement for waiver of subrogation.

(b) Minimum Limits of Insurance

Contractor shall maintain limits no less than:

1. General Liability: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
3. Workers' Compensation and Employers Liability: Workers' compensation limits as required by the Labor Code of the State of California and Employers Liability limits of \$1,000,000 per accident.

(c) Other Insurance Provisions

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

1. General Liability and Automobile Liability Coverages

- a. The City, members of the City Council and their agents, servants, employees and consultants are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officers, officials, employees or volunteers.
- b. The Contractor's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees, consultants and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, consultants or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officers, officials, employees, consultants or volunteers.
- d. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

2. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the City, its officers, officials, employees, consultants and volunteers for losses arising from work performed by the Contractor for the Agency.

3. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City.

d) Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A:VII.

(e) Verification of Coverage

Contractor shall furnish the City with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements may be on forms provided by the City. Where by statute, the City's workers' compensation-related forms cannot be used; equivalent forms approved by the Insurance Commissioner are to be substituted. All certificates and endorsements are to be received and approved by the City before work commences. The City reserves the right to require insurance policies, at any time.

(f) Subcontractors

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

4-09. Department of Industrial Relations: This Contract will be subject to compliance monitoring and enforcement by the California Department of Industrial Relations, pursuant to Labor Code section 1771.4 Attention is directed to Section 1725.5 of the California Labor Code. To insure compliance and complete understanding of the law regarding contractor registration the Contractor (and subcontractors) should, where some question exists, contact the Department of Industrial Relations prior to submission of bid. Responsibility for compliance with this Section lies with the Contractor and Sub contractors.

SECTION 5. PROSECUTION AND PROGRESS

5-01. Removal, Relocation, or Protection of Existing Utilities: In accordance with the provisions of Section 4215 of the California Government Code, the Contractor shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the City or owner of the utility to provide for the removal or relocation of such utility facilities.

5-02. Preconstruction Conference: Following award of contract, submittal of executed contract, and approval of certificates of insurance and bonds, but before start of work, a preconstruction conference shall be held at a mutually agreed time and place. The conference shall be arranged by the City and attended by City representatives including the inspector, and the Contractor, Contractor's superintendent and major subcontractors. Contractor shall present at the conference the progress and submittal schedules, and progress payment format, and provide emergency phone numbers.

The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established.

5-03. Beginning of Work: The Contractor shall be prepared to begin work within fifteen (15) calendar days after "Notice to Proceed." The "Notice of Proceed" we be issued no later than January 2, 2017, to ensure meeting project completion by March 30, 2017.

SECTION 6. MEASUREMENT AND PAYMENT

6-01. Payments: Attention is directed to Section 9-1.06, "Partial Payments," and 9-1.07, "Payment After Acceptance," of the State Standard Specifications and these City General Provisions.

As of the 20th day of each month, requests for progress payment listing amount and value of work performed during that month may be submitted for review. Upon review and approval or adjustment by the Engineer, progress payment will be made, retaining five percent (5%) of the amount due. Requests submitted promptly as of the twentieth of the month will be paid normally by the tenth of the following month.

The Bidder's attention is directed to the provisions of Section 9 of the Standard Specifications and the following modification, all of which are applicable to this Contract:

Upon receipt of written notice that the work is ready for final inspection and acceptance, the Engineer shall, within five (5) days, make such inspection, and when the Engineer finds the work acceptable under the Contract and the Contract fully performed, the Engineer will recommend to the City Council (at the next following Council meeting) that the Contract be accepted and a "Notice of Completion" be prepared and recorded. The entire balance found to be due the Contractor, including the retained percentage, shall be paid to the Contractor by the City within fifteen (15) days after the expiration of thirty (30) days following the date of recordation of the Notice of Completion.

Contractor shall supply with each progress payment request (with the exception of the first progress payment submittal) an email, fax or letter from each subcontractor stating: (a) the date that he/she has received his/her portion of the preceding payment; and (b) if the payment received was the total amount then due. Should the payment not include the total amount invoiced due to a dispute, the subcontractor shall include the details of such dispute in his/her letter with enough information for the City to verify that the provisions of Section 7108.5 of the CA Business and Professions Code have been met.

Before the final payment is due, the Contractor shall submit evidence satisfactory to the Engineer that all payrolls, material bills, materials on hand (Pipe, Valves, CAV, Hydrants) and other indebtedness connected with the work have been paid, except that in case of disputed indebtedness or liens, the Contractor may submit in lieu of evidence of payment, a surety bond satisfactory to the City guaranteeing payment of all such disputed amounts when adjudicated in cases where such payment has not already been guaranteed by surety bond.

6-02. Substitution of Securities in Lieu of Retention: Pursuant to Section 22300 of the Public Contract Code, the contractor may substitute securities for any money held by the City to insure performance of the contract. At the request and expense of the contractor, securities equivalent to the amount withheld shall be deposited with the City or federally-chartered banks as an escrow agent, who shall return such securities to the contractor upon satisfactory completion of the contract. Deposit of securities with an escrow agent shall be subject to written agreement in

accordance with the provisions of Section 22300. The City shall not certify that the contract has been completed until at least 35 days after filing by the City of a Notice of Completion. Securities shall be limited to those listed in Section 16430 of the California Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed upon by the contractor and the City.

ATTENTION BIDDERS:

Your bid shall represent the cost of performing all Work described in the Contract Documents including:

Special Provisions and Project Plans,
City Standard Specifications and Details,
State Standard Specifications and Plans, and
all Addenda and Change Orders.

CITY STANDARD SPECIFICATIONS AND DETAILS (Approved January 2011)

is a separate document that is available at the City of Pleasanton Engineering Division, Civic Center, 200 Old Bernal Avenue, for a non-refundable cost of \$20.

Call (925) 931-5650 for a copy of the
City Standard Specifications and Details.

*The City Standard Specifications and Details can be viewed online at the City's
Web Page, <http://www.ci.pleasanton.ca.us>
(Select: Government, City Departments, Community Development Department,
Engineering Services, Engineering)*

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SPECIAL PROVISIONS

(These Special Provisions are to be used in conjunction with the City Standard Specifications and Standard Details, and the State Standard Specifications and Standard Plans, 2006 edition)

All work shall be constructed in accordance with the City of Pleasanton Standard Specifications and Details dated January 2011, and as augmented by these Special Provisions. The Sections noted are those in the Standard Specifications except for the new Section(s) added. Where conflict exists between these documents and existing conditions, the Contractor shall request clarification from the Project Engineer.

SECTION 1. GENERAL

1-01 Scope and Purpose

The City is installing the recycled water line prior to the reconstruction of Valley Avenue scheduled for Spring of 2017. The City will also be performing concrete improvements along Valley Avenue that include curb and gutter and ADA ramp replacements. Contractor can expect to have to coordinate work with the concrete improvement project.

1-05 Operation of Existing Facilities

Add:

Recycled water system infrastructure will impact City water distribution and recycled water infrastructure, and DSRSD/DERWA recycled water infrastructure. The Contractor shall coordinate all work, planned outages and interconnections of existing infrastructure. An interconnect construction plan shall be submitted to the City at least fourteen (14) days prior to planned tie in work. The plan shall delineate City responsibilities and schedule as described in the City Standard Specifications.

1-06 Protection of Existing Facilities and Property

Add:

Prior to commencing construction activities and in the presence of the City, the Contractor shall record and document existing conditions along the project alignments and facility sites. Suitable digital photograph and videography shall be captured by the Contractor, including voiceover commentary as appropriate, and submitted for approval by the City.

The photographic and video documentation shall capture existing street striping and markings that will be replaced after paving.

The Contractor shall provide the City with a duplicate of the photographic and video documentation once complete.

1-09 Dust Control

Replace the third paragraph with the following:

Recycled water shall be used for dust control operations. Refer to Special Provision 1-32 for availability and requirements for using recycled water.

1-12 Storage

Add:

Contractor may submit as part of the progress payment, materials on hand stored in conformance with 1-12 storage for: pipe, valves, CAV and fire hydrants on hand and paid in full.

1-16 Lines and Grades and Construction Staking

Replace with the following:

The Contractor shall be responsible for establishing all lines and grades for the project as shown and indicated in the Contract Documents, including all construction staking. The Contractor shall be responsible for the accuracy of all construction staking.

All work shall be done in accordance with the lines, grades and elevations shown on the Plans. Staking and marking shall be provided in accordance with Section 5-1.07, "Lines and Grades," of the State Standard Specifications. Stakes and marks shall be carefully preserved by the Contractor. In case such stakes and marks are destroyed or damaged on City projects, they will be replaced by the Contractor at its expense.

The Plans have been developed using City GIS data, including utility information, aerial imagery. As such, the Contractor shall follow the process below to validate the horizontal and vertical alignment along the project pipelines.

1. Review Plans, mark out proposed alignment and develop pothole plan. Submit pothole plan and schedule to City.
2. Excavate potholes to verify utility and its horizontal and vertical location.
3. Using the pothole data, verify pipeline alignment and profile defined in the Plans and submit proposed modifications to the City for approval. Allow 10 working days for City review and approval.
4. Proposed modifications may include modifying the pipeline alignment using pulled joints as allowed in these Specifications, installing fittings with required thrust blocking or thrust restraint, cathodic protection and coatings.
5. Using the pothole data, City and Contractor will review types of utility under-crossing (Detail 1 or 2) and the anticipated measured length of each before pipeline construction begins.
6. Stake the pipeline alignment prior to initiating pipeline construction
7. Contractor shall validate at least an entire block at a time.

The work may impact several monuments located along the pipeline alignment. Contractors shall hire a California State License surveyor to RP the monuments prior to start of construction. All monuments within 10' of the pipeline shall be re-checked at the end of the project and any corrections filed. All monuments disturbed or damaged shall be reset and filed in accordance to state and local requirements. Work shall be included in various other items of work and no compensation shall be granted.

1-18 Working Hours

Add:

See Section 2 traffic control for allowable hours in which traffic can be impacted.

Except as noted above, work that interferes with traffic shall be performed between the hours of 8 am and 5 pm, Monday through Friday, unless otherwise authorized in writing by the City.

In order to minimize disruption to businesses impacted by this project, all work associated with water main tie-ins/shut downs/etc. shall be conducted only within the time specified under Section 14, "Water", of these specifications, unless otherwise authorized in writing by the City Engineer.

1-20 Permits and Licenses

Add:

Prior to the start of any work for this project, the Contractor shall apply for and obtain a "no fee" encroachment permit from the City of Pleasanton's Department of Engineering, at 200 Old Bernal, Pleasanton, CA.

The Contractor and all subcontractors shall also have a current City of Pleasanton business license to operate in the City of Pleasanton.

1-21 Progress Schedule

Replace with the following:

A. Initial Schedule Submittal

1. Within 15 days of the of Contract Award, Contractor shall submit for acceptance by Engineer, a preliminary bar chart construction schedule for the Work, showing its general plan for orderly completion of the Work and showing in detail its planned mobilization of equipment, sequence of early operations, timing of procurement of materials and equipment, and system startup. The construction schedule shall identify any and all critical path activities.
2. The initial construction schedule, as produced and submitted, shall indicate a project completion date on or before the contract completion date. Within 5 working days after receipt of the initial construction schedule, the Engineer will meet with a representative of Contractor to review the preliminary plan and construction schedule.
3. The schedule shall include durations described in working days. Individual durations shall not exceed ten workdays, except for submittal and delivery items. Where the duration of continuous work exceeds ten (10) workdays, work items in the construction schedule shall be subdivided by location, approximate stationing, or other sub-element of the work.

B. Revised Initial Construction Schedule

1. Within 5 working days after the conclusion of Engineer's review period, the Contractor shall revise the initial construction schedule as required, and resubmit to Engineer for review. The preliminary construction schedule will be revised and/or approved or rejected by Engineer within 5 working days after receipt.
2. The schedule, when accepted by Engineer, shall constitute the construction schedule until such time as later revised schedules are submitted to reflect progress and delays beyond the control and without the fault or negligence of Contractor.

- C. When the initial construction schedule has been accepted, Contractor shall submit to Engineer four (4) copies of the accepted initial schedule.
- D. Weekly, Contractor shall submit to Engineer a three week look-ahead schedule detailing all work to be accomplished over the next three week period. If the work identified in the three week look-ahead schedule is not consistent with the project construction schedule, the project construction schedule must be revised by Contractor as outlined below.
- E. Additional Revised Construction Schedules
 1. Contractor, if requested by Engineer, shall prepare and submit a revised construction schedule if, at any time, Engineer considers the completion date to be in jeopardy because of any portion of the Work falling behind schedule, or the three week look-head schedule is inconsistent with construction schedule.
 2. Contractor, at a minimum shall submit to Engineer a revised construction schedule with submission of every other progress payment.
 3. The revised construction schedule shall show how Contractor intends to accomplish the Work to meet the completion date. The form and method employed by Contractor shall be the same as required for the initial construction schedule.
- F. Construction Schedule Revisions
 1. Contractor shall modify any portions of the construction schedule that become unfeasible because of portions of the Work falling behind schedule, or for any other valid reason.
 2. Any portion of the work that cannot be completed by its originally scheduled completion date shall be deemed to be behind schedule.
 3. Updated Schedule shall reflect the working day statements issued by the City and all modifications to contract time changed by approved Change Orders.

1-25 Storm Water Management and Discharge Control

Replace with the following:

1-25A Regulatory Requirements

- A. Construction activities are regulated under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbances Activities (State Water Resources Control Board [SWRCB] Order No. 2012-0006-DWQ, NPDES Permit No. CAS00002 generally referred to as the Construction General Permit [CGP]). Coverage under a Construction General Permit requires the submission to the SWRCB of the Permit Registration Documents (PRDs), which includes a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), permit fee, and other required documents, and receipt from the SWRCB of a Water Discharger Identification Number (WDID) for the Project. Site disturbance, mobilization, or construction activities shall not start until the Contractor is in receipt of the WDID Letter issued by the SWRCB.

A copy of the General Permit is available on the SWRCB website:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

- B. The Contractor shall comply with RWQCB and City requirements regarding storm water management, inspection, and monitoring.
- C. The Contractor shall comply with the following prohibitions and limitations, which are contained in the Construction General Permit:
- a. Storm water and non-storm water discharge prohibitions:
 1. Discharge of materials other than storm water, which are not otherwise regulated by a NPDES permit, to a separate storm water sewer system or waters of the United States are prohibited.
 2. Storm water and non-storm water discharge shall not cause or threaten to cause pollution, contamination (including sediment) or nuisance.
 3. Storm water and non-storm water discharge regulated by this Construction General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117.3 and 40 CFR Part 302.4.
 4. Discharge of toxic pollutants prohibited by the Clean Water Act Section 307(a).
 - b. Receiving Water Limitations:
 1. Storm water and non-storm water discharges to any surface or groundwater shall not adversely impact human health or the environment.
 2. Storm water and authorized non-storm water discharges shall not contain pollutants in quantities that threaten to cause pollution, contamination (including sediment), or a public nuisance.
 3. Discharges located within the watershed of a CWA Section 303(d) impaired body shall limit the Total Maximum Daily Load (TMDL) to that approved by the U.S. EPA for “construction activities” or land disturbances.
 4. Water discharges shall not cause or contribute to a violation of any applicable water quality standards contained in the Statewide Water Quality Control Plan, California Toxics Rule, The National Toxics Rule, California Ocean Plan, Inland Surface Waters and Enclosed Bays and Estuaries Plan, or the applicable Regional Water Board’s Basin Plan.
- D. The Contractor is responsible for updating and submitting to the City the Erosion Control/BMP Project plans that are part of this SWPPP over the construction duration as site conditions change. The Contractor will upload the revised SWPPP information onto the SWRCB SMARTS system.

1-25B General

The City will be Legally Responsible Party for the RWQCB for the preparation of and compliance with the various management plans called for by the RWQCB. The Contractor shall prepare a SWPPP using their OSD and be responsible for uploading and maintain all information on the SMARTS website. The Contractor is responsible for providing the detail planning and

compliance activities insofar as they would potentially affect the Contractor's methods and means of performing the Work.

If a violation of the Permit is due to the Contractor's actions or inactions and a fine is assessed, the Contractor shall be responsible for the fine and all applicable remediation requirements.

1-25C Risk Assessment

A. The Project has been identified to be a LUP Type 1 based on the SWPPP prepared during the Design Phase.

1-25D Contractor Responsibilities

A. The Contractor shall be responsible for meeting the requirements of the Construction General Permit except as specifically noted otherwise within this Section.

B. Within fifteen (15) days of the Award of the Contract the Contractor shall submit the following:

- a. PRDs that are to be used by the City to apply for the Project WDID. This information shall be submitted by the Contractor in electronic form suitable for the submittal by the City to the SWRCB using the Storm Water Multiple Application Report Tracking System (SMARTS) website.
- b. SWPPP prepared by a Certified QSD.
- c. Construction Site Monitoring Plan (CSMP).
- d. Site Map.
- e. Names and 24-hour phone numbers for QSD, QSP(s), and other parties responsible for implementing, monitoring, inspecting and maintaining the SWPPP.

C. Prior to soil disturbing work the Contractor shall implement the measures of the SWPPP and be in receipt of the Project WDID. This is a prerequisite for coverage under the General Permit.

D. Contractor's QSD and/or QSP shall update the PRDs including but not limited to the SWPPP, CSMP and Site Map for new or changed conditions or if initial documents were incomplete and submit to City.

E. Contractor shall furnish:

- a. Routine inspection reports on Monday of each week [daily and weekly reports, REAPs, storm event reports (before, during and after inspections)].
- b. NAL Exceedance Reports within 48 hours of the event.
- c. NEL Violation Reports shall be maintained within twelve (12) hours after the NEL Exceedance has been identified. Note this report must be submitted to the RWQCB within 24 hours of the incident.

F. The Contractor shall develop and submit the annual report to the City within ten (10) days of August 1 of each year for submittal to the RWQCB by the City. The content shall be complete and fully comply with the requirements of Section XVI of the Construction General

Permit. The Contractor's QSD shall prepare and certify the report using the language of Section IV, Item J, Compliance Certification of the Construction General Permit.

- G. Prior to Final Completion the Contractor shall develop and submit an annual report to the City for the time frame between the Notice to Proceed or last previous annual report, and the Final Completion Date.
- H. The Contractor shall provide evidence to the City with the submission of the SWPPP that the individual(s) responsible for the PRDs development including the SWPPP preparation is a Qualified SWPPP Developer (QSD) who has the certification or registration required by Section VII of the General Permit.
- I. The Contractor shall provide evidence to the Construction Manager that the individual(s) responsible for supervising the SWPPP implementation, monitoring and reporting as required by the Construction General Permit is a Qualified SWPPP Developers (QSD) or a Qualified SWPPP Practitioner (QSP) who has the certification and/or registration required by Section VII of the Construction General Permit.
- J. All QSD and QSP(s) must meet the certification and/or registration requirement of Section VII of the Construction General Permit. Contractor shall provide evidence and demonstrate that his Qualified SWPPP Developer and Qualified SWPPP Practitioner are qualified to develop PRDs, SWPPP, etc. and supervise the implementation to the Construction Manager.
- K. Contractor shall be responsible for implementing, monitoring, inspecting, and maintaining best management practices (BMPs) and other measures as detailed in the SWPPP, CSMP, REAP, Site Map, other applicable documents and the requirements of the Construction General Permit. The work shall be supervised by the Contractor's QSP(s).
- L. Contractor shall be responsible for providing equipment, materials, and workers to implement the SWPPP and complying with all the requirements of the General Permit as well as being available for rapid response to BMP failures and emergencies.
- M. The SWPPP together with the weekly reports and rain event reports shall be kept and maintained by the Contractor on the construction site during the duration of the Project. Reports shall be certified by the Contractor's QSD or QSP. Reports shall be submitted to the Construction Manager no later than two (2) business days after actual inspection.
- N. The Contractor shall be responsible for taking the proper actions to prevent storm water or non-storm water coming into contact with contaminants and sediments from migrating offsite or entering public storm drainage systems. The Contractor shall take immediate action if directed by the Construction Manager or if the Contractor observes contaminants and/or sediments entering the storm drainage system, to prevent further storm water from entering the system.
- O. The Contractor shall submit the updated SWPPP to the City for submittal to the SWRCB SMARTS system by whenever there is a change in construction or operations which may affect the discharge of any pollutants from the construction site.
- P. The SWPPP shall be amended by the Contractor's QSD or QSP if it is in violation of any conditions of the Construction General Permit or has not achieved the general objective of reducing pollutants in storm water or non-storm water discharges.

- Q. All amendments shall be completed at no additional cost to the City.
- R. The Contractor shall submit all PRDs and other documents (storm event reports, REAPs, Annual Reports, NAL Exceedance Reports, NEL Violation Reports, etc.) to the City. The Contractor's QSD shall certify to the City that the submitted documents are in compliance with the Construction General Permit. The certification shall use the language of Section IV, Item J-Compliance Certification, of the CGP. The Contractor shall furnish the following:
- a. One (1) certified hardcopy.
 - b. An electronic submittal to the RWQCB through the State Water Board's SMARTS website (PDF and MS Word formats when available). The Contractor will be responsible for uploading the information to the SMARTS website.

1-25E City Responsibilities

- A. The City, designated as the Legally Responsible Person (LRP), will submit and certify the Notice of Intent (NOI) and SWPPP via the SWRCB's SMARTS and will obtain the Project WDID. The City requires PRDs from the Contractor to be uploaded into SMARTS and transmitted in an acceptable electronic format prior to filing the NOI.
- B. The City will review and contractor upload the PRDs approved by City to the SMARTS website including but not limited to the PRDs, storm event report(s), Annual Report(s), Notices of Violation. Contractor shall provide all the information required to the City in written (hard copy) and electronic copy (PDF and/or MS Word format).
- C. The City will have LRP signatory responsibility for the SWPPP as defined in Section IV, Item I-Signatory Requirements of the Construction General Permit.
- D. The Contractor will submit City approved to the RWQCB an annual report(s) as developed by the Contractor and will pay the associated fee.
- E. In accordance with Section II.D of the General Permit, the City will upload a Notice of Termination (NOT), a final site map, and photos through the SWRCB's SMARTS website within 90 days of completion of all construction activities or when ownership has transferred.

1-32 Measurement and Payment

Renumber this section as 1-33.

Replace the section entirely as follows:

Measurement and payment for bid items are described in this section. Full compensation for Work not appearing as a specific bid item but required by the Contract Documents shall be considered as included in the contract unit price paid for the various items of work and no additional compensation will be allowed therefore. Measurement and payment descriptions within the various sections of the City Standard Specifications for the various items of work shall not apply.

No adjustment of the unit price bid shall be made for any increase or decrease in the quantity of utility under crossing bid items, as required by these Special Provisions and Project Plans regardless of the reason for such increase or decrease. The Provision in Section 4-1.03B,

“Increase or Decrease Quantities,” of the State Standard Specifications shall not apply to these mentioned items.

1-32A Bid Item Measurement and Payment Descriptions

1. Bid Item No. 1 - Mobilization

- A. No measurement shall be made for this Bid Item.
- B. Payment shall be made at the lump sum bid price named for Bid Item No. 1, and shall conform to public contract code 10264 and shall include but not be limited to obtaining all permits, insurance and bonds, mobilizing labor force, mobilizing equipment onto the site, preparatory work and operations, providing necessary storage, parking, and staging areas, providing construction water supply, providing on-site sanitary facilities, and all incidentals pertaining to the project site.

2. Bid Item No. 2 - Traffic Control

- A. No measurement shall be made for this Bid Item.
- B. Payment shall be made at the lump sum bid price named for Bid Item No. 2, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all work involved in preparing traffic control plans for City of Pleasanton approval, coordinating with and providing construction notification to City of Pleasanton and Livermore Amador Valley Transit Authority, and other agencies, and for furnishing and placing barricades, warning devices, signage, flaggers, portable sign boards, and other traffic control elements and controlling pedestrian, bicycle and vehicle traffic around and through construction areas as may be required by the Contract Documents and the encroachment permits under which the work is being performed permit in implementing traffic control during construction. Traffic Control Plans are required for work affecting public roads and pedestrian access ways.

3. Bid Item No. 3 - Storm Water Pollution Prevention Plan

- A. No measurement shall be made for this Bid Item.
- B. Payment shall be made at the lump sum bid price named for Bid Item No. 3, which shall include full compensation for all aspects of implementing, complying with, and maintaining the measures specified in the Storm Water Pollution Prevention Plan (SWPPP) as attached to these Contract Documents and required under the NPDES General Permit for Storm Water Discharges Associated with a Linear Underground Project (LUP).

Payment for implementing the SWPPP shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in implementing, inspecting, maintaining, testing, monitoring, and reporting under the SWPPP, as shown on the Plans, as described in the Standard Specifications and these Specifications, and as directed by the City. Contractor shall be responsible for any and all revisions and amendments to the SWPPP, including, but not limited to, changes in project size and scope, fines, or anything associated with a change in the SWPPP.

- C. Payment for the Storm Water Pollution Prevention Plan will be made in accordance with the approved Contractor's Schedule of Values.
- D. The City will withhold portions of or all partial payments during payment periods in which the Contractor fails to meet the requirements of the Special Provisions Section 1-25 and the SWPPP as determined by the City. The partial payments withheld for failure of the Contractor to conform to the provisions in this section will be released for payment on the next monthly estimate for partial payment following the date that the approved SWPPP has been properly implemented and maintained, and water pollution is adequately controlled, as determined by the City.

4. Bid Item No. 4 - Utility Potholes

- A. Measurement for this Bid Item shall be made per each utility pothole, which shall be deemed complete upon successful locating of the utility and backfilling and restoring of the surface and providing the City pothole information charted on profile.
- B. Payment for pot holes shall be made at the unit price bid for Bid Item No. 4. for completion of each approved pothole from alignment and profile verification process and otherwise as specified in the Special Provisions, as determined by the City. Payment under this Bid Item shall be considered full compensation for the work described and shall include but not be limited to furnishing all labor and equipment and material required to request utility locating, mark out and receive approval for potholes, sawcut pavement, remove existing pavement, excavate and stockpile soil material, identify and document existing utility, locate the utility horizontally and vertically, place and compact backfill material, restore pavement and hardscape or landscape surfaces and related work required to complete the work as specified per the Contract Documents. This bid item also includes repairing damage, making modifications to or replacing existing utilities damaged by the Contractor's operations.

Utility potholing applies to main line installation, including but not limited to Bid Items 5. Potholing for services, flushing hydrants, flushing manholes and CAV's are not a measured item and are included in the various items of work, and therefore no separate payment will be made.

5. Bid Item No. 5, 6 - Recycled Water Pipeline in Pavement/Hardscape (6", 12")

- A. Measurement for these bid items shall be made per each horizontal lineal foot projection of recycled water main furnished, installed and tested, complete and operable in accordance with the requirements of the Contract Documents.
- B. Payment for installing recycled water mains shall for the completed footage of recycled water pipeline constructed, tested and with trench surface restored. Payment under these bid items shall be considered full compensation for the work described and shall include but not be limited to furnishing, installing and testing recycled water pipe and fittings, complete as specified; furnishing all labor, equipment, material and incidentals to construct the pipeline with materials specified, complete and operational.

These bid items also include performing all property coordination and notifications to residences, businesses, public transit officials, emergency services officials and other affected entities; surveying and staking; alignment and profile verification; support of existing crossing utilities as required in City Standard Detail 315 for 12" clearance; temporary fencing and barricades; protection of existing facilities and improvements; pre-construction documentation, reporting and preservation; site preparation; initial pavement saw cut and AC and PCC pavement removal; concrete curb, curb and gutter and sidewalk sawcutting, removal and disposal; trench excavation and temporary spoil storage, hauling and disposal of excess materials; dewatering and disposal of water; furnishing pipe, fittings and associated hardware, pipe and pipe fittings shown and specified; installation of pipeline to a minimum cover of 42-inches to 54-inches including joint restraint, cathodic protection on all metallic components; making connections to existing pipelines and pipelines installed under separate bid items as shown; import, placement and compaction of bedding, pipe embedment and trench backfill materials; roadway aggregate base restoration, AC pavement plug of trench, installing and maintaining striping and pavement markings and delineators, temporary trench plating; restoration of concrete sidewalk, curb and gutter; permeant stripping and pavement marking in paint, record drawing GPS locating of PIs and fittings and appurtenances; cleaning, flushing, installation of temporary jumpers between segments, conveyance of test water and filling of pipeline, pressure testing, and discharge of test water, and passing of all required tests and inspections. This bid item also includes Contractor quality control of its work.

This work shall also include planning, designing, engineering, preparation of submittals, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

6. Bid Item Nos. 7,8 - Water Valve (6" or 12" inch)

- A. Measurement for these bid items shall be made per each water valve furnished, installed, disinfected, tested, complete and operable and in accordance with the requirements of the Contract Documents.
- B. Payment for installing water valves shall include full compensation for furnishing and installing water valve, riser, operating stem, valve box and lid, and other appurtenances required by the City's Standard Detail 313. Payment shall be full compensation for labor, materials, equipment and other incidentals necessary to complete work.

7. Bid Item Nos. 9 – Combination Air Valve Above Grade (2-inch)

- A. Measurement for these Bid Items shall be made per each above grade Combination Air Valve, per Detail 4, GC-2 in the Contract Documents and City Standard Detail 311, furnished, installed, tested, complete and operable and in accordance with the requirements of the Contract Documents.
- B. Payment for constructing above grade Combination Air Valves shall be considered full compensation for furnishing and installing Combination Air Valve

per Detail 4, GC-2, including but not limited to potholing; tapping connection to recycled or potable water main; lateral line from tap to the Combination Air Valve, joint restraints, cathodic protection on all metallic components; import, placement and compaction of bedding, pipe embedment and trench backfill materials; roadway aggregate base restoration, final AC pavement plug of trench, installing and maintaining temporary striping and pavement markings and delineators, temporary trench plating; restoration of concrete sidewalk, curb and curb and gutter; restoration of decorative paver crosswalks including concrete base and perimeter band and sand bedding; protective coatings on above grade metallic components; landscape restoration; restoration of irrigation system components damaged by construction, and other incidentals necessary to complete work per the Contract Documents.

This work shall also include planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

8. Bid Item No. 10 - End of Line Blowoff (Detail 1010)

- A. Measurement for this Bid Item shall be made per each End of Line Blowoff, per City Standard Detail 1010 and as modified detail 1010 in the Contract Documents, furnished, installed, tested, complete and operable and in accordance with the requirements of the Contract Documents.
- B. Payment for installing End of Line Blowoffs shall be made at the unit bid price shall be considered full compensation for furnishing and installing End of Line Blowoffs per City Standard Detail 1010 and as modified in the Contract Documents, including but not limited to potholing, full stick of DIP, tapping the end of line blind flange or end cap, all associated piping to raise to grade, joint restraints, concrete kickers, cathodic protection on all metallic components; import, placement and compaction of bedding, pipe embedment and trench backfill materials; roadway aggregate base restoration, saw cut, final AC pavement plug of trench, installing and maintaining temporary striping and pavement markings and delineators, temporary trench plating; restoration of concrete sidewalk, curb and curb and gutter; landscape restoration; restoration of irrigation system components damaged by construction, and other incidentals necessary to complete work per the Contract Documents.

This work shall also include planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

9. Bid Item No. 11 - Flushing Hydrant

- A. Measurement for this Bid Item shall be made per each Flushing Hydrant, per City Standard Detail 1008 and 1009, furnished, installed, flushed, tested, complete and operable and in accordance with the requirements of the Contract Documents.
- B. Payment for installing Flushing Hydrants shall be made at the unit bid price named for Bid Item No. 11, which shall include full compensation for furnishing and installing Flushing Hydrants per City Standard Detail 1008 and 1009, including but not limited to potholing, installing the tee, valve, joint restraints, concrete kicker, cathodic protection on all metallic components; import, placement and compaction of bedding, pipe embedment and trench backfill materials; roadway aggregate base restoration, final AC pavement plug of trench, installing and maintaining temporary striping and pavement markings and delineators, temporary trench plating; restoration of concrete sidewalk, curb and gutter; landscape restoration; restoration of irrigation system components damaged by construction, and other incidentals necessary to complete work per the Contract Documents.

This work shall also include planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

10. Bid Item No. 12 - Customer Services (2")

- A. Measurement for this Bid Item shall be made per each customer service furnished, installed and tested, complete and operable in accordance with the requirements of the Contract Documents.
- B. Payment for installing customer services shall be for the full compensation for all potholing, labor, materials, tools, equipment, excavation, backfill, hardscape and turf restoration, and other incidental work necessary to install customer services as shown on the Plans and standard detail 1010B including but not limited to the saddle tap, corporation stop, service line, curb stop, meter flange, boxes, valves, pipe extension, pressure reducing valve and miscellaneous piping and tagging, trenching. Work shall include but not limited to potholing, installing the saddle, valves, joint restraints, cathodic protection on all metallic components; import, placement and compaction of bedding, pipe embedment and trench backfill materials; roadway aggregate base restoration, final AC pavement plug of trench, installing and maintaining temporary striping and pavement markings and delineators, temporary trench plating; restoration of concrete sidewalk, curb and gutter; landscape restoration; restoration of irrigation system components damaged by construction, and other incidentals necessary to complete work per the Contract Documents.
- C. This work shall also include planning, designing, engineering, preparation of submittals, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of

OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

11. Bid Item No. 13,14 - Utility Undercrossing Detail 1 for up to 2 feet Additional Vertical Depth (6",12" Pipe)

- A. Measurement for this Bid Item shall be made per horizontal linear foot projection of Utility Undercrossing Detail 1 shown or required for up to 2 foot additional vertical depth from the baseline depth of 4.5 feet of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 1 utility undercrossings up to 2-foot deep shall be made at the unit price made which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 1 for up to 2 feet additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to a 2-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, shown on Utility Undercrossing Detail 1.

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to Contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is 2 feet or less. Only one Additional Vertical Depth bid item may apply to utility undercrossings shown on the plans, or determined to be necessary in the field.

12. Bid Item No. 15 – Utility Undercrossing Detail 1 for 2 feet to 4 feet Additional Vertical Depth (6", 12" Pipe)

- A. Measurement for this Bid Item shall be made per horizontal linear foot projection of Utility Undercrossing Detail 1 shown or required for over 2 feet up to 4 foot additional vertical depth from the baseline depth of 4.5 (54") foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 1 utility undercrossings from over 2-foot up to 4-foot deep shall be made at the unit price the which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 1 for up to 4-foot additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to 4-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, as shown in Utility Undercrossings Detail 1.

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to Contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is over 2 feet and up to 4 feet. Only one Additional Vertical Depth bid item may apply to utility undercrossings shown on the plans, or determined to be necessary in the field.

13. Bid Item No.17 - Utility Undercrossing Detail 2 for up to 2 feet Additional Vertical Depth (12" Pipe)

- A. Measurement for this Bid Item shall be made per each location of Utility Undercrossing Detail 2 shown or required for up to 2-foot additional vertical depth from the baseline depth of 4.5 foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 2 utility undercrossings up to 2-feet deep shall be made at the unit price made for the appropriate Bid Item, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 2 for up to 2-foot additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to 2-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, tr-flex pipe and fittings, solid sleeves as indicated on project plans including cathodic protection.

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches, based on pipe size. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is 2 feet or less. Only one Additional Vertical Depth bid item may apply to undercrossings shown on the plans, or determined to be necessary in the field.

14. Bid Item No 16 - Utility Undercrossing Detail 2 for 2 feet to 4 feet Additional Vertical Depth (6" Pipe)

- A. Measurement for this Bid Item shall be made each location of Utility Undercrossing Detail 2 shown or required for over 2-foot up to 4-foot additional vertical depth from the baseline depth of 4.5 foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 2 utility undercrossings from over 2-foot up to 4-foot deep shall be made at the unit price, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 2 for up to 4-foot additional vertical depth. Payment shall include but not limited to, additional labor, materials, fittings, cathodic protection, TR Flex piping, solid sleeves, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to 4-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, pipe and fittings as indicated and cathodic protection as shown in utility undercrossing detail 2.
- C. Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.
- D. Payment under this Bid Item is in addition to payment made to contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is over 2 feet and up to 4 feet. Only one Additional Vertical Depth bid item may apply to undercrossings shown on the plans, or determined to be necessary in the field.

15. Bid Item No. 18 - Prepare Excavated Materials Management Plan

- A. No measurement shall be made for this Bid Item.
- B. Payment shall be made at the lump sum bid price named for Bid Item No.21, which shall include full compensation for preparing a materials management plan for use if potentially contaminated soil and groundwater is detected or suspected. Payment also includes, but is not limited to, operating a sniffer or other detection analyzer at the trench heading for the duration of excavation.
- C. If potentially contaminated materials are detected or suspected, the implementation of handling, stockpiling, testing and disposal protocols is covered in other bid items.

The following bid items are provided to pay for revised or additional work under the Contract Documents. Use of these bid items shall be only with the written authorization of the City. These bid items have a quantity allowance provided in the bid schedule and the extended total for these items is included in the total bid amount.

16. Bid Item No. 19 – Handling and Testing of Potentially Contaminated Material

- A. Measurement for this Bid Item shall be per each cubic yard of suspected contaminated soil and groundwater per the Contract Documents.

- B. Payment for handling and testing of potentially contaminate materials shall be made at the unit bid price named for Bid Item No. 22, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals including final cleanup of the temporary site for doing all work involved per the Contract Documents and described in the Excavated Materials Management Plan. Payment includes moving suspected contaminated materials to a prepared stockpile location, establishing of the stockpile location to prevent further contamination, sampling materials and performing tests as described in the Contract Documents.
17. Bid Item No. 20 - Hauling and Disposal of Hazardous Soils – Kettleman
- A. Measurement for this Bid Item shall be made per cubic yard of contaminated soils to be handled and disposed to the Kettleman Hills Hazardous Waste Facility per the Contract Documents.
- B. Payment shall be made at the unit bid price named for Bid Item No. 23, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all work involved per the Contract Documents including the handling from the stockpile and trucking and disposal of the materials.
18. Bid Item No. 21 - Hauling and Disposal of Hazardous Soils – Vasco Road Landfill (Class 3 and Up Hazardous Materials)
- A. Measurement for this Bid Item shall be made per cubic yard of contaminated soils to be handled and disposed to the Vasco Road Landfill per the Contract Documents.
- B. Payment shall be made at the unit bid price named for Bid Item No. 24, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all work involved per the Contract Documents including the handling from the stockpile and trucking and disposal of the materials.
19. Bid Item No. 22 – Utility Undercrossing Detail 1 for 2 feet to 4 feet Additional Vertical Depth (6” Pipe)
- A. Measurement for this Bid Item shall be made per horizontal linear foot projection of Utility Undercrossing Detail 1 shown or required for over 2 feet up to 4 foot additional vertical depth from the baseline depth of 4.5 (54”) foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 1 utility undercrossings from over 2-foot up to 4-foot deep shall be made at the unit price the which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 1 for up to 4-foot additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to 4-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, as shown in Utility Undercrossings Detail 1.

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to Contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is over 2 feet and up to 4 feet. Only one Additional Vertical Depth bid item may apply to utility undercrossings shown on the plans, or determined to be necessary in the field.

20. Bid Item No. 23- Utility Undercrossing Detail 1 for 4 feet to 6 feet Additional Vertical Depth (12”)

- A. Measurement for this Bid Item shall be made per horizontal linear foot projection of Utility Undercrossing Detail 1 shown or required for over 4-foot up to 6 foot additional vertical depth from the baseline depth of 4.5 foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 1 utility undercrossings from over 4-foot up to 6-foot deep shall be made at the unit price, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 1 for up to 6-foot additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5, for up to 6-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, and as indicated on the contract documents..

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to contractor under the appropriate Bid Item No. 5 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is over 4 feet and up to 6 feet. Only one Additional Vertical Depth bid item may apply to undercrossings shown on the plans, or determined to be necessary in the field.

21. Bid Item No.24 - Utility Undercrossing Detail 2 for up to 2 feet Additional Vertical Depth (6” Pipe)

- A. Measurement for this Bid Item shall be made per each location of Utility Undercrossing Detail 2 shown or required for up to 2-foot additional vertical

depth from the baseline depth of 4.5 foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.

- B. Payment for Detail 2 utility undercrossings up to 2-feet deep shall be made at the unit price made for the appropriate Bid Item, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 2 for up to 2-foot additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to 2-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, tr-flex pipe and fittings, solid sleeves as indicated on project plans including cathodic protection.

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches, based on pipe size. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is 2 feet or less. Only one Additional Vertical Depth bid item may apply to undercrossings shown on the plans, or determined to be necessary in the field.

22. Bid Item No 25 - Utility Undercrossing Detail 2 for 2 feet to 4 feet Additional Vertical Depth (12" Pipe)

- A. Measurement for this Bid Item shall be made each location of Utility Undercrossing Detail 2 shown or required for over 2-foot up to 4-foot additional vertical depth from the baseline depth of 4.5 foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 2 utility undercrossings from over 2-foot up to 4-foot deep shall be made at the unit price, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 2 for up to 4-foot additional vertical depth. Payment shall include but not limited to, additional labor, materials, fittings, cathodic protection, TR Flex piping, solid sleeves, equipment over and above that of Bid Item No. 5&6, as appropriate, for up to 4-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, pipe and fittings as indicated and cathodic protection as shown in utility undercrossing detail 2.
- C. Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all

temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- D. Payment under this Bid Item is in addition to payment made to contractor under the appropriate Bid Item No. 5&6 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is over 2 feet and up to 4 feet. Only one Additional Vertical Depth bid item may apply to undercrossings shown on the plans, or determined to be necessary in the field.

23. Bid Item No. 26 - Utility Undercrossing Detail 2 for 4 feet to 6 feet Additional Vertical Depth (12" pipe)

- A. Measurement for this Bid Item shall be made per each location of Utility Undercrossing Detail 2 shown or required for over 4-foot up to 6-foot additional vertical depth from the baseline depth of 4.5 foot of pipe cover that are required to avoid interferences, all in accordance with the requirements of the Contract Documents.
- B. Payment for Detail 2 utility undercrossings from 4-foot up to 6-foot deep shall be made at the unit price, which shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in constructing Utility Undercrossing Detail 2 for up to 6-foot additional vertical depth. Payment shall include additional labor, materials, equipment over and above that of Bid Item No. 5, as appropriate, for up to 6-foot deeper pipeline installation, including but not limited to additional shoring, excavation and backfill, backfill compaction, spoil hauling and disposal, dewatering, tr-flex pipe and fittings, solid sleeves and as indicated on project plans including cathodic protection.

Payment shall also include additional planning, designing, engineering, furnishing, installing, and constructing and removing and disposing of all temporary sheeting, shoring, and bracing of excavations as required but not limited to the provisions of any permits, in accordance with the requirements of OSHA, the Construction Safety Orders of the State of California, and pursuant to the provisions of Sections 6700 through 6708 of the California Labor Code.

- C. Payment under this Bid Item is in addition to payment made to contractor under the appropriate Bid Item No. 5 for pipe depth of 42 inches to 54 inches. Payment under this bid item occurs when the additional vertical depth shown or required for the undercrossing is over 4 feet and up to 6 feet. Only one Additional Vertical Depth bid item may apply to undercrossings shown on the plans, or determined to be necessary in the field.

24. Bid Item No. 27 – Additional Horizontal Pipeline Fittings – (6" or 12"-inch)

- A. Measurement for this Bid Item shall be made per each additional fitting to provide horizontal offset to avoid existing improvements where authorized by the City and in accordance with the requirements of the Contract Documents. Fittings shall include ductile iron elbows of any angle, tees, crosses, sleeves, reducers and

- of the required joint configuration, including all available combinations of flanged, mechanical joint locking segment push on ends.
- B. Payment for additional ductile iron fittings shall be made at the unit price named for Bid Item No. 23, which shall be considered full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved in procuring and installing additional ductile iron fittings, including cathodic protection, coatings, bolt sets for jointing and other incidentals necessary to complete work per the Contract Documents.
 - C. Payment does not include pipe, trenching, backfill, surface restoration or other like items that are included in other bid items.

1-32B Schedule of Values

For work to be performed for a lump sum amount, the Contractor shall submit a cost breakdown to the City prior to the first payment and within ten (10) days after Notice to Proceed. The cost breakdown (Schedule of Values), as agreed upon by the Contractor and the City, shall be used for preparing future estimates for partial payments to the Contractor, and shall list the major items of work with a price fairly apportioned to each item.

The cost breakdown shall be generally in the same format as the Contract specifications divisions and subdivisions, with major items of work listed individually. The cost breakdown shall include separate allowances for testing and startup work required. Measurable approximate quantities of work performed by the Contractor or its subcontractors shall be provided. For quantities that are the sum total of several individual quantities, backup summaries shall be provided which list the individual descriptions and quantities. These summaries then will be used to determine the quantities of work in place in subsequent progress payment requests.

Unless specified otherwise in the Contract Documents the costs for submittal and shop drawings preparation shall be included in the applicable work items identified above. No separate payment will be made for submittal or shop drawing preparation until such applicable equipment or materials are delivered to the Site.

The above is a statement of the intent of the Contract Documents to provide a moderate level of detail, acceptable to the City, to allow a fair and reasonable estimate to be made of the value of work installed. The detail of the cost breakdown must be sufficient to provide timely processing of the monthly progress payment request.

The cost breakdown will be subject to the approval of the City, and upon request, the Contractor shall substantiate the price for items and provide additional level of detail, including quantities of work. The cost breakdown shall be sufficiently detailed to permit its use by the City as one of the bases for evaluating requests for payments. The City shall be the sole judge of the adequacy of the cost breakdown.

The cost breakdown shall be solely used to determine progress payments. The cost breakdown shall not be considered in determining payment or credit for additional or deleted work.

1-33 Enforcement

Renummer this section as 1-34.

Add new section:

1-32 Recycled Water

Due to drought and the subsequent declaration of a Stage 2 emergency by the Municipal Code, the City of Pleasanton is requiring the use of recycled water for all applicable construction activities that would typically use potable water meters including but not limited to: dust control, milling machines, construction water trucks, water buffalo and street sweeping.

Recycled water is available for purchase from Dublin San Ramon Services District (DSRSD) and by the City of Pleasanton. The DSRSD recycled water fill station is located at 7399 Johnson Drive in Pleasanton. Before the first water pickup, the customer must schedule an appointment with an Environmental Compliance Inspector to apply for a Water Reuse Permit, pay any applicable fees, and be trained in mandatory procedures for using the fill station.

http://www.drsrd.com/doing_business_with_drsrd/recycledwaterhydrants.html

All water for construction and for recycled water pipeline testing on the project shall be recycled water unless otherwise approved by the City or as noted in the Contract Documents.

SECTION 2. TRAFFIC CONTROL

2-01A Public Convenience and Safety

Add:

Upon completion of each day's work, the contractor shall be responsible for leaving the work area free of hazards and shall provide all necessary temporary signs, warning devices, plating of trenches and barricades at no additional cost to the city. Access is to be provided for all adjacent residences and businesses at all times including non-construction hours. Maintain access for pedestrian and disabled persons at all times including non-construction hours.

Contractor shall provide access to driveways and parking lots at all times, unless coordinating with facility owner.

2-01B Construction Area Traffic Control Devices

Add:

A minimum of two (2) Changeable Message Sign (CMS) devices are required to be placed along Valley Avenue. CMS shall be installed two week prior to construction activity including potholing. The Contractor shall modify the message on the CMS devices to convey accurate messages. The City reserves the right to direct the Contractor to relocate locations of CMS devices at no additional cost to the City.

The Contractor shall be responsible for maintenance of any and all traffic control devices that are required by the approved Traffic Control Plan. The contractor shall ensure that all devices are maintained in the proper location during holiday, overnight, and on weekends.

Should it become necessary to use City forces to maintain the traffic control devices, the Contractor will be billed at the overtime rate for two (2) technicians and a vehicle, with a minimum of two (2) hours per incident/call.

2-01C Haul Routes

Replace:

The contractor shall access the site via I-680 to Bernal to Valley.

2-01D Traffic Control Plan

Add:

For all portions of the work, the Contractor shall provide a detailed traffic control plan including pedestrian and disabled person's accessibility plan for review and comment by the City Traffic Engineer. No work shall commence until the traffic control plans have been reviewed and commented by the City Traffic Engineer. These plans shall be prepared by qualified professionals (Traffic Engineers, Civil Engineers, or by Traffic Control Specialists). Submit site specific traffic control plans for all signalized intersections. Typical traffic control plan shall be submitted for work between intersections. Typical plans shall be prepared for the various lane configurations/geometry that will be encountered throughout the project limits. Pipe installation through intersections will determine the traffic control requirements for each intersection. Traffic control plans shall conform to the most current California MUTCD and State Standard Plan, and traffic control plan must include provisions for driveway access, pedestrians, bicyclist, and ADA requirements.

The Traffic Control Plan shall be prepared and submitted along with the pothole plan for validation of alignment and profile as described in Section 1-16, Lines and Grades and Construction Staking, as modified by these Special Provisions.

The time frame for city review and comment on the Traffic Control Plan shall be 14 calendar days for each Plan submitted.

2-01E Traffic Control Restrictions

Add:

The Contractor shall provide minimum 11-foot lanes for through traffic on roads affected by construction between 8 am and 5 pm unless otherwise approved by the Engineer. The City reserves the right to adjust the traffic control including lane closure hours and the number of traffic lanes closed.

Work Hours are 8am to 5pm Monday thru Friday unless noted otherwise.

Work near Koll Center Parkway(north/south)/Fair Grounds Entrance will be prohibited during fairground events. See www.alamedacountyfair.com for updated list of upcoming events. Event setup can prohibit work near the intersections and extend two days prior to the scheduled event.

GoodGuys Car Show – November 11 thru 13

SPA Swim SPA – January 1 thru 3

Manufactures RV Show - January 9 thru 18th

Spring Home & Garden Show – February 10-12

Hot Tub and Swim Spa Show – February 17-19
GoodGuys – March 17-19

Valley Avenue – Hopyard to Arroyo Del Valle Bridge – [Day Time Only]

Paseo Santa Cruz/Valley Ave Intersection

Restrict traffic to one lane each direction. Right hand turn pockets to remain open.

Flagger controlled intersection

Allowable Lane Restriction Hours: 9am to 4:30pm

Paseo Santa Cruz (north) to Hansen Drive

Restrict traffic to one lane each direction. Redirect NB traffic to SB lanes through intersections controlled by flagger. Provide cone separation from NB /SB traffic.

Allowable Lane Restriction Hours: 9am to 4:30pm

Hansen Drive to Paseo Santa Cruz (south)

Restrict traffic to one lane each direction. Redirect NB traffic to SB lanes through intersections controlled by flaggers. Provide cone separation from NB /SB traffic.

Allowable Lane Restriction Hours: 9am to 4:30pm

Paseo Santa Cruz (South) Intersection

Restrict traffic to one lane each direction. Right hand turn pockets to remain open.

Flagger controlled intersection.

Allowable Lane Restriction Hours: 9am to 4:30pm

Paseo Santa Cruz (South) to Koll Center Parkway (North)

Restrict traffic to one lane each direction. Redirect SB traffic to NB lanes through intersections controlled by flaggers. Provide cone separation from NB /SB traffic.

Allowable Lane Restriction Hours: 10am to 4:30pm (Dependent on morning traffic back up at Koll Center North Intersection)

SECTION 8. ASPHALT CONCRETE, LIQUID ASPHALT AND ASPHALTIC EMULSION

Replace:

All references to “Type B” for the entire Section 8, to “Type A”

All references to “Isolated Pavement Repair/Base Repair” for the entire Section 8, to “Full Depth HMA Repair”

8-02A Asphalt Concrete

Add:

Maximum 15% recycled asphalt concrete is allowed

Asphalt concrete to be used for asphalt concrete paving shall conform to the provisions of Section 39, "HOT MIX ASPHALT," of the State Standard Specifications 2010, and as augmented by these Special Provisions as follows

Section 39-1.01A Summary

Add:

The City will accept a previously Caltrans approved mix design and shall not require job start up verification. The mix shall have been validated by Caltrans within the last 18 months. Contractor shall submit Job Mix Formula (JMF), Job Mix Formula Verification, Contractor Hot Mix Asphalt Design Data, Suppliers Quality Control Plan, density core results from previous job, briquettes test data from previous job.

Provide ¾" HMA-Type A produced under the Standard Method of Construction.

39-1.03E

Add:

The City will not provide verification of JMF, JMF must be previously approved by Caltrans within the last 18 months.

39-1.03G Job Mix Formula Acceptance

Modify:

2. Contractor has supplied proof that Caltrans has verified JMF within 18 months before start of HMA production.

39-1.04F Density Cores

Add:

The City reserves the right upon request by the Engineer for contractor to assist the City's 3rd party inspector to perform density cores in accordance with section 39-104.G. Contractor is not required to have density cores taken by an independent party. This does not relieve the supplier from performing testing as identified in their Quality Control Plan. Contractor shall submit test results from previous job with same JMF.

39-1.04G Briquettes

Add:

The City reserves the right upon request by the Engineer for contractor to assist the City's 3rd party inspector to sample the mix to make and tests briquettes in accordance with section 39-104.G. Contractor is not required to have briquettes made and tested by an independent party. This does not relieve the supplier from performing testing as identified in their Quality Control Plan. Contractor shall submit test results from previous job with same JMF.

39-1.05 Acceptance Criteria

Add:

The City reserves the right to use Contractor's/Supplier's Quality Control data for acceptance. Contractor to submit Suppliers quality control data from testing identified in Supplier's Quality Control Plan.

39-1.07 Production Start-up Evaluation

The City reserves the right to perform production start-up evaluation by third party if deemed necessary by Engineer upon review of submittals and previous test data.

39-1.08A General

Supplier shall submit statement certifying that the plant holds a current qualification certification from Caltrans Materials Plant Quality Program.

39-1.12C Profilograph
Delete section.

39-2.03 Acceptance Criteria

The City reserves the right to use the Contractors Quality Control test data for acceptance. Contractor shall submit Quality Control Testing data within 7 days of paving. Cores shall be taken only upon approval by the City.

SECTION 9. ASPHALT CONCRETE PAVING

9-03 Construction

Permanent Trench Plug Patch:

Prior to starting work the Contractor shall submit to the City for approval a video tape of all lane markings establishing a record of all existing markings and signage.

All asphalt materials used for the permanent patch over all pipelines "Tee" patch shall be ¾-inch HMA – Type A. This permanent patch shall be a minimum of 4". The asphalt material for trench restoration will not be paid for separately but shall be included in the unit price of the pipeline being installed requiring said patching.

Any aggregate base under this permanent asphalt patch for trench restoration will not be paid for separately but shall be included in the unit price of the pipeline being installed.

Any lane markings or traffic legend, disturbed during pipeline installation shall be replaced with paint within five (5) calendar days of disturbance. Temporary tabbing of lane markings shall be installed prior to traffic being allowed on these areas of disturbance while waiting for temporary paint markings. A penalty of \$100 per calendar day shall be assessed against the Contractor for each violation after the above mentioned five (5) calendars day period.

Pavement marking will not be paid for separately but shall be included in the unit price of pipeline being installed.

All trench repairs will be in accordance with City of Pleasanton Standard Detail 112. Valley Avenue is a major street. It is anticipated that the trench repair will be in place for significant time before Valley Avenue is reconstructed. It is expected that the workmanship and finish quality of the AC on the trench repair will be of the highest quality - to the quality of a finished product. The City will not accept lower quality even though the street will eventually be reconstructed.

SECTION 11. TRENCH EXCAVATION AND BACKFILL

11-03A.2 Trench Length, Width and Depth

Add:

It is the intent of the project to maintain a minimum of 42 inches of cover over the proposed recycled water main unless otherwise noted on the Drawings. It shall be understood that the depth of cover may increase at some locations in order to minimize possible unforeseen conflict with various existing underground facilities. Contractor shall be ready to install shoring as needed per OSHA requirements.

The proposed new recycled water main alignment as shown on the plans may deviate as necessary per direction from the Engineer in order to minimize potential conflict with existing underground facilities. Otherwise, the proposed recycled water main alignment shall be in conformance to the project plans and City Standard Specifications.

At various locations shown in the drawings or as ordered by the City due to shallow depth of cover (less than 30"), a 6" thick reinforced concrete (#5 @12" each way) cap with width of full trench (plus 6" each side) for the full length of the ductile iron pipe installed as required. Any pipe less than 30" of cover shall be ductile iron. To expedite curing of the concrete, contractor shall utilize high early strength Type III Portland cement to achieve a minimum 24 hour compressive strength of 3,000 psi.

The Contractor shall expect that the existing thickness of asphalt surfacing along streets affected by open cut construction vary as shown in the Plans.

11-02C Upper Trench Backfill Material

Replace first sentence with:

"Upper trench backfill material for water, recycled water, sanitary sewer, and storm drain pipelines in existing streets and undeveloped areas shall be class II aggregate base as specified in Caltrans 2015, section 26-1.02B. Class II recycled materials acceptable."

11-03A.2 Trench Length, Width and Depth

Replace first sentence with:

"The maximum length of open trench, including trenching, pipe laying and backfilling, shall not exceed 600 feet (600'). All open trench not actively being worked on shall be plated."

SECTION 14. WATER

14.02B.2 Fittings

Add :

Fittings for PVC mechanical joints shall be EBAA Iron Megalug 2000PV or Sigma One-Lok SLCE 12.

All fittings shall be ductile iron type. Fittings for ductile iron mechanical joints shall be restrained mechanical joints with EBAA Iron Megalug 1100 or Sigma One-Lok SLDE 12 restraining gland or locking segment push on joint type, TR FLEX or equal, unless noted otherwise.

Where shown and for Utility Under Crossing detail 2, provide locking segment push-on joint type, TR FLEX or equal connections to valves and fittings using compatible locking segment push-on joint fittings or flange by locking segment push-on joint connecting piece adapters.

Add:

14-02L Nuts and Bolts for Buried Pipelines

Nuts and bolts for buried pipelines shall be stainless steel in accordance with Attachment A, Section 15000 – Piping, General. Nuts and bolts shall be protective coated after installation with bitumastic as required in, Section 16640 – Cathodic Protection.

14-03I Abandonment of Water Facilities

Add:

All fire hydrants utilized for this project and shown in the project drawings shall be new.

The Contractor shall install permanent concrete or mechanical plug on existing pipelines, where it is severed and abandoned in place in accordance with this section. Fire hydrant risers shall be removed to 3' below grade and existing pipe shall be filled with concrete to fire hydrant valve. Concrete plugs shall extend in the existing line a minimum of two pipe diameters. Valve risers, box and extension shall be removed to 3' below grade.

Add:

14-03K Cutting and Abandoning Asbestos Cement Pipe

Handling, including cutting, removal, disposal or abandoning in place of any asbestos cement pipe shall be in conformance with Title 8 CCR 1529 – Asbestos in Construction. If handling asbestos cement pipe, Contractor shall:

1. Possess appropriate state registration and certification
2. Use employees trained in performing work inside regulated work areas for Class II Asbestos work.
3. Perform work such that air fiber concentrations do not exceed Department of Occupational Safety and Health's permissible exposure limits for asbestos outside of established regulated areas.
4. Perform all work in accordance with applicable local, state, and federal regulations.
5. Contractor shall submit evidence of proper licensure and certifications prior to performing any work associated with Asbestos Cement Pipe.

Preparing or cutting asbestos cement pipe or transite pipe shall only be performed with a snap type cutter.

Refer also to the applicable provisions of Section 02201 – Handling, Storage, Testing, and Disposal of Excavated Soil and Materials.

SECTION 15. CONCRETE SURFACE IMPROVEMENTS

15-02A Portland Cement Concrete

First Paragraph, First Sentence, is modified to read as follows:

Portland cement concrete for all concrete surface improvements, except where it is noted, shall be Class 2 in conformance with Section 90, "Portland Cement Concrete" of the State Standard Specifications dated May 2006 and have a maximum slump of three inches (3"), except where it is noted otherwise.

Add:

Portland cement for reinforced concrete caps utilized in shallow depth pipelines shall be Type III high early strength.

SECTION 17. TRAFFIC STRIPES AND PAVEMENT MARKING

17-02B

Add:

All permanent pavement marking and striping shall be paint.

17-04

Delete:

Traffic striping and legends are not a measured item.

17-05

Delete:

Traffic striping and legends are not a pay item and shall be included in various items of work.

SECTION 19. IRRIGATION

Add:

- A. Repairs and Restoration of Irrigation System and Components: The Contractor shall repair or replace irrigation systems and components that are damaged during construction or by Contractor activities. Work in repairing irrigation systems and components shall be in accordance with the City Standard Specifications and as required for existing irrigation systems. The City shall inspect all restoration work prior to covering with soil and prior to planting and laying sod, which shall not be initiated until the irrigation system restoration work is approved.
- B. Contractor shall submit a list of irrigation system materials and components for City review and approval prior to procuring these materials and components. Submittals shall meet the requirements of the City Standard Specifications and these Special Provisions.
- C. Contractor shall request that the City test the irrigation system as specified in the City Standard Specifications. Planting or laying sod shall not commence until the irrigation system has been tested successfully.

SECTION 20. PLANTS AND PLANTINGS

Add:

- A. Sod Replacement: Sod for restoration shall include replacement of sod for areas disturbed by construction and within the work area limits defined in the Plans. Sod shall match existing. In preparation of laying sod, the Contractor shall remove existing remaining and damaged turf grass to below the root zone and then scarify the top 6 inches of subgrade soil. Top soil

consisting of previously excavated and separated top soil mixed thoroughly with well decomposed organic amendments made from recycled green waste or food waste.

The Contractor shall prepare native topsoil and soil amendment samples and conduct a soil analysis using an independent testing firm. Topsoil shall not be applied until the City approves the test results. The City is the sole judge of adequacy of the topsoil and amendment based on the laboratory soil analysis.

Soil preparation including applying topsoil to prepared subgrade shall be in accordance with the City Standard Specifications. The City shall inspect the prepared area prior to laying sod.

Sod laying shall be in accordance with the City Standard Specifications. The Contractor shall ensure that sod is in a healthy condition with no sign of drying or fermentation.

- B. Landscaping Restoration: Where the Contractor's operations damage existing vegetation or where the Contractor must remove vegetation, the Contractor shall replace the vegetation with similar species and densities of plants. All work of restoring landscaping shall be in accordance with the City Standard Specifications.
- C. Contractor shall submit a list of plant and sod materials including source for City acceptance. Submittals shall meet the requirements of the City Standard Specifications and these Special Provisions.
- D. Contractor shall maintain all plants and sod maintenance as specified in the City Standard Specifications.

Restoration is not a measured item and shall be included in various other items of work.

SECTION 21. MISCELLANEOUS

21-01 E Good Neighbor Letter (48 Hours Notice)

Attached and made part of these special provisions are sample "Good Neighbor Letters" informing the public of pending construction activity. This letter is required for distribution a minimum of 48 hours before the start of construction. Each week new letters will be issued to residents impacted by the next week's activities. The contractor is required to submit a draft letter to the City for review and approval prior to the start of any work. This letter is required and is in addition to the "No parking signs" required under section "2-01 E Traffic Control Restrictions." These letters are to be distributed to all entities, businesses or residents that are directly impacted when access to their property may be impeded and this distribution is not limited only to the project's limit of work.

No separate payment for conforming to the provisions herein.

(SAMPLE LETTER ON FOLLOWING PAGES)

(Contractor's Letterhead)

REQUIRED GOOD NEIGHBOR LETTER (48 HRS Notice)

Date: ___/___/___

RE: VALLEY AVENUE RECYCLED WATER MAIN EXTENSION
Project No. 16148

Dear Tenant/Occupant:

Please be advised that heavy construction activity to install a new recycled water main, recycled water service connections, and various related appurtenances along Valley Avenue from Hopyard to Bernal Avenue. Work near your residence will begin around [(Time of Day: _____) on (Day of week: _____), (Date, ___/___/___)]. The project will start from _____ street to _____. It is anticipated that this work will be completed by (Time of Day: _____) on (Day of week: _____), (Date, ___/___/___), weather permitting.

During this time period, traffic may be impacted in around the area. Access to your roadway will be maintained at all times but delays might occur while working directly in front of the street. Pedestrian access to all properties will be maintained during this period.

(Optional sample language depending on type of work)

- On-street parking will be limited and at times may not be available. It is suggested that you park your vehicle on adjacent streets not under construction. Typically, this work will occur between the hours of 8:00 a.m. and 5:00 p.m. In order to minimize interruption to water services, working hours may be modified to accommodate the connection of the new water services and other reasons.
- During trenching operations to install the water main, access to your driveway/roadway will be interrupted as heavy equipment and work occurs in front of your driveway/roadway. At the end of the workday, vehicle access to your driveway will be restored to allow you vehicle access to your property.

If you have questions or special access needs, please feel free to contact Mr./Ms. _____ who is our construction superintendent on this project at ___ - _____. Also, you may contact the City's Inspector (Inspector assigned to project: Mr. ___ directly at 925-931-XXXX).

Sincerely,

Contractor Name

Attachment(s): None/List of affected streets

21-01 I Potholing

Potholing locations at all utility crossings (shown in drawings, USA markings), tie-ins, etc. shall be as directed by the field Engineer, Contractor, and Inspector in order to ascertain horizontal and vertical locations of existing underground facilities that may impact final placement of proposed facilities. During potholing operations, measurements shall be taken and recorded by the contractor in order to ascertain the dimension, shape, material, and any special features of the existing underground facilities. The potholing locations shall include but not be limited to City exploratory pothole locations that indicate soil cement below asphalt paving, utility crossings and vaults, and parallel utilities within 5 feet of the proposed pipeline and at 50-foot maximum intervals as indicated in the Drawings or proposed by the Contractor through the alignment validation process.

Potholing operations shall only be started after the Underground Service Alert has been contacted and all of the utilities have been marked in the field. Traffic control shall be approved by the traffic engineer and shall be properly installed and maintained throughout the duration of the potholing operations.

Potholing shall include saw cut to existing pavement, removal and disposal of material to a depth necessary to locate existing underground utility(s)/facilities; backfill including materials, compaction, and placement of permanent surfacing as shown on the plans, as specified by the Engineer in the field, and in Section 3 and Section 11 of the City Standard Specifications where construction will not otherwise require paving over the pothole. Where the pothole is located such that it will be within the trench plug patch, a temporary patch of cold mix AC is acceptable, provided that the full cold patch is replaced with a hot mix AC trench plug patch.

The Contractor shall be held responsible for damages to existing improvements, above ground or underground, shown or not shown on the plans, both private and public, due to contractor's operation. The Contractor shall repair and/or replace any such damaged improvements according to the requirements of the Engineer at no additional cost to the City.

21-01.J Construction Sequencing and Constraints

The following are requirements that the Contractor must adhere to and include in its schedule for the Work.

- A. The Contractor is allowed to occupy up to two adjacent streets (intersection to intersection to intersection) at any one time. Work cannot move to the next adjacent street until work is complete, including trench AC patch paving and full restoration of landscaping and private improvements.
- B. Trench AC patch paving of T-cut shall occur within two weeks of completion of recycled water pipeline construction, including pipe embedment zone and trench zone backfill. If the trench paving does not occur within this time limit, contractor will be required to halt pipeline work until paving operations can come into compliance. This two week requirement must be met regardless of the status or pressure testing pipeline. See Section 9-03 regarding expected quality of AC patch.
- C. Traffic control plans broken down for each major line segment prepared by the Contractor shall be submitted to the City allowing for 14 calendar days review for each submittal. Traffic control plans shall be approved prior to marking out preliminary pipeline alignment.

- D. Construction will disrupt access to existing Alameda County Transportation Commission transportation services for seniors and disabled residents along project alignments. Contractor shall provide temporary bus stops when existing bus stops are blocked by construction. The Contractor shall coordinate its schedule for construction in front of and adjacent to existing ACTC stops with ACTC and City staff, Pam Deaton (925) 931-5367.
- E. Construction will disrupt access to existing Wheels/LAVTA bus stops along project alignments. Contractor shall provide temporary bus stops when existing bus stops are blocked by construction. The Contractor shall coordinate its schedule for construction in front of and adjacent to existing Wheels/LAVTA bus stops with City staff and with Wheels/LAVTA, Cyrus Sheik (925) 455-7555.
- F. Contractor shall provide access to driveways/roads at all times to extent possible. Trench plating shall be installed over trenches when active construction is not occurring in front of driveways/roads. Contractor shall coordinate with resident/business a minimum of 5 working days prior to scheduled work in front of driveways and shall work within the agreed time frame. Advance notice signage of temporary driveway closures shall be installed 48 hours at each impacted driveway.
- G. Trench restoration paving shall meet the same expectations as if it was the final paving for the project. The paving shall match or exceed the quality of pavement surface and rideability as the adjacent pavement and shall be free from: depressions (greater than 1/4"), high spots/swells (greater than 1/4"), dips, gouges, potholes, waves, rutting, unevenness, raveling, cracking, bleeding, and settlement.
- H. The following restoration requirements must be met before City will approve Contractor to start work on next scheduled block. A maximum of two blocks can be disturbed at any given time per work area. Block is defined as distance between two public street intersections. If Contractor chooses to have multiple work areas the Contractor shall provide a plan to the City for review and approval that demonstrates that the multiple work areas will not have overlapping impacts and disturbances.
- All potholes shall be filled and permanently capped.
 - Mainline shall be installed.
 - All service laterals shall be installed.
 - All flushing hydrants, fire hydrants, blow offs, CAVs shall be installed.
 - All mainline and service lateral trenches shall have permanent hot mix asphalt trench cap paved and approved.
 - All valve boxes and irons shall be installed and approved.
 - All meter boxes shall be installed and approved.
 - All monuments impacted shall be reinstalled.
 - All pavement markings (stripping, legends, buttons, etc.) shall be installed (in paint) and approved.
 - All concrete shall be restored and approved. (Curb gutter, sidewalks, concrete bands, etc.)
 - All decorative pavers shall be restored and approved.
 - All street signage shall be reinstalled.
 - All USA and contractor markings shall be removed.
 - All landscaping/irrigation shall be fully restored and approved.
 - All construction signage, traffic control devices shall be removed unless required for active traffic control scheme.
 - All construction debris and trash shall be removed.
 - All stockpiled material shall be removed unless approved otherwise.
 - All SWPPP devices shall be removed unless required for active construction sequence.
 - Street shall be thoroughly clean to remove any soil debris build up.

All areas disturbed shall be restored to the extent possible within 30 working days from initiation of work in the area regardless of whether they have completed the work for the entire block, unless approved by the City Engineer.

In an event that requires work in a fully restored area, the Contractor shall fully restore the area as required above within 48 hours after completion of repair.

- I. The maximum length of pipe that can be pressure tested is 2,000 linear feet. Pressure testing and flushing may be completed after final restoration.
- J. Irons shall be set flush, but do not require concrete collars on new iron set north of Bernal Avenue.

21-01.L Staging Area

Contractor shall locate and secure staging area site(s) according to its needs to complete the project.

The City has a City staging yard location at Valley Avenue and Laguna Creek Lane. Contact Adam Nelkie at 925 931-5675 to review staging area. Contractor will be responsible to restore the area to existing condition upon completion of the project. The staging area may be used by multiple City contractors and contractor will be responsible to secure and maintain the entire area and maintain all SWPPP measures. All stockpiled materials will be required to be removed from the area in a timely manner.

21-01.M Stockpiling of Materials

No on street stockpiling of materials allowed unless approved by Engineer. Contractor may use merge lanes and begin portions of turn pockets for temporary storage of materials and equipment overnight. Side street parking of equipment is acceptable provided it is not located in front of residences. Starting of parked equipment near to residences will have 8am start times strictly enforced.

SECTION 22. RECYCLED WATER

22-01 GENERAL

This section covers recycled water system construction specifications. All recycled water design and construction work shall conform to Sections 14 of the City Standard Specifications as amended, unless otherwise noted. In addition, all recycled water pipes and fittings shall be purple or wrapped in purple polyethylene sleeve conforming to AWWA C105 specifications. Piping or piping wrap shall be permanently labeled "Caution: Recycled Water – Do Not Drink" or similar as approved by the City Engineer.

22-02 MATERIALS OF CONSTRUCTION

This section covers materials for recycled water pipes, fittings, and appurtenances for City recycled water facilities.

22-02A Pipes and Fittings

22-02A.1 Polyvinyl Chloride (PVC) Pipe and Fittings

PVC pipe and fittings for City facilities shall conform to City Standard Specification Section 14 for potable water.

22-02A.2 Ductile Iron Pipe Materials

Ductile iron pipe and fittings shall conform to City Standard Specifications for potable water, Sections 14-02B and 14-03B.

22-02A.3 Pipe Identification

All recycled water piping shall be clearly marked as recycled water pipe by the use of purple-colored and stenciled pipe, permanent recycled water warning tape continuously applied to the pipe, or marked plastic encasement. All marking and coloring shall be durable enough to be easily recognizable and legible for the design life of the piping. PVC pipe material shall be purple infused color at time of extrusion.

Plastic pipe, permanent warning tape, or encasement shall be purple in color with the words "CAUTION: RECYCLED WATER – DO NOT DRINK," or similar, printed on it as approved by the City Engineer or Inspector. The lettering shall be repeated continuously on two (2) sides of the pipe, warning tape, or encasement for the full length of the pipe, warning tape, or encasement. If purple pipe is used, it shall be PW PurplePlus, or JM Purple Save, or approved equal. If encasement or warning tape is used, it shall be Pantone 512 or equivalent in color with 1" minimum black or white lettering. Encasement or warning tape shall be T.Christy Enterprises, Rencor, or equivalent.

All piping shall be continuously and permanently marked with the manufacturer's name or trademark, nominal size, and schedule or class indicating the pressure rating.

All riser pipes for valves and blowoffs on recycled water lines shall be purple piping.

Recycled water service lines shall conform to City Standard Details as referenced in the Drawings. The line shall be purple or purple wrapped.

22-02A.4 Cathodic Protection of Buried Metallic Recycled Water System Components

All buried piping components shall be cathodically protected in accordance with the Drawings and as specified in Attachment A, Section 16640 – Cathodic Protection.

Ductile iron pipe and fittings shall be encased in 8 mil polyethylene sheeting in conformance with AWWA C105. The polyethylene sheeting shall be purple.

22-01B Appurtenances

22-01B.1 General

Unless otherwise specified below, appurtenances for City recycled water facilities shall conform to City specifications for potable water, Section 14-02C.

22-01B.2 Above-Ground Equipment

Exposed or above-ground equipment, such as blowoffs, valves, pumps, and water meters, shall be labeled with recycled water tags. Tags shall be provided by City and fastened as specified in Section 22-01B.7 of this document.

22-01B.4 Valve and Meter Boxes

All recycled water valve boxes shall be Christy G-4, or approved equal with a cast iron triangular, purple powder-coated cover for heavy traffic areas. Concrete collars are not required on irons north of Bernal Avenue. All valve covers shall have a recognizable "RW" inscription cast or otherwise permanently marked on the top surface.

All meter boxes and customer facility valve boxes shall be purple in color and have a warning label permanently molded into or affixed onto the lid with rivets, bolts, etc. Warning labels shall be constructed of a purple weatherproof material with the warning "RECYCLED WATER" permanently stamped or molded into the label, T.Christy Enterprises 3800, or equivalent.

Valve stem riser pipe shall be purple PVC pipe.

22-01B.5 Pressure Reducing Valves

Pressure reducing valves (PRV) for customer services shall be Wilkins Model 500XL with HLR (10 psi to 125 psi spring range, factory set at 50 psi) and SC (sealed cage bell housing and stainless steel adjustment screw) options or approved equal for irrigation systems serviced by ¾-inch to 3-inch water meters. City Engineer shall review proposed PRV installations for larger sizes on an individual basis. All pressure reducing valves shall be factory union inlet, red brass nipple and brass union connection to allow for easy removal of the valve. The valve shall have a minimum of 6" of clearance all the way around the valve.

22-01B.7 Identification Tags

All meters, valves, blowoffs, and controllers shall be identified using recycled water identification tags, T.Christy Enterprises 3150, or equivalent. Tags shall be weatherproof plastic, 3-inch by 4-inch, purple in color with the words "WARNING – RECYCLED WATER – DO NOT DRINK," or similar imprinted on one side, and "AVISO – AGUA IMPURA – NO TOMAR" on the other side, or similar as approved by the City Engineer. Imprinting shall be permanent and black in color. One tag shall be attached to each valve as follows:

1. Attach to valve stem directly or with plastic tie wrap; or
2. Attach to solenoid wire directly or with plastic tie wrap; or
3. Attach to valve cover with existing valve cover bolt.

Weatherproof stickers of equivalent color and lettering may be used as an alternative for controller units.

22-01B.9 Tracer Wire and Warning Tape

Underground tracer wire shall be insulated #10 AWG THWN copper wire. The Contractor shall demonstrate the continuity of the buried tracer wire to the City between each valve box or locator station box. Locator stations to be spaced no further than 500’.

22-01C Thrust Blocks

Thrust blocks for recycled water systems shall conform to City specifications for potable water, Section 14-02H. Where allowed, thrust blocks to resist static thrust loads caused by pipeline system pressure are allowed on pipe up to 12-inch diameter. For larger pipe, thrust restraint shall be accomplished using restrained joints and over the restrained joint lengths shown on the Drawings, unless otherwise noted. All pipe restrained utilizing cross trench kicker thrust blocks shall be ductile iron

22-01E Joint Restraints

Mechanically restrained joints shall be suitable to the application and pressure rated equal to the pressure rating of the adjoining pipe in accordance with the manufacturer’s specifications. Mechanical restraints shall be the following or approved equal:

1. Restraining gland for plain end PVC pipe spigot to ductile iron mechanical joint fittings: Uni-Flange Series 1500 (Ford Meter Box Company); Megalug 2000PV (EBAA Iron); Sigma One-Lok Series SLCE or approved equal.
2. Restraining gland for plain end DI pipe spigot to ductile iron mechanical joint at fittings and valves shall be Uni-Flange Series 1400 (Ford Meter Box Company); Megalug Series 1100 (EBAA Iron); One-Lok SLDE (Sigma); or approved equal.
3. Ductile Iron Pipe Restrained Joints to Utility Undercrossing: Push-on type restrained joints shall be of the locking segment, boltless type, TR FLEX (US Pipe Company); Snap Lok (Griffin Pipe Company); Flex Ring (American Cast Iron Pipe Company); or approved equal. Joint restraint systems shall be rated to at least 250 psi working pressure.
4. PVC Pipe Restrained Joints: The restraints can be via fusing joints, installing bell restraints, or use internal restraining gasket systems. Internal restraining gaskets are allowed on 12” diameter and smaller pipes and shall be Bulldog Integral Joint Restraint System, JM EAGLE LOC 900 or approved equal. Restraining harness for PVC pipe bell and spigot push on joints sized larger than 12” diameter: Ford Meter Box Co. Uni-Flange Series 1350, EBAA Iron Series 2800, Sigma PV-Lok PWP or equal.

22-01G: Service Taps on Recycled Water Mains

Recycled water services shall be installed in conformance with Section 14-02C of the City Standard Specifications, the same as for the construction of potable water services, with the following additions:

1. Saddles for use with C905 PVC pipe shall be constructed of brass and shall be Ford model [C900/PVC S912-604] or approved equal.
2. Saddles for use with DI pipe shall be construction cast with dual stainless steel bands and shall be Ford model FSD202 or approved equal.

3. Tapping sleeve for 3” services and larger shall comply with Section 14-02I of the City Standard Specifications.
4. Tapping valves for 2” to 3” services shall be Mueller A2362 or approved equal. Tapping valves for 4” to 12” services shall be Mueller A2360 or approved equal.
5. Corporation stops on 2” services shall be in conformance with Section 14-02C.2 of the City Standard Specifications and shall be Ford FB1100-corporation stops.
6. Curb stops shall be Ford BA/BFA 43 Series.

22-01H: Nuts and Bolts for Buried Pipelines

Nuts and bolts for buried pipelines shall be stainless steel in accordance with Attachment A, Section 15000 – Piping, General. Nuts and bolts shall be bitmastic protective coated as required in Attachment A, Section 16640 – Cathodic Protection.

22-03 INSTALLATION OF RECYCLED WATER PIPE AND APPURTENANCES

Recycled water pipe and appurtenances shall be installed in conformance with Section 14-03 of City Standard Specifications, the same as for the construction of potable water pipe and appurtenances, with the following exceptions:

1. At the point where a service line crosses beneath a curb, the point shall be permanently marked with an “RW” to signify recycled water, rather than a “W,” which is used for potable water.
2. Plastic warning tape specified in Section 14-02K used for recycled water lines shall be purple in color, a minimum of three (3) inches wide and printed continuously with the words “CAUTION: RECYCLED WATER LINE BELOW,” or similar as approved by the City Engineer. Plastic warning tape shall be installed at 12 inches above all recycled water mains as indicated on Detail 8, 60-3.
3. During construction, above ground risers for recycled water pipe and appurtenances shall be purple in color.
4. All metallic pipe, fittings, couplings and appurtenances shall be cathodically protected as specified in Attachment A, Section 16640 – Cathodic Protection and as shown in the Drawings.

22-04 INSPECTION AND TESTING

Recycled water piping shall be tested using recycled water. If the Contractor demonstrates a need to use potable water for testing and with the approval of the City, the recycled water piping may be tested using potable water with an approved backflow prevention device. The testing shall be performed in accordance with City Standard Specifications, Section 14-03G.2 to Section 14-03G.5. The minimum flushing velocity is 3 feet per second for a minimum of 10 exchanges of water and until a NTU 2 + source water. Disinfection is not required on recycled water mains.

After completion of testing, the Contractor shall thoroughly flush all recycled water from the line with recycled water from the existing system to remove debris from the pipeline. The Contractor is responsible for proper disposal of the flush water in a manner that will not cause damage and/or nuisance to the environment and in compliance with state and local regulations.

22-04B Cross-Connection Inspection and Coverage Test

The Contractor shall be advised that the City will be conducting customer side retrofit work to allow for conversion to recycled water for irrigation purposes. The City will be performing mandated cross connection inspections and tests, irrigation system coverage tests and removing of potable water cross connections within the customer side irrigation system. The Contractor shall cooperate and support the City in these testing activities by preparing work areas under its responsibility to allow testing and inspection on the customer side of the irrigation meter.

SECTION 02201 - HANDLING, STORAGE, TESTING, AND DISPOSAL OF EXCAVATED SOIL AND MATERIALS

PART 1 GENERAL

1.1 THE REQUIREMENT

- A. Excavated materials will be segregated, managed, tested, disposed of on-site in accordance with these specifications. The Contractor shall submit to the Engineer an Excavated Materials Management Plan. The plan shall address soil handling and testing anticipated for on-site and off-site reuse and for waste profiling for off-site disposal. The Contractor will test soil anticipated for on-site reuse prior to backfilling.
- B. All labor, materials, tools, supervision, transportation, fees, and equipment necessary to perform segregation, temporary on-site storage, waste characterization, and transport of all excavated soil to off-site disposal facilities shall be furnished. All work shall be performed as specified herein, and as shown on the Contract Drawings.
- C. The Contractor shall be responsible for all aspects of proper soil handling, transportation, reuse, and disposal in accordance with the requirements of the contract drawings, specifications herein, and all applicable federal, state, county, and local regulations. Handling activities include but are not limited to: excavation, staging, stockpiling, dewatering, segregating, loading, transporting, tracking, recordkeeping, disposal, characterization, and prevention of further release or discharge to the environment.

1.2 DEFINITIONS

- A. Generator: As defined in Title 22 CCR, Section 66260.10 of Article 2, Chapter 10, Division 4.5 of and in Title 40 CFR. City will be the generator to the extent specified under applicable laws.
- B. Hazardous Waste: Soil or aqueous liquid characterized as a Resource Conservation and Recovery Act (RCRA) hazardous waste, per 40 CFR Parts 260–265, a Toxic Substances Control Act (TSCA) Polychlorinated Biphenyl (PCB) hazardous waste per 40 CFR Part 761, or a non-RCRA, California-hazardous waste per 22 CCR Section 66261.

- C. Non-RCRA (California-Hazardous) Waste: Soil or aqueous liquid characterized as a Non-Resource Conservation and Recovery Act (non-RCRA) California- hazardous waste per 22 CCR Section 66261. Requires disposal at a Class I disposal facility in California or a similarly permitted out-of-state facility and transport by a licensed hazardous waste transporter.
- D. Non-hazardous waste: excavated soil and material not classified as RCRA or non-RCRA hazardous waste, requiring disposal at a Class II disposal facility in California or at a similarly permitted out-of-state facility.

1.3 REFERENCES AND STANDARDS

- A. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, U.S. EPA Publication SW-846.
- B. Minimum Standards for Solid Waste Handling and Disposal, Title 14 of the California Code of Regulations (CCR), Division 7, Chapter 3.
- C. Environmental Health Standards for the Management of Hazardous Waste, Title 22 CCR, Division 4.5.
- D. Hazardous Substance Account Act of 1981, California Health and Safety Code, Section 25300 *et seq.*
- E. Title 40 of the Code of Federal Regulations (CFR). Chapter 1:
 - 1. Part 260, "Hazardous Waste Management System: General"
 - 2. Part 261, "Identification and Listing of Hazardous Waste"
 - 3. Part 262, "Standards Applicable to Generators of Hazardous Waste"
 - 4. Part 263, "Standards Applicable to Transporters of Hazardous Waste"
 - 5. Part 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities"
 - 6. Part 268, "Land Disposal Restrictions"
- F. Pipeline and Hazardous Materials Safety Administration, Department of Transportation, 49 CFR, Chapter 1, Subchapter C. Hazardous Materials Regulations.
- G. Identification and Listing of Hazardous Waste; Standards Applicable to Generators of Hazardous Waste; Section, and Standards Applicable to Transporters of Hazardous Waste, 42 of the United States Code (USC), Sections 6921–6923.
- H. Comprehensive Environmental Responses, Compensation, and Liability Act (CERCLA) of 1980 and Superfund Amendments and Reauthorization Act (SARA) of 1986, Title 42 USC, Section 9601 *et seq.*
- I. Aeration of Contaminated Soil and Removal of Underground Storage Tanks, Bay Area Air Quality Management District, Regulation 8. Organic Compounds, Rule 40.
- J. National Emission Standards for Hazardous Air Pollutants (NESHAPs) Asbestos Regulations, 40 CFR 61, Subpart M.

1.4 QUALITY CONTROL

- A. The Contractor shall submit the samples to an analytical laboratory that is certified by the Environmental Laboratory Accreditation Program administered by the California Department of Health Services. The laboratory must have a current certification for analysis of the target constituents using the methods selected by the Contractor in the Excavated Materials Management Plan.
- B. Contractor shall ensure that all employees managing potentially contaminated soils are properly trained and certified in the use of personal protective equipment and the proper handling, storage, and transportation of soils waste under applicable OSHA, Cal/OSHA, USEPA, and Cal/EPA regulations.
- C. The Contractor shall maintain at all times one copy each at the office and one copy in view at the site, of the approved Excavated Materials Management Plan.
- D. The Contractor shall obtain the services of a Licensed Environmental Professional, defined as a civil engineer or geologist licensed in good standing by the California Board of Professional Engineer and Land Surveyors with environmental experience in soil sampling and waste classification associated with construction-related soil handling operations. The Contractor's licensed professional shall provide full-time on-site supervision of the soil sampling and waste classification associated soil handling and disposition, and provide recommendations regarding the waste classification of such soils for review and approval by the Engineer.

1.5 SUBMITTALS

- A. The Contractor shall submit for approval by the Engineer an Excavated Materials Management Plan containing:
 - 1. Method for identifying soils that may contain hazardous constituents which would render the soil hazardous waste;
 - 2. Methods for segregation of potentially contaminated soils;
 - 3. Locations, means, and methods for storing excavated soils prior to transportation in accordance with applicable permits and this section;
 - 4. Methodology for characterizing excavated soils for on-site reuse, export, off-site reuse, recycling, or off-site disposal in accordance with this section;
 - 5. Plan for groundwater management within excavation(s) including characterization and lawful disposition of accumulated standing water as aqueous waste; and
 - 6. Names, locations, and approvals for proposed designated facilities for final disposition.
- B. On a weekly basis, the Contractor shall provide all field notes and results associated with screening of potentially contaminated materials.
- C. The Contractor shall submit final certified analytical reports for the soil characterization samples.
- D. The Contractor shall submit waste profiles for approval by the City a minimum of 14 calendar days prior to transport of waste (both soil and aqueous) to designated facilities for final disposition.

- E. The Contractor shall submit completed sample manifest(s) for final disposition of waste at designated facilities.
- F. The Contractor shall submit completed manifests to City's Representative for signature by City prior to waste shipment. Contractor and Subcontractors shall not sign as "Generator."
- G. The Contractor shall submit to Engineer copies of completed manifests, bills of lading, and facility acceptance receipts for materials and waste transported to off-site disposal facilities.

1.6 PROJECT CONDITIONS

- A. The City has no information about any constituents in the soil that may be present as a result of a known process, which would require classification of soil as a listed waste.

1.7 INDEMNIFICATION

- A. The Contractor shall retain, and the City will not indemnify against, liability of the Contractor resulting from the activities or duties, which are the responsibility of the Contractor under the terms of this Contract. This includes, but is not limited to, liability arising from the arrangement of transportation of excavated material, whether on-site or off-site.
- B. The Contractor is specifically alerted to, and shall familiarize itself and its subcontractors to, the liability statutes of:
 - 1. The Comprehensive Environmental Responses, Compensation, and Liability Act of 1980, 42 USC, Section 9601 *et seq.*
 - 2. The Superfund Amendments and Re-authorization Act of 1986, 42 USC, Section 9601 *et seq.*
 - 3. The California Hazardous Substance Account Act of 1981, California Health and Safety Code, Section 25300 *et seq.*
 - 4. California Health and Safety Code, Division 20.
 - 5. 22 CCR Section 6600 *et seq.*
- C. The Contractor shall be responsible for all liability and costs necessary to prevent its own or subcontractors' operations from violating federal, state, or local statutes, laws, regulations, and policies.

PART 2 PRODUCTS

2.1 STORAGE CONTAINERS

- A. Storage containers for hazardous waste shall comply with 40 CFR Part 265.
- B. Containers for shipment of hazardous waste shall comply with DOT requirements.

PART 3 EXECUTION

3.1 GENERAL

- A. The Contractor shall comply with California EPA and USEPA's requirements for hazardous waste generation, temporary on-site storage, transportation, and disposal.

3.2 EXCAVATION MONITORING

- A. The Contractor shall monitor the excavation for contaminants using a photo ionizing detector (PID) or other devices acceptable to the City and called for in the Contractor's Excavated Materials Management Plan and Health and Safety Plan.
- B. The Contractor shall notify the City within 24 hours if visual observations or detected levels of contaminants reach the establish action levels.
- C. When visual observations or detected levels of contaminants reach concentrations that require special handling per the Excavated Materials Management Plan or the Contractor's Health and Safety Plan, the Contractor shall implement the procedures for handling, stockpiling, and testing of suspected contaminated materials per the Excavated Materials Management Plan and Health and Safety Plan.
- D. Testing shall be performed by a state-certified laboratory acceptable to the City.

3.3 SEGREGATION

- A. The Contractor shall manage excavated soil in a safe manner in accordance with federal, state, and local requirements.
- B. The Contractor shall store potentially contaminated excavated soil in stockpiles, roll-off bins, other storage container units in staging area pending characterization and arrangements for off-site disposal.
- C. The Contractor shall not mix or comingle soils of different waste classifications during excavation.
- D. The Contractor shall segregate soil into separate temporary storage stockpiles and/or areas based on visual evidence of chemical staining, chemical odors, PID readings or other test results. The Contractor shall measure the amount of suspected contaminated material generated.
- E. Contractor shall keep soil segregated during site storage, loading, transport and disposal until all required analytical results are received, at which time the Contractor may combine soils that are of non-hazardous, RCRA-hazardous, or non-RCRA hazardous.
- F. The Contractor shall not contaminate (i.e., spill or spread soil or waste onto) haul routes or work area during performance of the work.
- G. When removing or managing hazardous waste, Contractor's personnel shall have documented 40 hours of initial training per 8 CCR, Section 5192. Hazardous Waste

Operations and Emergency Response (HAZWOPER) and current 8-hour annual HAZWOPER refresher training.

3.4 ON-SITE REUSE OF EXCAVATED SOILS

- A. The Contractor shall coordinate, sequence, and schedule work as required in order to reuse excavated soils on-site, to the extent practicable.
- B. Soils designated for on-site reuse shall meet the requirements for backfill specified in the Special Provisions.
- C. Soil reuse shall comply with all federal, state, and local requirements.

3.5 MANAGEMENT OF STOCKPILES WITH POTENTIALLY CONTAMINATED SOILS

- A. Potentially contaminated soils shall be separated and managed in manner protective of human health and the environment pending testing.
- B. The Contractor shall construct stockpile(s) on a level surface that is geotechnically and structurally competent. All stockpile locations shall be approved by the Engineer.
- C. Contractor shall remove residual water from the stockpile of excavated soils. No residual water shall be allowed to drain onto the ground. Contractor shall manage, store, test, and dispose of any accumulated water in compliance with all federal, state, and local regulations and requirements. Disposal facilities and waste profiles shall be approved by the City prior to disposal.
- D. Stockpiles shall be placed on sufficiently durable plastic sheeting on prepared subgrade. The Contractor shall ensure sufficient overlap of individual plastic sheets to contain the stockpiled soil. Any damage to the sheeting shall be repaired promptly by the Contractor.
- E. Contractor shall clearly demarcate, track, and label the stockpiles to correspond with representative samples submitted for laboratory testing for soil characterization purposes as presented in this section.
- F. After collecting characterization soil samples from a particular soil stockpile, the Contractor shall not enlarge, move, rework, divide, or disturb the soil unit without the Engineer's written approval.
- G. If applicable, the Contractor shall comply with the Bay Area Air Quality Management District, Regulation 8. Organic Compounds, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- H. The Contractor shall comply with any and all stockpile management requirements of the DTSC and State Water Resources Control Board.
- I. The Contractor shall store soil to minimize dust generation and protect storm water quality with appropriate best management practices.

- J. The Contractor shall manage soil in a manner that complies with all local ordinances and applicable permits.
- K. The Contractor shall not store any soil classified as RCRA or non-RCRA hazardous waste for more than 90 days following the classification.
- L. All costs associated with the temporary storage of the excavated soil shall be borne by the Contractor, including, but not necessarily limited to dust control, vacuum and wet sweeping, covering of stockpiles, multiple handling and transportation, multiple staging, work re-sequencing or rescheduling, time loss and standby time due to the duration of storage, and complying with federal, state, and local requirements.

3.6 CHARACTERIZATION

- A. The Contractor shall characterize the soil to determine disposition.
- B. Contractor's soil sampling and handling procedures shall be in accordance with USEPA's "Test Methods for Evaluating Solid Waste-Physical/Chemical Methods" (SW-846; latest revision).
- C. The Contractor shall collect characterization soil samples to the standards and acceptance criteria of the receiving landfills and per the approved Excavated Materials Management Plan.
- D. The Contractor shall collect characterization soil samples to the standards and acceptance criteria of the receiving sites if soil is reused off-site and per the approved Excavated Materials Management Plan.
- E. Each soil sample submitted for testing shall be collected by the Contractor at approximately 3 feet below the surface of stockpile or at the mid-point of stockpile height, whichever is less. Each sample shall be collected at a randomly selected point on the stockpile surface.
- F. For quality control purposes, duplicate soil samples shall be collected and analyzed by the Contractor at a frequency of 10% of the number of primary samples.
- G. Duplicate soil samples shall be represented by collection of an additional sample immediately below the primary sample and analyzed by the same USEPA methods conducted for the primary samples.
- H. The number of duplicate soil samples shall be rounded up to the next whole number; a minimum of one duplicate is required.
- I. For VOC analysis, trip blanks shall be analyzed for each sampling event.
- J. Soil samples shall be transferred to laboratory-quality sample containers and preserved by the Contractor in accordance with SW-846.
- K. Each soil sample shall be recorded and transported using an approved chain-of-custody form.

- L. The Contractor shall request laboratory turn-around time sufficient to meet its contractual schedule.
- M. The Contractor shall not collect composite samples for volatile organic compounds (VOCs) or total petroleum hydrocarbons as gasoline (TPH-G). Samples for these analytes shall be collected using Terracore or equivalent samplers. Samples for other analytes may be composited (4 aliquots to one composite sample) if acceptable to the off-site disposal facilities.
- N. The Contractor shall analyze the samples by the following methods:
 1. Total Petroleum Hydrocarbons (TPH) as carbon chain: USEPA Method 8015M
 2. Volatile Organic Compounds (VOCs): USEPA Method 8260B/5035
 3. Polychlorinated Biphenyls (PCBs): USEPA Method 8082
 4. Polycyclic Aromatic Hydrocarbons (PAHs): USEPA Method 8310
 5. Organochlorine Pesticides: USEPA Method 8081A
 6. California Code of Regulations, Title 22 Metals (17 metals): USEPA Method 6010B/7470A
- O. All characterization activities shall be conducted under the supervision of the Contractor's Licensed Environmental Professional.

3.7 ASBESTOS CONTAINING MATERIAL

- A. If the Contractor or the Contractor's Licensed Environmental Professional has identified Asbestos Containing Material (ACM) in the materials to be excavated, the Contractor shall prepare an ACM Work Plan in accordance with applicable regulations, including, but not limited to USEPA National Emission Standards for Hazardous Air Pollutants (NESHAPs) Asbestos Regulations (40 CFR 61, Subpart M).
- B. The Contractor shall utilize a licensed asbestos abatement subcontractor with trained asbestos abatement workers in accordance with all applicable regulation for the removal, containment.
- C. The Contractor shall comply with notifications, permits, and licenses governing handling and disposal of ACM.

3.8 COORDINATION OF OFF-SITE REUSE

- A. Soil to be reused off-site shall be characterized as non-hazardous and acceptable for reuse per the Excavated Materials Management Plan.
- B. All off-site reuse shall comply will applicable local, regional, state, and federal laws, regulations, and policies.
- C. The Contractor shall obtain the City's approval for transfer of soil for off-site reuse.
- D. The Contractor shall not propose any re-use sits or facilities located outside the contiguous United States.

- E. Should the proposed sites facilities be found to be unacceptable to the City in its exclusive discretion, an alternate site or facility shall be substituted at no additional cost to the City.
- F. Approval of soil disposition shall be secured from the designated off-site recipient prior to transport.

3.9 DISPOSAL COORDINATION

- A. After stockpile characterization is complete, the Contractor's Licensed Environmental Professional shall prepare the appropriate waste profile(s) and facility acceptance forms with all appropriate backup documentation (e.g., sampling maps, certified analytical reports, chain-of-custody forms, etc.). Submit forms to Engineer for approval prior to submitting to disposal facilities.
- B. The Contractor shall submit written documentation of pre-acceptance of receiving facilities to the Engineer for approval prior to transporting waste to off-site landfills.
- C. The Contractor shall submit current licenses, certifications, and contact information for any facilities proposed for disposal of soil classified as non-hazardous Waste, non-RCRA or RCRA hazardous waste. The proposed facilities shall be fully licensed and permitted at the time of use and not subject to regulatory investigation or undergoing review for renewal of its license.
- D. The Contractor shall not propose any disposal facilities located outside the contiguous United States.
- E. Should the proposed facilities be found to be unacceptable to the City in its exclusive discretion, an alternate facility or facilities shall be substituted at no additional cost to the City.
- F. The City shall obtain California Hazardous Waste ID Numbers from the California Department of Toxic Substances Control and provide the ID Numbers to the Contractor for use by the Contractor for lawful waste management when transporting and disposing of non-RCRA California-hazardous waste.
- G. The City shall obtain USEPA ID numbers and provide the ID Numbers to the Contractor for use by the Contractor for lawful waste management when transporting and disposing of RCRA or TSCA hazardous waste.
- H. The Contractor shall notify the Engineer at least 72 hours prior to off-haul of excavated material. Off-haul shall occur between the hours of 8:00 a.m. and 4:30 p.m. Monday through Friday, excluding holidays.

3.10 HAZARDOUS WASTE MANIFESTS

- A. All material classified as hazardous waste shall be hauled off-site by a licensed hazardous waste transporter under a uniform hazardous waste manifest (DTSC Form 8022A and/or EPA Form 8700-22).

- B. Weight, not volume, shall be entered for each item on the manifest to denote the waste quantity.
- C. Contractor shall submit manifests for the designated facilities for final disposition (completely filled out except for signatures and hauler truck license numbers) to the Engineer a minimum of three (3) calendar days prior to transporting non-hazardous waste or hazardous waste. Sufficient numbers of the manifests shall be provided by the Contractor for the transport of all soils to the off-site facility(ies). The Engineer will obtain the authorized signatures of the City's Representative on the manifests provided and will retain all copies of the manifests until the Contractor is authorized to dispose of the soils.
- D. Signed manifests shall be provided to the Contractor for each load prior to the load being transported off-site.
- E. The City will not be responsible for additional costs incurred by the Contractor should the Contractor fail to provide sufficient manifest forms for all soils to be transported and disposed of off-site.
- F. A licensed transporter shall sign and date the hazardous waste manifest indicating that the transporter has accepted the load described on the manifest.
- G. The licensed transporter shall carry a hazardous waste manifest with each truckload.
- H. After approval of a waste profile by the Contractor's recycling or disposal facility, random sampling of the waste stream by the facility upon delivery may indicate that the waste exceeds approved profile criteria. Contractor shall immediately notify the Engineer if the facility will not accept any waste that was previously approved for acceptance.
- I. Within two (2) days of its return to Contractor after disposal is complete, the Contractor shall provide the Engineer with the completed waste manifest. The completed waste manifest shall be certified by the receiver of the waste shipment, confirming that the shipment was received at the waste treatment or disposal facility and certifying the shipment weight.
- J. Should any waste manifest not be returned within 35 days of shipment, the Contractor shall initiate follow-up, shall document such follow-up effort in writing with an Exception Report in accordance with 40 CFR 262.42 and/or 22 CFR 66262.42, and shall provide a copy to the Engineer.

3.11 HAZARDOUS WASTE TRANSPORTATION

- A. The Contractor shall ensure that the transporter follows truck routes and other transportation requirements per applicable ordinances.
- B. The Contractor shall comply with all applicable regulatory requirements listed, as well as other applicable federal, state, or local laws, codes, and ordinances, which govern or regulate transportation of wastes, including, but not limited to, DOT-HM 181, 49 CFR 172.

- C. As warranted, the Contractor shall ensure that its drivers as well as the subcontractor drivers have in their possession, during the hauling of material and soil, all applicable state and local vehicle insurance requirements, valid driver's license, and vehicle registration and licensing. A current Class 1 Certificate of Compliance from the California Highway Patrol shall be affixed to each vehicle.
- D. All hazardous materials and waste haulers shall possess a Hazardous Substance Removal Certification granted by the State of California, Contractors State License Board (800-321-2752 or <http://www.cslb.ca.gov>), and all other required certifications and insurance.
- E. Haul trucks carrying excavated material shall be loaded so that the soil does not extend above the walls of the truck bed, and there is no leakage from any vehicle.
- F. All loads require covering and lining underneath, regardless if the material is wet, hazardous, or non-hazardous. Soil loads shall be tarped and lined to prevent soils from spilling over the sides, underneath, and in back of the trucks.
- G. The Contractor shall employ dust control and storm water protection practices during loading.
- H. The Contractor shall be responsible for cleaning up excavated material spill that occurs during loading, handling, and transportation.
- I. All vehicles shall be decontaminated by the Contractor prior to leaving the load out areas. For track-out prevention and control, all truck exteriors shall be cleaned after loading.
- J. Markings, labels, placards, and packaging prior to transport shall be in accordance with all regulations and shall be the responsibility of the Contractor.
- K. Prior to leaving the load out areas, each truck shall be inspected by the Contractor to ensure that the payloads are adequately covered, the trucks are free of spilled material or free liquids, and the shipment is properly manifested or documented.

3.12 DISPOSAL

- A. The Contractor shall furnish all labor, materials, equipment, incidentals and disposal fees required to load, transport and dispose of soil waste at off-site disposal facilities.
- B. The Contractor shall transport and dispose of all waste (soil and aqueous) to approved licensed facilities for final disposition.
- C. Costs incurred as a result of a landfill or other off-site facility rejecting transported waste or other material shall be incurred by the Contractor.

3.13 RECORDS AND REPORTS

- A. The Contractor shall keep records of documents generated in the course of the work. These include field notes, laboratory reports, air monitoring data, chain-of-custody forms, daily soil volumes and weights, waste manifests, and reports of any spills or

accidents. Copies of all records shall be organized by date and submitted to the Engineer at the completion of the work in both printed copy and electronic format.

- B. All work, including but not limited to excavation and disposal, shall be performed within the schedule indicated and no additional time will be allowed.
- C. The Contractor shall track on Non-Hazardous Waste Manifests the movement, from point of generation to the designated location for final disposition, of soil classified as Non-Hazardous Waste.
- D. The Contractor shall track on Hazardous Waste Manifests the movement, from point of generation to the designated location for final disposition, of soil classified as hazardous waste.
- E. The Contractor shall provide weight tickets or bills of lading to the Engineer after the soils have been shipped offsite.

END OF SECTION

SECTION 15000 – PIPING, GENERAL

PART 4 GENERAL

4.1 THE REQUIREMENT

- A. The Contractor shall provide the piping systems indicated, complete and operable, in accordance with the Contract Documents. Unless otherwise noted in the Special Provisions, Sections 14 and 22, the provisions of this Section shall apply.
- B. The Drawings define the general layout, configuration, routing, method of support, pipe size and pipe type. The Drawings are not pipe construction or fabrication drawings. The Contractor shall develop details necessary to construct mechanical piping systems, to accommodate equipment, and to provide and install spools, spacers, adapters, and connectors for a complete and functional system. Flanges and joints in addition to those shown may be required to facilitate fabrication and installation.

4.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of other requirements of these Specifications, work specified herein shall conform to or exceed the requirements of applicable Building Codes and applicable requirements of referenced standards to the extent that the provisions of such documents are not in conflict with the requirements of this Section; provided, that for Building Codes, the latest edition of the code, as adopted as of the date of award by the authority having jurisdiction, shall apply to the Work.

4.3 CONTRACTOR SUBMITTALS

- A. The Contractor shall prepare and submit information required herein in accordance with the City Standard Specifications.
- B. Shop Drawings: Shop Drawings shall contain layout drawings including dimensions, details, pipe joints, fittings, specials, valves, appurtenances, anchors, guides, and material lists. Fabrication drawings shall indicate spool pieces, spacers, adapters, connectors, fittings, and supports to accommodate equipment and valves in a complete and functional system. Material lists shall describe piping and appurtenances, including bolting, to be provided under this Section.
- C. Certifications:
 - 1. Certificates, test reports, and affidavits of compliance shall be submitted.
 - 2. Fabricator Statement: A statement from the pipe fabricator certifying that the pipes provided will be fabricated subject to a recognized quality control program. An outline of the program shall be submitted prior to the fabrication of pipe.

4.4 QUALITY ASSURANCE

- A. General: To assure uniformity and compatibility of piping components in grooved-end piping systems, fittings and couplings shall be furnished by the same manufacturer. Like items of materials provided hereunder shall be the end products of one manufacturer in order to achieve standardization for appearance and manufacturer's service.
- B. Inspection:
1. Pipe shall be subject to inspection at the place of manufacture. During the manufacture of the pipe, the City shall be given access to areas where manufacturing is in progress and shall be permitted to make inspections to confirm compliance with the Specifications.
 2. The Contractor shall notify the City of the production schedule in sufficient time so that factory inspection can be arranged. Factory inspection will be made after the manufacturer has performed satisfactory checks, adjustments, tests, and operations. The extent of factory inspection and testing shall be as specified herein and in the applicable piping sections of these Specifications.
 3. The manufacturer shall make available for the City's use such gauges or other tools required for inspection. The manufacturer shall provide the City with assistance with handling of pipe and fittings.
 4. If a factory inspection is performed by the City, approval of pipe at the factory will allow the manufacturer to ship the product to the site, and does not constitute final acceptance by the City.
 5. Unless otherwise specified, the City will pay for expenses incurred for factory test visits. The cost of performing the tests shall be included in the Contractor's bid.
- C. Welding Requirements: Welding procedures used to fabricate pipe shall be prequalified under the provisions of ANSI/AWS D1.1. Welding procedures shall be required for, but not necessarily limited to, longitudinal and girth or spiral welds for pipe cylinders, reinforcing plates and ring flange welds, and plates for lug connections.

PART 5 PRODUCTS

5.1 GENERAL

- A. Extent of Work: Pipes, fittings, and appurtenances shall be provided in accordance with the requirements of City Standard Specifications and the Contract Documents. The pipe material required for each application shall be in accordance with the Drawings or Pipe Schedule, if applicable. Where a pipe material type is not specifically designated on the Drawings, the Contractor may select among the options presented in the Pipe Schedule, if applicable. When a pipe material is specifically designated on the Drawings, only that material will be allowed unless approved in writing by the City.
- B. Lining: Application, thickness, and curing of pipe lining shall be in accordance with the requirements of the applicable City Standard Specifications, as modified by the Special Provisions and Technical Specifications, unless otherwise indicated. The Manufacturer shall take full responsibility for the complete, final product and its application. Pipe

ends and joints of lined pipes at screwed flanges shall be epoxy-coated to assure continuous protection.

- C. **Protective Coating:** Application, thickness, and curing of pipe coating shall be in accordance with the requirements of the applicable Sections of Division 2, unless otherwise indicated. Pipes above ground or in structures shall be field coated in accordance with Section 09900 – Painting and Coatings.
- D. **Pressure Rating:** Piping systems shall be designed for the maximum expected pressure as defined in other piping sections, or as shown on the Drawings.
- E. **Welding Requirements:** Welding procedures used to fabricate pipe shall be prequalified under the provisions of ANSI/AWS D1.1 - Structural Welding Code. Welding procedures shall be required for longitudinal and girth or spiral welds for pipe cylinders, spigot and bell ring attachments, reinforcing plates and ring flange welds, and plates for lug connections. Welding shall be done by skilled welders, welding operators, and tackers who have had experience in the methods and materials to be used. Unless otherwise specified in Division 2, welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the pipeline. Machines and electrodes similar to those used in the Work shall be used in qualification tests. The Contractor shall furnish material and bear the expense of qualifying welders at no increased cost to the City.
- F. Care shall be exercised during fabrication to prevent the accumulation of weld rod, weld splatter, pipe cuttings and filings, gravel, cleaning rags, etc., within piping sections. Piping shall be examined to assure removal of these and other foreign objects prior to assembly. Shop cleaning may employ a conventional commercial cleaning method if it does not corrode, deform, swell, or otherwise alter the physical properties of the material being cleaned.
- G. **Manufacturers:** Piping system components of like kind shall be the product of one manufacturer.

5.2 PIPE FLANGES

- A. **Steel Pipe Flanges:** Unless noted otherwise, where design pressure is 150 PSI or less, steel pipe flanges shall conform to either ANSI/AWWA C207 - Steel Pipe Flanges for Waterworks Service - Sizes 4 In. through 144 In., Class D, or ANSI/ASME B16.5 - Pipe Flanges and Flanged Fittings, 150-lb class. Where the design pressure is greater than 150 psi up to a maximum of 275 psi, flanges shall conform to either ANSI/AWWA C207 Class E or Class F, or ANSI/ASME B16.5 150-lb class. However, AWWA flanges shall not be exposed to test pressures greater than 125 percent of rated capacity. For higher test pressures, the next higher rated AWWA flange or an ANSI-rated flange shall be selected. Where the design pressure is greater than 275 psi up to a maximum of 700 psi, flanges shall conform to ANSI/ASME B16.5, 300-lb class. Flanges shall have flat faces and shall be attached with bolt holes straddling the vertical axis of the pipe, unless otherwise indicated. Attachment of the flanges to the pipe shall conform to the applicable requirements of ANSI/AWWA C207. Flanges for miscellaneous small diameter steel pipe shall be in accordance with the industry

standards indicated for these pipes rated for the applicable pressure rating. The Contractor shall be responsible for ensuring that steel pipe flanges are compatible with connecting appurtenances, including but not limited to valves.

- B. **Steel Blind Flanges:** Blind flanges shall be in accordance with ANSI/AWWA C207, or as indicated for miscellaneous small pipes. Blind flanges for pipe sizes 12 inches and over shall be provided with lifting eyes in form of welded or screwed eye bolts.
- C. **Flange Bolts:** Refer to Paragraph “Bolts and Anchors” of this Section.
- D. **Steel Flange Gaskets:** Gaskets for flanged joints shall be full-faced, 1/16-inch thick compressed sheets of aramid fiber base, with nitrile binder and non-stick coating, suitable for temperatures to 700 degrees F, a pH of one to eleven, and pressures to 1,000 psig. Blind flanges shall have gaskets covering the entire inside face of the blind flange and shall be cemented to the blind flange. Ring gaskets shall not be permitted, unless otherwise indicated.
 - 1. **Steel Pipe Flange Gasket Manufacturers, or Equal:**
 - a. John Crane; Style 2160.
 - b. Garlock; Style 3000.
- E. **Flange Coating:** Machined faces of metal blind flanges and pipe flanges shall be coated with a temporary rust-inhibitive coating to protect the metal until the installation is completed.
- F. **Ductile Iron Flanges:** Ductile iron flanges shall be in accordance with the City Standard Specifications, Section 14, as modified by the Special Provisions.

5.3 INSULATING FLANGES

- A. **Insulating Flange Sets:** Insulating flange sets shall be provided where indicated and shall meet the requirements of Section 16640 – Cathodic Protection

5.4 THREADED INSULATING CONNECTIONS

- A. **General:** Threaded insulating bushings, unions, or couplings, as appropriate, shall be used for joining threaded pipes of dissimilar metals and for piping systems where corrosion control and cathodic protection are involved.
- B. **Materials:** Threaded insulating connections shall be of nylon, Teflon, polycarbonate, polyethylene, or other non-conductive materials, and shall have ratings and properties to suit the service and loading conditions.

5.5 MECHANICAL JOINT RESTRAINTS FOR DUCTILE IRON PIPE (RESTRAINT GLAND)

- A. **Mechanical joint restraints shall be as required in the Special Provisions.**
 - 1. **Restraint devices joining plain end ductile iron pipe to mechanical joint fittings or pipe shall conform to AWWA C111 or AWWA C153.**

- B. Where allowed, restraint devices shall consist of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of AWWA C110. Restraint body, wedges and wedge actuating component shall be cast ductile iron grade 65-42-12 in accordance with ASTM A536.
 - 1. Pressure rating shall be 350 psi for pipe 16 inches diameter and less and 250 psi for pipe 18 inches diameter and larger with a minimum factor of safety of 2.
 - 2. Gripping wedge and bolt quantities and sizes shall be as indicated in the manufacturer's published literature for the product.
 - 3. Coating shall be in accordance with Section 09900 – Painting and Coatings.

5.6 FLANGE COUPLING ADAPTERS

- A. Flange adapters shall be fabricated from high strength steel. Flanges shall be supplied to AWWA C207, as well as applicable ANSI standards. Compression ends shall have wedge gasket for efficient sealing. Gasket material shall be suitable for the intended fluid service and application. Miscellaneous metal items shall be Type 316 stainless steel.
- B. Pipe ends shall be properly prepared for accepting the flange adapter in accordance with manufacturer's recommendations. The outside diameter and pipe type shall be verified prior to ordering adapters. Flange adapters shall be lined and coated with fusion bonded epoxy.
- C. Where cement mortar coated pipe is to be provided with sleeve type couplings, cement mortar coatings shall be held back for coupling. Pipe shall be coated with amine cured epoxy at location of coupling and cement mortar coating intersection.
- D. Flange Adapters Manufacturers or Approved Equal:
 - 1. Dresser; Style 128.
 - 2. Smith-Blair.

5.7 DISMANTLING JOINTS

- A. Dismantling joints shall be designed and manufactured to provide for fit up adjustability and assembly and disassembly of flanged piping systems. Dismantling joints shall be designed to the full pipe working class rating, with the capability of at least 3 inches of fit-up adjustment and shall be fully restrained.
- B. Dismantling joints shall be flanged end couplings fabricated from high strength steel. Flanges shall conform to the provisions defined in this Section. Spool pipe, end ring and body of coupling shall be fabricated from ASTM A36 steel and cold expanded 1 percent to size.
- C. Gaskets shall conform to the requirements for mechanical sleeve type couplings specified in this Section.
- D. Bolts and nuts shall be stainless steel conforming to the requirements of this Section. Tie rods for restraint shall conform to the requirements of Paragraph "Bolts and Anchors" of this Section.

- E. Dismantling joints shall be fusion bonded epoxy.
- F. Dismantling Joint Manufacturers or Approved Equal:
 - 1. ROMAC Industries, Style DJ400
 - 2. Dresser; Style 131.
 - 3. Smith-Blair, Model 972.

5.8 PIPE THREADS

- A. Pipe threads shall be in accordance with ANSI/ASME B1.20.1 - Pipe Threads, General Purpose (inch), made up with Teflon tape, unless otherwise indicated.

5.9 BOLTS AND ANCHORS

- A. Standard Service (Non-Corrosive Application): Unless otherwise indicated, bolts, anchor bolts, washers, and nuts shall be steel, galvanized after fabrication as indicated herein. Threads on galvanized bolts and nuts shall be formed with suitable taps and dies such that they retain their normal clearance after hot-dip galvanizing. Except as otherwise indicated, carbon steel bolts, anchor bolts and cap screws shall be in accordance with the requirements of ASTM A307, Grade B where working pressures are 175 psi or less. For higher pressures, bolt material shall conform to the requirements of ASTM A193, Grade B7.
- B. Corrosive Service: Bolts, nuts, and washers in the locations listed below shall be stainless steel as indicated below.
 - 1. Buried locations.
 - 2. Submerged locations.
 - 3. Locations subject to seasonal or occasional flooding.
 - 4. Inside hydraulic structures below the top of the structure.
 - 5. Inside buried vaults, manholes, and structures that do not drain through a gravity sewer or to a sump with a pump.
 - 6. Chemical handling areas.
 - 7. Inside trenches, containment walls, and curbed areas.
 - 8. Locations indicated by the Contract Documents or designated by the City to be provided with stainless steel bolts.
- C. Unless otherwise indicated, stainless steel bolts, anchor bolts, nuts, and washers shall be Type 316 stainless steel in accordance with ASTM A193, Class 2, Grade 8M or ASTM F593, Condition SH. Threads on stainless steel bolts shall be protected with an antiseize lubricant suitable for submerged stainless steel bolts, to meet government specification MIL-A-907E. Buried bolts shall be coated as shown in Cathodic Protection details (see Drawings).
 - 1. Antiseize lubricant shall be classified as acceptable for potable water use by the NSF.
 - 2. Antiseize lubricant shall be "Pure White" by Anti-Seize Technology, Franklin Park, IL; or equal.
- D. Bolt Requirements:

1. The bolt and nut material shall be free-cutting steel.
2. The nuts shall be capable of developing the full strength of the bolts. Threads shall be Coarse Thread Series conforming to the requirements of the American Standard for Screw Threads. Bolts and cap screws shall have hexagon heads and nuts shall be Heavy Hexagon Series.
3. Bolts and nuts shall be installed with washers fabricated of material matching the base material of bolts, except that hardened washers for high strength bolts shall conform to the requirements of the AISC Specification. Lock washers shall be installed with washers where indicated and shall be fabricated of material matching the bolts.
4. The length of bolts shall be such that after joints are made up, each bolt shall extend through the entire nut, but in no case more than 1/2-inch beyond the nut.
5. All-thread studs shall be used on valve flange connections, where space restrictions preclude the use of regular bolts.

PART 6 EXECUTION

6.1 DELIVERY and STORAGE

- A. Piping materials, fittings, valves, and accessories shall be delivered in a clean and undamaged condition and stored off the ground for protection against oxidation caused by ground contact. Defective or damaged materials shall be replaced with new materials.

6.2 INSTALLATION

A. General:

1. Pipes, fittings, and appurtenances shall be installed in accordance with the requirements of the applicable City Standard Specifications, as modified by the Special Provisions.
2. Each pipe and fitting shall be carefully inspected before the exposed pipe or fitting is installed or the buried pipe or fitting is lowered into the trench. The laying of pipe shall be in finished trenches free from water or debris. The lining and protective coating shall be inspected, and damaged areas patched in the field with material similar to the original. Clean ends of pipe thoroughly. Remove foreign matter and dirt from inside of pipe and keep clean during and after laying.
3. Clean out fittings, valves, and pipe sections before installing.
4. Furnish and assemble pipe and fittings to provide accurate alignment for joints.
5. Make joints watertight.
6. Use an anti-seize compound on bolt threads. Manufacturer's instruction for application shall be followed. The anti-seize compound shall be designed to prevent rusting and seizure of bolt threads and to prevent galling of stainless steel.
7. Provide temporary plugs or bulkheads for closure of the open ends of piping whenever work is stopped.
8. Use proper implements, tools, and facilities for the safe and proper protection of the pipe. Carefully handle pipe in such a manner as to avoid physical damage to the pipe. Do not drop or dump pipe into trenches.

9. Repairs of defects that are discovered as a result of inspection or tests shall be made with new materials. Caulking of screwed joints, cracks, or holes will not be accepted. Tests shall be repeated after defects have been eliminated.
 10. After completion of the work, remaining pipe cuttings, joining and wrapping materials, and other scattered debris, shall be removed from the site. The entire piping system shall be handed over in a clean and functional condition.
 11. Following assembly and testing, but prior to final acceptance, pipelines shall be flushed with high velocity water or flushed with a cleaning ball. Accumulated construction debris and other foreign matter shall be removed. Flushing velocities shall be a minimum of 2.5 feet per second. Accumulated debris shall be removed through drains 2 inches and larger or by dropping spools and valves.
- B. Buried Pipe: Buried pipe installation shall meet the requirements of the City Standard Specifications, as modified by the Special Provisions.
- C. Exposed Pipe:
1. Where not detailed, exposed pipe shall be installed in straight runs parallel to the axes of the structures. Pipe runs shall be horizontal and vertical, except that gravity lines shall have a minimum slope of not less than 0.5 percent, unless otherwise specified.
 2. No exposed piping shall be erected until all equipment to which the pipe is to be attached has been installed and it can be determined where piping and fittings shall be located to make a neat, efficient arrangement.
 3. The Drawings shall be taken as diagrammatic for piping that is not shown in detail. Sizes of piping and their locations are indicated, but it is not intended to show every offset and fitting nor every structural difficulty that will be encountered during the installation of the Work.
 4. The alignment of pipes shall be varied from that indicated on the Contract Documents, without extra expense to the City to avoid structural or mechanical difficulties or to avoid the work of other trades. The Contractor shall furnish such parts and pieces to provide a complete and operable system.
 5. Pipe work shall be suspended and supported in such manner as to prevent sagging or overstressing of pipe and connections and, furthermore, shall be supported so that no item of the piping system will transfer load or stress to equipment.
 6. Pipe and fittings shall be assembled so there will be no distortion or springing of the pipelines. Flanges, unions, flexible couplings, and other connections shall come together at the proper orientation. The fit shall not be made by springing piping, nor shall orientation alignment be corrected by taking up on flange bolts. Flange bolts, union halves, flexible connectors, etc. shall slip freely into place. If the proper fit is not obtained, the piping shall be altered to fit.
 7. Piping shall be made up with unions or flanged joints to permit breaking of lines for inspection and maintenance, in addition to such joints as are definitely shown on the Drawings.

END OF SECTION

SECTION 16640– CATHODIC PROTECTION

PART 7 GENERAL

7.1 THE REQUIREMENT

- A. The Contractor shall furnish all materials, install all equipment and provide all labor necessary to complete the work shown on the Drawings and or/listed below and all other work and miscellaneous items not specifically mentioned but reasonably inferred, including all accessories and appurtenances required for a complete system. The intent of this specification is to provide for a complete, functional cathodic protection system and or corrosion protection system for the Pleasanton Recycled Water Infrastructure.
- B. Work included in this section consists of all components of the cathodic protection system; including anodes, cables, and any other work necessary to complete the installation. Work on this project includes a combination of the following items, depending on the pipe material selected for the Project:
1. Cathodic protection of pipeline, pipe segments and/ or metallic fittings.
 - a. Polyethylene encased ductile iron pipe segments
 - b. Polyethylene encased ductile iron fittings.
 2. Bonding of flanges, flexible couplings and other non-welded fittings.
 3. Joint bonding of ductile iron pipe & fittings
 4. Coating of buried harness sets
 5. Installation of magnesium anodes, cables, insulating blankets, insulating joints, coatings for buried insulating joints, and test stations, where required.
 6. Backfill and compaction of backfill.
 7. Provide shop Drawings, reports, permits, and obtain City's approval where required.
 8. Correction of all deficiencies.
 9. The work shall include the provision of all materials, equipment, and apparatus not specifically mentioned herein or noted on the plans, but which are obviously necessary to complete the work specified.

7.2 REFERENCE SPECIFICATIONS

- A. This section contains references to the following documents. They are a part of this section as specified and modified. In case of a conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
1. American Society of Testing and Materials (ASTM)

2. National Electrical Manufacturers Association (NEMA)
3. American Water Works Association (AWWA)
4. National Association of Corrosion Engineers (NACE)
5. American National Standards Institute (ANSI)

7.3 CODES AND REGULATIONS

- A. All materials, workmanship, and installation shall conform to all requirements of the legally constituted authority having jurisdiction. These authorities include, but are not limited to, the latest revision of the State of California, Department of Industrial Relations, Division of Industrial Safety Orders of the Industrial Accident Commission, and all other applicable State, County, or City codes and regulations. Nothing in the Drawings or specifications is to be construed to permit work not conforming to these regulations and codes. Where larger size or better grade materials than required by these regulations and codes are specified, the specifications and Drawings shall have precedence.

7.4 CONTRACTOR SUBMITTALS

- A. Submittals shall be furnished in accordance with Section 01340, Shop Drawings, Product Data and Samples.
- B. A complete list of equipment and material, including name and manufacturer, catalog number, size, finish and any other pertinent data necessary for proper identification

PART 8 PRODUCTS

8.1 GENERAL

- A. All materials shall conform to the requirements set forth herein or as designated on the Drawings, unless otherwise specified. All materials must be new, free from defects, and shall be of the best commercial quality for the purpose specified. The Contractor shall furnish all necessary items and accessories not shown on the Drawings or specified herein, but which are required to fully carry out the specified intent of the work, without additional cost to the City.

8.2 MAGNESIUM GALVANIC ANODES

- A. Magnesium anodes shall be of the H-1 alloy with composition as indicated below. Each anode shall be cast with a steel core and the core shall protrude from one end and shall be of sufficient length to permit attachment of a lead wire. Each anode shall conform to the following chemical composition and dimensions:

1. Chemical Composition

<u>Element</u>	<u>Range</u>
Aluminum	5.0 – 7.0%

Zinc	2.0 – 4.0%
Manganese	0.15% Min.
Copper	0.10% Max.
Nickel	0.003% Max.
Iron	0.003% Max.
Other Impurities	0.05% each or 0.3% Max Total.
Magnesium	Balance

2. Bare Anode Dimensions:

Nominal Wt. Bare (lbs)	Height (in.)	Width (in.)	Length (in.)
5	3	3	7.5
9	3	3	13.5
17	4	4	17
32	5	5	21
50	8	-	15

- B. Anode Core Strap: Galvanized steel, with one end of anode recessed to provide access to the rod for connection of the lead wire
- C. Lead Wire: No. 10 AWG, Type THHN (Black) silver brazed to the rod, making a mechanically secure connection
- D. Soldered Connection and Core: Seal entirely with electrical potting compound
- E. Magnesium Anode Packaging: Prepackaged in a cloth bag containing low resistivity backfill consisting of 75% hydrated gypsum, 20% bentonite, and 5% sodium sulfate.
- F. Manufacturers, or equal
 - 1. Farwest Corrosion.
 - 2. Corrpro Companies.

8.3 CABLES

- A. All underground cables utilized for drain and bonding cables shall be single conductor, stranded copper, Type CP, insulated for 600 volts with High Molecular Weight Polyethylene (HMWPE) in accordance with the requirements of ASTM D1248, Type 1, Class C, Category 5, Grades E-4 and E-5.

- B. All cables for galvanic anodes and test stations shall be Type THHN, solid, copper, sized as shown on the plans, and shall conform to Federal Specifications JC-30B
- C. Test Leads and Anode Leads: Extend 18 inches minimum above grade after connection to test station panel board.

8.4 CABLE-TO-PIPE CONNECTIONS

- A. The cable connections to the steel pipelines shall be accomplished utilizing an exothermic welding process as shown on the Drawings. Each cable shall be fitted with a copper sleeve for accomplishing the weld and cartridge, sleeves and molds for each weld shall be furnished by the same manufacturer. All materials for welding shall be sized and in accordance with recommendations in manufacturers' literature.
 - 1. Manufacturers, or equal
 - a. "Cadweld" by Erico Products, Inc.
 - b. "Thermoweld" by Continental Industries, Inc.

8.5 CABLE-TO-PIPE CONNECTIONS (PIN BRAZING)

- A. Pin brazing equipment based upon Electric-arc silver soldering using a specially designed portable Pin Brazing unit, a hollow brazing pin containing silver solder and flux shall be utilized for cable-to-stainless steel pipe connections. The unit may be battery powered or powered with a welding generator. Battery pack, pins with fuse wire, ceramic ferrules and cable lugs shall be in accordance with the manufacturer's recommendations for each wire size and pipe or fitting size and material. Brazing materials and equipment shall be the product of a single manufacturer. All material and equipment utilized for brazing shall be from one manufacturer.
- B. Subject to Compliance with the Contract Documents the following Manufacturers are acceptable:
 - 1. BAC - GMC Electrical, Ontario, CA
 - 2. Safetrack Baavhammar AB
 - 3. Farwest Corrosion Control
 - 4. Or equal.

8.6 CABLE-TO-PIPE COATING MATERIAL

- A. Corrosion protection for exothermic cable-to-pipe connections shall utilize two part epoxy resin.
- B. Manufacturers, or equal

1. Durcon-164, by Duriron Company
2. Scotchcast Resin No. 4, by 3-M Company
3. CC-1 Potting Compound, by PSI Products
4. Propoxy 20 epoxy putty by the Hercules Chemical Company

8.7 TEST STATION METERING SHUNTS (N/A)

- A. Anode metering shunts shall be 0.01 ohm, 6 amp capacity, with 1% accuracy.
- B. Provide only where shown on the Drawings.
- C. Manufacturers, or equal
 1. Tinker & Razor

8.8 FLUSH GRADE TEST STATION (N/A)

- A. Flush grade test stations shall be traffic boxes with cast iron cover as shown on the Drawings. Terminal boxes shall be locking type, constructed of high-impact, molded Lexan plastic. The test box shall be provided with sufficient hardware and binding post terminals for each cable as shown on the Drawings. All test station hardware, including nuts, bolts and shorting straps shall be nickel plated brass.
- B. Provide only where shown on the Drawings.
- C. Manufacturers, or equal
 1. Christy G5 traffic box with a cast iron lid as shown on the Drawing. The cover shall be manufactured with "CP-TEST" markings for easy identification.
 2. Terminal Boxes shall be Model "T-3" by Tinker & Razor

8.9 CABLE WARNING TAPE

- A. All buried test station cables shall have plastic warning tape installed a minimum of 12 inches above the top of the cables for the entire buried length of the cables. The warning tape shall be 4 inches wide and shall be yellow with black lettering with the legend "CAUTION, CATHODIC PROTECTION CABLES BURIED BELOW" in 3 inches high lettering printed at a minimum of seven foot intervals along the entire buried length of the cable.

8.10 CABLE SPLICES

- A. All cable splices shall be accomplished utilizing a steel split bolt connector or crimp-type connector. The connector appropriately sized for the #10 AWG anode lead cable and the #8 AWG anode header cable. The connector shall be installed and wrapped

with two layers of half-lapped rubber tape, followed with two layers of half-lapped PVC tape.

8.11 CABLE IDENTIFICATION TAG

- A. All cables in the terminal boxes shall be identified. The identification tags shall be white plastic "zip-tie" type straps with a plastic tab of sufficient size to allow the pipeline station to be written on the tab with a permanent felt tip marker.

8.12 INSULATING JOINTS (N/A)

A. Insulating Flange

- 1. Each insulating flange set shall consist of a full-face central gasket, a full-length sleeve for each flange bolt, and two insulating washers with two steel washers for each bolt. The ring-type central gasket shall be 1/8-inch thick sheet packing, having a dielectric constant of 300 volts per mil, minimum. Bolt sleeves shall be fabric reinforced phenolic resin or mylar, and insulating washers shall be constructed of fabric reinforced phenolic resin. The complete assembly shall have an ANSI pressure rating equal to that of the flanges between which it is installed.

B. Insulating Flanged Coupling Adapters

- 1. Insulating elements shall be installed to electrically isolate the water pipeline from existing pipelines. The insulating elements shall consist of a full-face central gasket, two sleeves for each end of the flange bolt, and two insulating washers with two steel washers for each bolt. The ring-type central gasket shall be 1/8-inch thick sheet packing, having a dielectric constant of 300 volts per mil, minimum. Bolt sleeves shall be fabric reinforced phenolic resin or mylar, and insulating washers shall be constructed of fabric reinforced phenolic resin. The complete assembly shall have an ANSI pressure rating equal to that of the flanges between which it is installed.

C. Insulating Flexible Coupling

- 1. A double boot assembly shall be installed on the flexible coupling to electrically isolate the water pipeline from existing pipelines.

8.13 RIGID PVC CONDUIT AND FITTINGS

- A. Rigid polyvinylchloride (PVC) conduit and fittings shall be Schedule 40, manufactured to NEMA TC-2 and WC-1094 specifications and shall be U.L. approved.

8.14 BURIED INSULATING JOINT & HARNESS SET COATING MATERIAL (N/A)

A. Viscous Elastic Coatings and Sealants (VEC) or a three part wax tape coating system shall be used for coating all buried insulating flange as well as insulating flanges inside of Vaults.

1. Viscous Elastic Coatings & Sealants (VEC)

a. Manufacturers, or equal

- 1) Viscotaq Coatings
- 2) Stopaq Coatings

2. Three part wax tape coating system

a. Coatings for buried insulating flanges and insulating couplings shall consist of a non-conductive, petrolatum-based coating system, such as Trenton Wax Tape #1 by The Trenton Corporation, or approved equal. The coating system shall consist of a prime coat as an initial surface preparation to displace moisture on the surface and to improve adhesion of the wax tape. A wrap material shall be used to provide a smooth contour on the surface of the joint as well as for protection of the substrate. An over wrap shall be used as a final coating to provide increased mechanical strength of the coating. The prime coat shall be a petrolatum material with corrosion inhibitors and plasticizers. The wrap coat shall be a synthetic fabric saturated with a blend of petroleum wax, plasticizers and corrosion inhibitors. The over wrap shall be plasticized, self-adhesive PVC tape.

8.15 BITUMASTIC

8.16 Coating for all buried bolts, nuts and metallic washers of the ductile iron pipe and the copper insulating corporation stops shall be Bitumastic 300M coal tar mastic coating, as manufactured by Carboline or approved equal..

8.17 POLYETHYLENE SHEETS FOR PIPE ENCASEMENT.

- A. The polyethylene sheets used for encasement of the ductile iron pipe and fittings shall be minimum 8-mils thick in accordance with AWWA C-105. The polyethylene sleeves used for encasement of the copper pipe shall be a minimum 6-mils thick, and shall be of sufficient diameter to slip over the pipe without getting damaged.

PART 9 EXECUTION

9.1 MATERIAL DELIVERY, STORAGE AND PROTECTION

- A. All materials and equipment to be used in construction shall be stored in such a manner to be protected from detrimental effects from the elements. If warehouse storage cannot be provided, materials and equipment shall be stacked well above ground level and protected from the elements with plastic sheeting or other method as appropriate.

9.2 GENERAL

- A. All materials, workmanship and installation shall conform to all requirements of the legally constituted authority having jurisdiction. These authorities include, but are not limited to, the latest revision of the State of California, Department of Industrial Relations, Division of Industrial Safety, Electrical Orders; The National Electric Code, General Construction Safety Orders of the Industrial Accident Commission; and all other applicable State, County, or City codes and regulations. Nothing in the Drawings or specifications is to be construed to permit work not conforming to these regulations and codes. Where larger size or better grade materials than required by these regulations and codes are specified, the Specifications and Drawings shall have precedence.

9.3 GALVANIC ANODES

- A. Galvanic anodes shall be installed in the trench horizontally in native soil, after excavation to proper depth, equal to the bottom of the pipeline, a minimum of 3 feet from fittings and a minimum of 5 feet from the pipelines. Spacing between anodes shall be a minimum of 10 feet, if multiple anodes are installed at a single test station location. Prior to placing anodes in the trench or hole, paper or plastic bags shall be removed, but the cloth bag shall remain around the anode. Care shall be exercised during installation to prevent damage to the cloth bag and loss of backfill material. After placing anodes in the trench, native soil, free of rocks and other foreign objects shall be placed around the anode to a minimum cover of one foot above the anode. Flood the anode hole with 5 gallons of fresh water when the backfill reaches one foot above the anode. Remainder of the trench shall then be backfilled with native soil. During installation, anodes shall not be supported or handled by use of attached wires.
- B. The number of anodes to be installed at each test station is designated on the Drawings.

9.4 CABLES

- A. Cables buried in the ground shall be direct buried and shall be laid straight, without kinks. The cable shall have a minimum cover of 30 in. Each cable run shall be continuous in length and free of joints or splices. Care shall be exercised during installation to avoid punctures, cuts, and similar damage to insulation. Any damage to insulation will require replacement of the entire cable length. Backfill surrounding the cables shall be native soil free of foreign materials. Cable warning tape shall be installed 12-inches above the entire buried length of the cable.

9.5 CABLE-TO-PIPE CONNECTIONS

- A. Cable-to-pipe connections shall be installed in the manner and at the locations shown on the Drawings. Coating materials shall be removed from the pipe surface over an area just sufficient to make the connections. The surface shall be cleaned to white metal by grinding or filing prior to welding the conductor. Grinding with resin impregnated wheels shall not be allowed. The conductor shall be welded to the pipe by the exothermic process with a copper sleeve fitted over the conductor, and only sufficient insulation shall be removed from the conductor to allow placing in welding mold. After the weld has cooled, all slag shall be removed and the weld shall be tested with a sharp blow from a 22 ounce hammer to assure proper metallurgical bond. All defective welds shall be removed and replaced. All exposed surfaces of copper and steel shall be covered with a minimum thickness of $\frac{1}{4}$ in. of insulating materials as shown on the Drawings.
- B. MORTAR COATED PIPE CONNECTION COATING (N/A)
 - 1. The exposed metal and surrounding surface shall be cleaned of contaminants and coated with $\frac{1}{4}$ inch thick application of epoxy. After the epoxy has dried, restore the coating by using non-shrink mortar.

9.6 CABLE-TO-PIPE CONNECTIONS (PIN BRAZING)

- A. Cable-to-pipe connections for stainless steel pipe shall be installed in the manner shown on the Drawings utilizing a pin-brazing technique. Cut wire with a wire cutter to prevent deforming the wire ends. Do not deform the wire. Remove only enough insulation from the wire to allow the brazed connection to be made. The surface of the stainless steel structure shall be ground or filed to a bright, shiny, clean and dry surface before brazing the wire connection. The wire is to be held at a 90 degree angle to the surface when brazing. Only one wire is to be attached with each braze. All wire to structure braze shall be a minimum of 6 inches apart. As soon as the braze has cooled, the brazed connection shall be tested for strength by striking a sharp blow with a two-pound hammer while pulling firmly on the wire. All unsound brazed connections are to be redone and retested. Assure that the area to be coated is thoroughly cleaned by wire brushing. All exposed surfaces of copper, steel and

surrounding surface shall be cleaned of contaminants and covered with a minimum thickness of 1/4-inch of epoxy as shown on the Drawings.

9.7 TEST STATIONS (ONLY WHERE SHOWN)

- A. Test stations shall be installed at locations designated on the Drawings anode installation locations. The test station shall be located directly above the pipe or fitting. Exact locations of test stations shall be determined by the City in the field. The terminal end of each cable shall be identified with the structure identification using the permanent cable identification tags.
- B. The test station leads shall be tested by the Contractor and results approved by the City prior to backfill.

9.8 JOINT BONDING

- A. All non-welded rubber gasket joints, mechanical joints, flange joints and threaded joints shall be bonded with an insulated copper cable, sized as shown on the Drawings. The overall length of the conductor shall permit maximum movement of the pipe joint without transferring any tensile stress to the cable, per pipe manufacturer's recommendations.

9.9 INSULATING FLANGED JOINTS (N/A)

- A. All insulating components of the insulating flanged gasket set shall be cleaned of all dirt, grease, oil and other foreign materials immediately prior to assembly. Bolt holes in mating flanges shall be properly aligned at the time bolts and insulating sleeves are inserted to prevent damage to the insulation. After flanged bolts have been tightened, each insulating washer shall be inspected for cracks or other damage. All damaged washers shall be replaced. After assembly, resistance between each bolt and flange shall be measured with an approved ohmmeter, and the minimum resistance shall be 50,000 ohms. Where the insulating joint is assembled in the shop and shipped as a unit, resistance shall be measured in the shop between the flanges and between each bolt and flange and shall meet the above requirements. All insulating flanged joints shall be coated as shown on the Drawings and specified below.
- B. The completed assembly shall be tested with a flange insulation tester such as Gas Electronics Model 601, or equal for the integrity of the insulation. This testing shall be conducted in the presence of the City and approved prior to backfill.

9.10 COATING BURIED INSULATING FLANGED JOINTS AND HARNESS SETS

- A. Viscous Elastic Coatings & Sealants (VEC) Option
 - 1. Use wire brush, power brush or an abrasive cleaning pad to remove all loose material, dirt and grime from substrate to a minimum cleanliness of SSPC SP2. Clean pipe/substrate with denatured alcohol. Apply VEC coating and overlap

10% or 1/2inch minimum to substrate. For uneven areas, around bolts and in voids apply Viscous Elastic Paste materials. Paste should be packed into these areas leaving as few air pockets as possible. Once the substrate is coated using the VEC an outer wrap shall be applied for mechanical protection.

B. Three Part Wax Tape Coating System Option

1. Surfaces shall be cleaned of all dirt, grease, oil and other foreign materials immediately prior to coating. Remove loose rust, paint and other foreign matter in accordance with SSPC SP2 or SP3. A prime coating shall be applied in a uniform coating over the entire surface to be wrapped. A liberal coating shall be applied to threads, cavities, shoulders, pits and other irregularities. A fill coating shall be molded and packed onto irregular surfaces such as flanges, valves or flexible couplings to create a smooth profile prior to wrapping. A wrap coating shall be spirally wrapped using a minimum of 55 percent overlap to ensure a double thickness of material. At the completion of each roll the overlaps shall be smoothed by hand in the direction of the spiral to ensure sealing of the overlap. A 2-inch overlap shall be maintained when overlapping one roll with the end of a new roll. Overlap shall occur on the top half of the pipeline. A guard coating shall be spirally over-wrapped using a 55 percent overlap to ensure a double coating.

9.11 FIELD COATING OF BURIED FLANGE HARDWARE

- A. All buried nuts and bolts shall be coated with bitumastic prior to polyethylene encasement. After flange hardware is installed use wire brush, power brush or an abrasive cleaning pad to remove all loose material, dirt and grime from substrate to a minimum cleanliness of SSPC SP2. Apply Bitumastic coating liberally with a medium bristle brush to the extent that all surfaces are completely covered with no bare spots visually evident. Coat exposed surfaces of bolts, washers and nuts, giving special attention to the bottom-side surfaces. Follow the manufacturer's recommendations for drying times required before polyethylene encasement and backfill.

9.12 POLYETHYLENE ENCASEMENT OF PIPE AND FITTINGS

- A. Encase the buried ductile iron pipes and fittings in minimum 8-mil polyethylene in accordance with AWWA C-105. Encase copper pipe in polyethylene sleeves a minimum 6-mils thick.

9.13 SYSTEM COMMISSIONING

- A. After installation of the cathodic protection facilities, the system shall be tested, and adjusted by the Project's corrosion engineer, to assure conformance with the Specifications. Testing shall include a determination of proper installation of each component, adequacy of test stations and insulating joints, anodes, dielectric insulation

and electrical continuity of bonded pipe fittings. Upon completion of tests, a detailed report will be submitted describing any deficiencies detected. Any and all deficiencies shall be corrected by the Contractor and site conditions restored prior to final acceptance. All retesting shall be at the Contractor's expense.

- B. After the final acceptance, if at the Insulating Joint Test Stations both the project pipe and the existing pipe show adequate levels of cathodic protection, then the Project's corrosion engineer shall bond across the insulating joints to make the new and existing pipe electrically continuous. If the existing pipelines do not show adequate cathodic protection, the insulating joint shall not be bonded across.
- C. The Contractor shall notify the City 48 hours prior to installation of any cathodic protection components so that inspections can be scheduled. Phone messages left with others will not be considered adequate notification. The Contractor shall not backfill any cathodic protection components prior to inspection and approval by the City.

9.14 QUALITY ASSURANCE

- A. All work shall be performed to the satisfaction of the City.
- B. The Contractor shall not substitute for the specified materials unless approved by the City.
- C. Compaction of backfill and trenches shall match the existing conditions and shall be approved by the City.

9.15 INTERFERENCE AND EXACT LOCATIONS

- A. The Contractor shall coordinate and properly relate this work to the site and to the work of all trades. The general locations of the facilities are shown on the Drawings. However, the Contractor shall visit the premises and thoroughly familiarize himself with all details of the work and working conditions, verify existing conditions in the field, determine the exact locations of existing pipelines and structures and advise the City of any discrepancy that may prevent or hinder the specified work from being completed. The Contractor shall be solely responsible for location and marking underground structures so as to avoid damage during construction.

9.16 PRE-CONSTRUCTION CATHODIC PROTECTION COORDINATION MEETING

- A. Prior to the start of pipe installation conduct a field meeting with all installation crew foremen to go over cathodic protection installation requirements and field testing.

9.17 GPS COORDINATES

- A. The "as-built" GPS coordinates of all components such as test stations, anode beds, etc. shall be mapped by the Contractor and provided in tabular form and also as an electronic file.

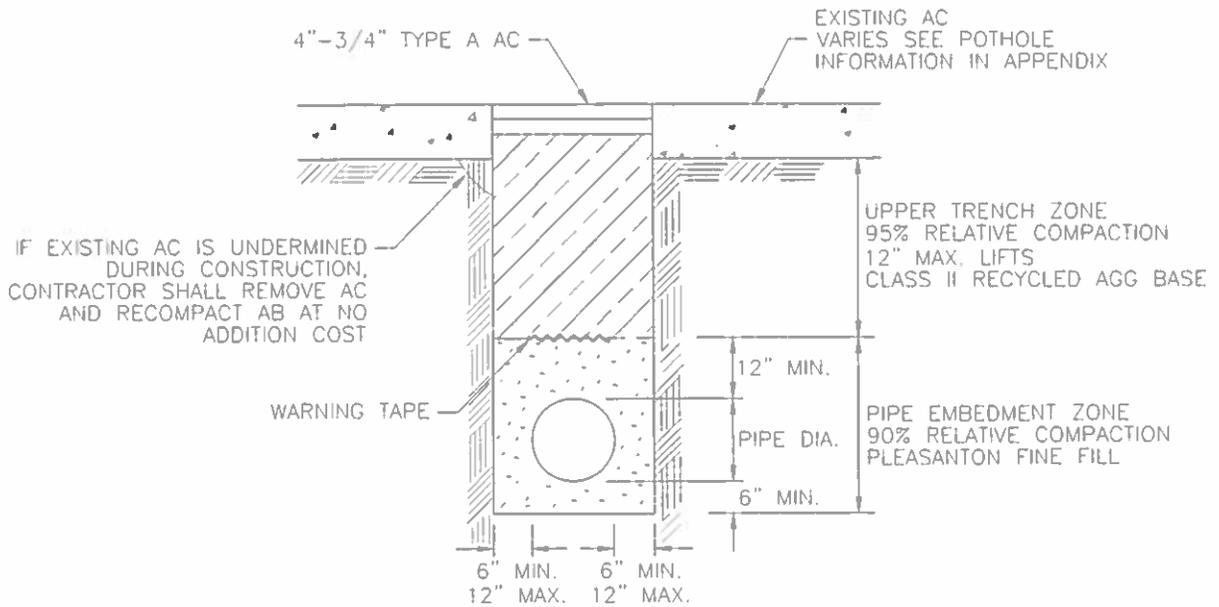
END OF SECTION

EXHIBITS

Note: The following exhibits are included in the Contract Documents. Where the provisions and/or statements in the Exhibits conflict with the remainder of the Contract Documents, the Contractor shall notify the City and request clarification and direction.

- **City Standard Updated Sheets & New Standards**
- **CERCO Corrosivity Analysis**
- **ENGEO Log of Borings**

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NOTES:

1. BACKFILL COMPACTION SHALL BE CERTIFIED BY THE SOILS ENGINEER.
2. SEE SPECIFICATIONS FOR TRENCH WIDTH REQUIREMENTS.
3. CEMENT TREATED BASE MAY BE REQUIRED INSTEAD OF AB WHEN SPECIFIED BY THE ENGINEER.
4. STRUCTURAL SECTION TO BE COMPACTED TO 95% RELATIVE COMPACTION.

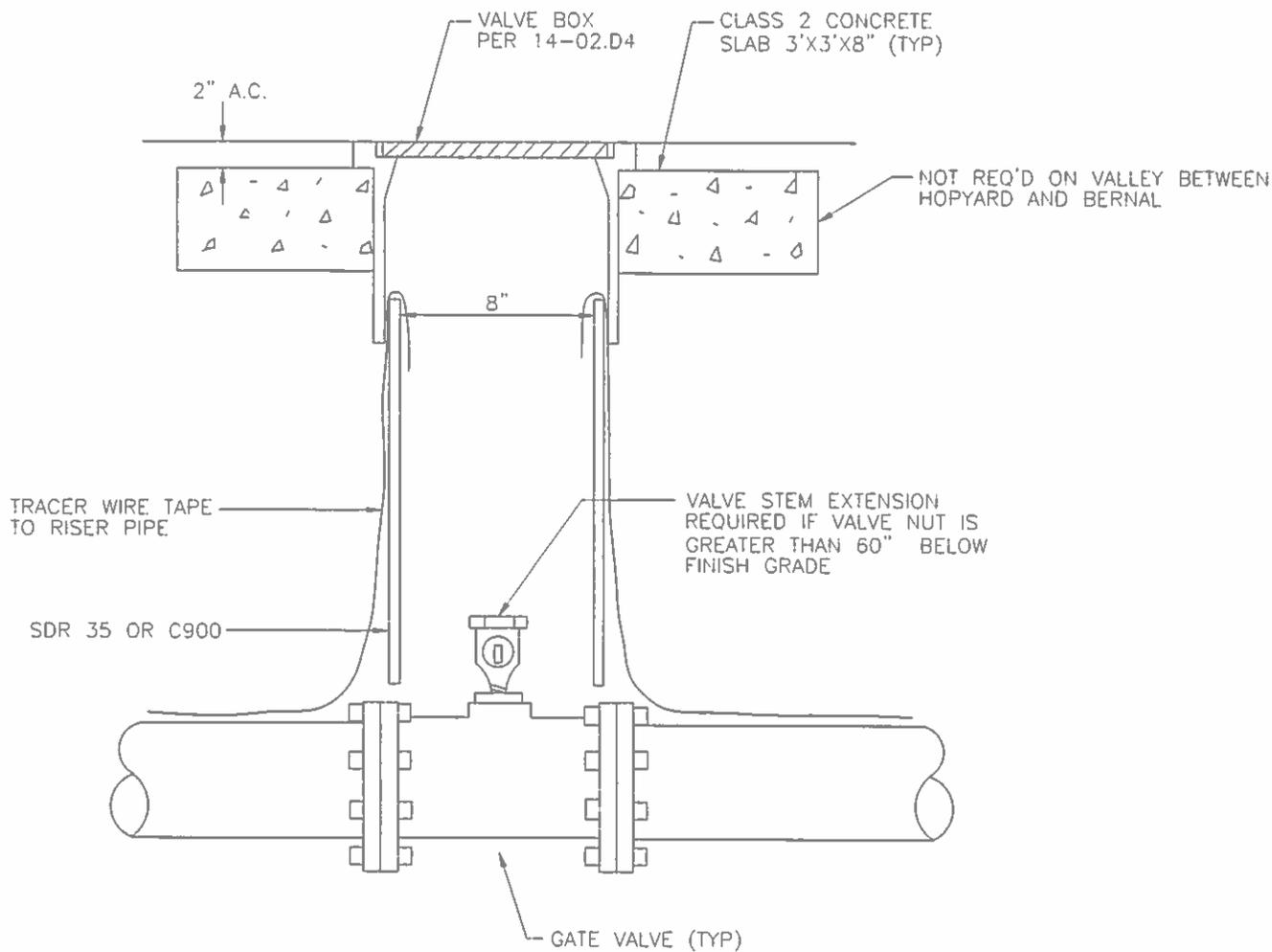


CITY OF PLEASANTON

STANDARD DETAILS

TRENCH BACKFILL FOR
EXISTING STREETS

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 112



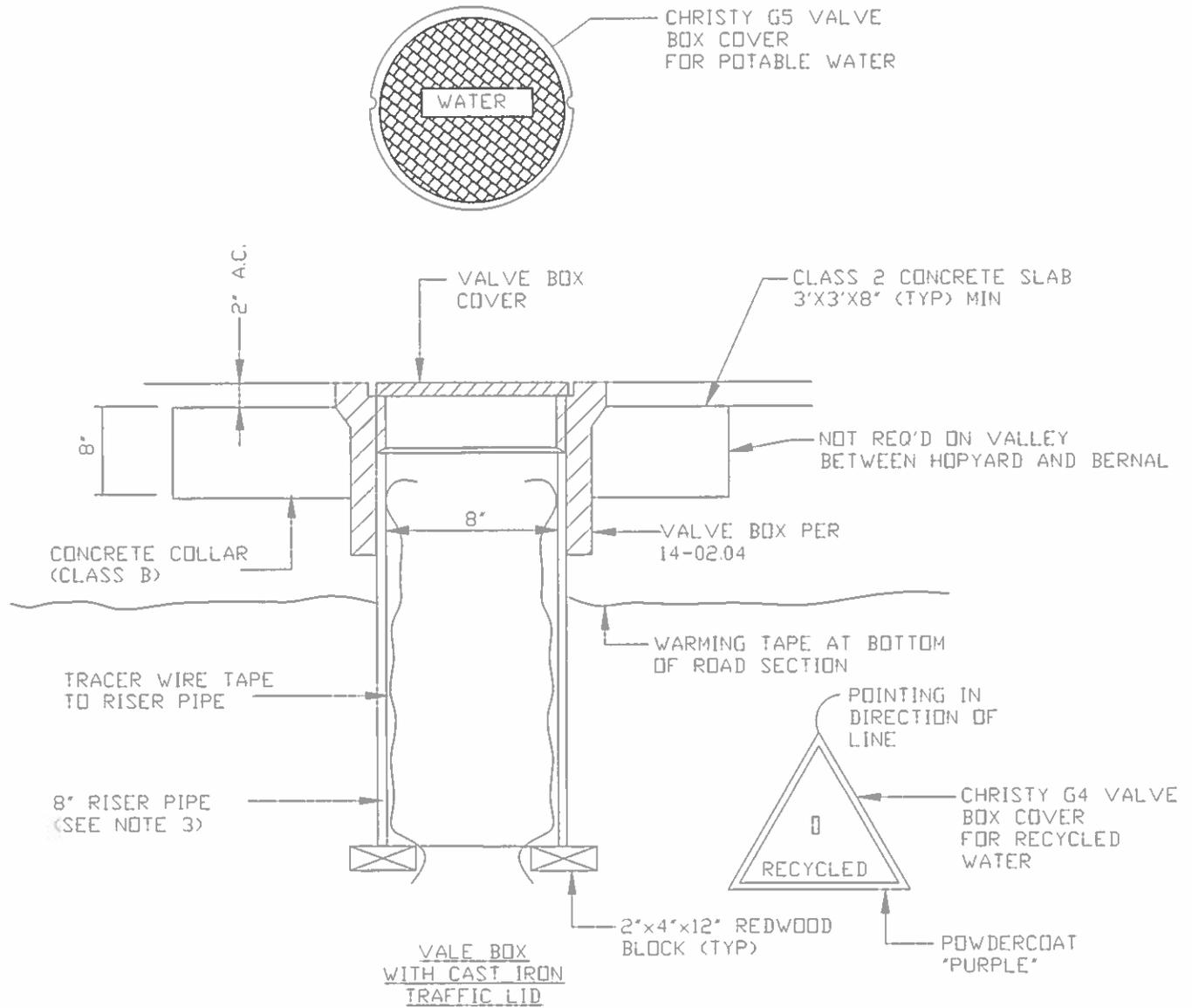
NOTES:

1. ON MAINS WHERE VALVES ARE TO BE INSTALLED ADJACENT TO TEES OR CROSSES, THE VALVES SHALL BE FLG X FLG WITH FLANGED END BOLTED DIRECTLY TO THE TEE OR CROSS.
2. IN-LINE VALVES MAY BE FLG X FLG WITH ADAPTERS OR MJ X MJ ENDS.



CITY OF PLEASANTON
STANDARD DETAILS
GATE VALVE INSTALLATION

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 313



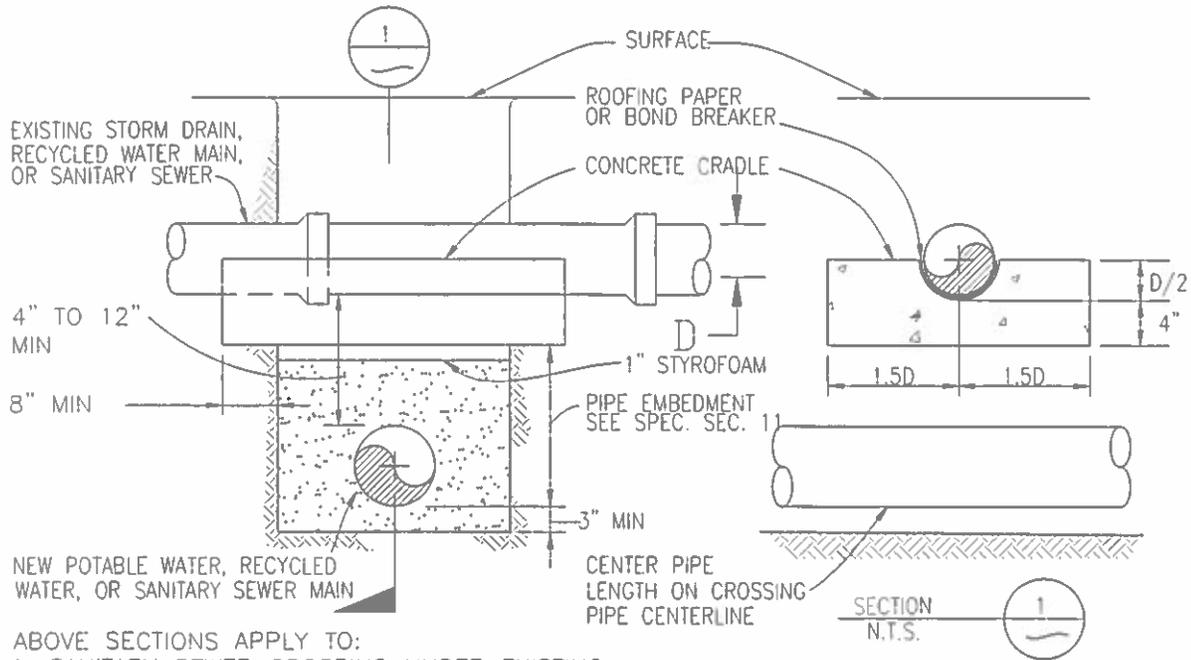
NOTES:

1. A.C. PAVEMENT TO COMPLY WITH STREET PAVEMENT REQUIREMENTS.
2. FOR VALVE BOXES INSTALLED IN NON-TRAFFIC AREAS, CONCRETE COLLAR SHALL BE EXTENDED TO FINISH GRADE. SLOPE COLLAR TO DRAIN AWAY FROM LID
3. RISER PIPE TO BE ONE CONTINUOUS PIECE, SDR35 OR C900 FOR RECYCLED WATER RISER PIPE SHALL BE PURPLE
4. VALVE BOX COVERS FOR RECYCLED WATER MAINS SHALL BE TRIANGULAR WITH "RECYCLED" INSCRIPTION CAST ON THE TOP SURFACE AND POWDER COATED PURPLE 3 MIL W/EDGES MASKED. COLOR TO BE MAAS BROTHERS RAL 4006 TRAFFIC PURPLE.

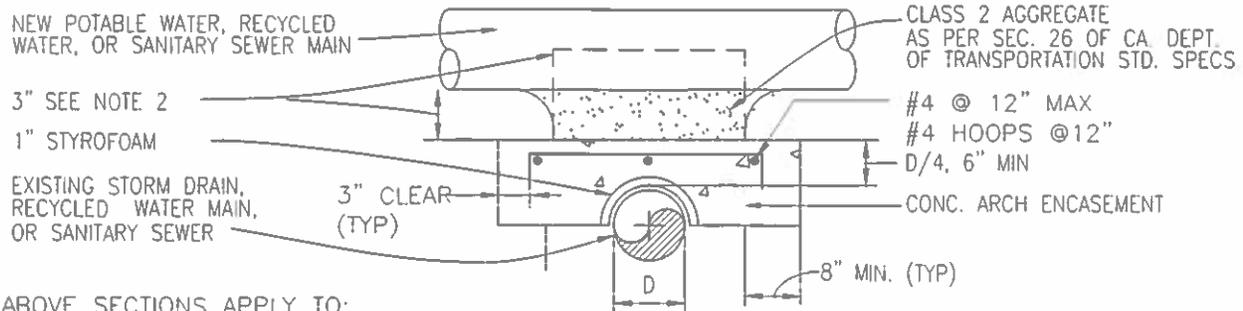


CITY OF PLEASANTON
STANDARD DETAILS
VALVE BOX INSTALLATION

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 314



- ABOVE SECTIONS APPLY TO:
1. SANITARY SEWER CROSSING UNDER EXISTING STORM DRAIN OR SANITARY SEWER.
 2. RECYCLED WATER CROSSING UNDER EXISTING STORM DRAIN OR RECYCLED WATER
 3. POTABLE WATER CROSSING UNDER EXISTING STORM DRAIN



- ABOVE SECTIONS APPLY TO:
1. SANITARY SEWER CROSSING OVER EXISTING STORM DRAIN OR SANITARY SEWER
 2. RECYCLED WATER CROSSING OVER EXISTING STORM DRAIN OR RECYCLED WATER
 3. POTABLE WATER CROSSING OVER EXISTING STORM DRAIN

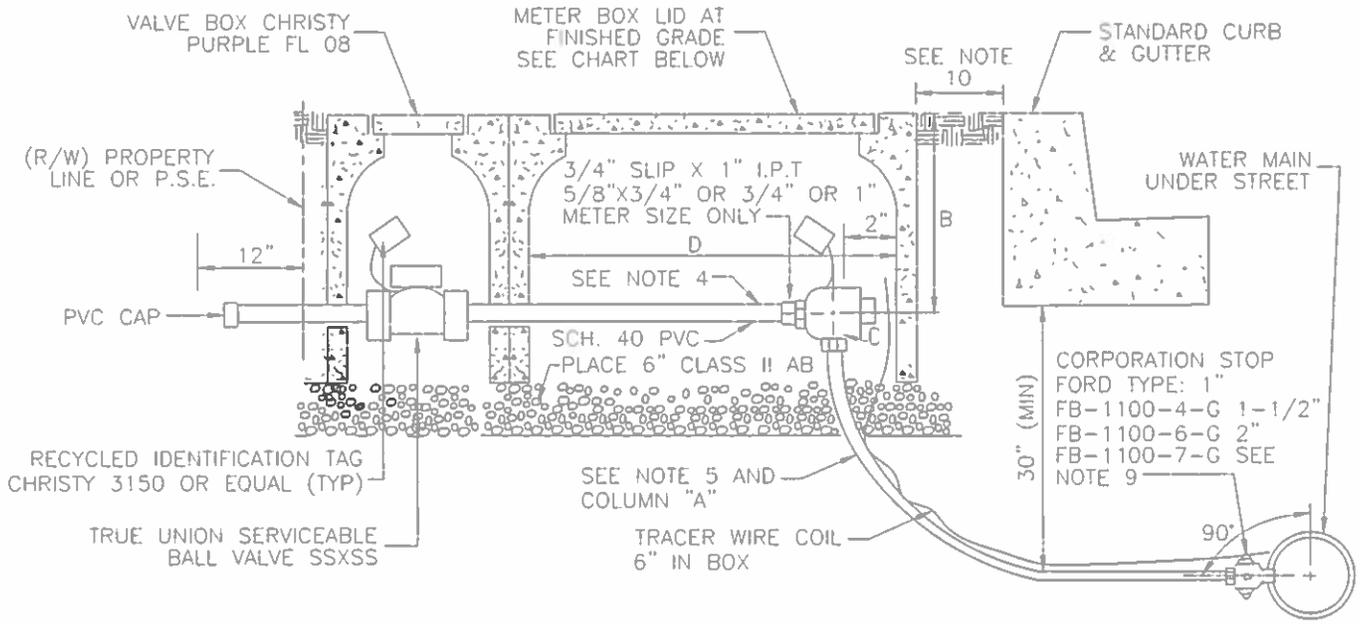
NOTES:

1. CROSSING OF POTABLE WATER MAINS, RECYCLED WATER MAINS, AND SANITARY SEWERS: SEPARATION, CONSTRUCTION, AND PIPE CRITERIA SHALL BE AS REQUIRED BY SECTION 1-C5 AND THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH.
2. IF CLASS 2 AGGREGATE BASE MATERIAL CANNOT BE ATTAINED, THEN RAISE PIPE CRADLE TO CONTACT LOWER HALF OF NEW PIPE. PROVIDE ROOFING PAPER OR BOND BREAKER BETWEEN NEW PIPE AND CONCRETE AS SHOWN IN SECTION 1 ABOVE.
3. APPROVAL OF THE CITY ENGINEER REQUIRED TO USE ABOVE DETAILS.



CITY OF PLEASANTON
STANDARD DETAILS
CLOSE CROSSING DETAIL

DRAWN BY: SN
CHECKED BY: AN
SCALE: NTS
DATE: 8/2016
DWG NO.: 315



NOTES:

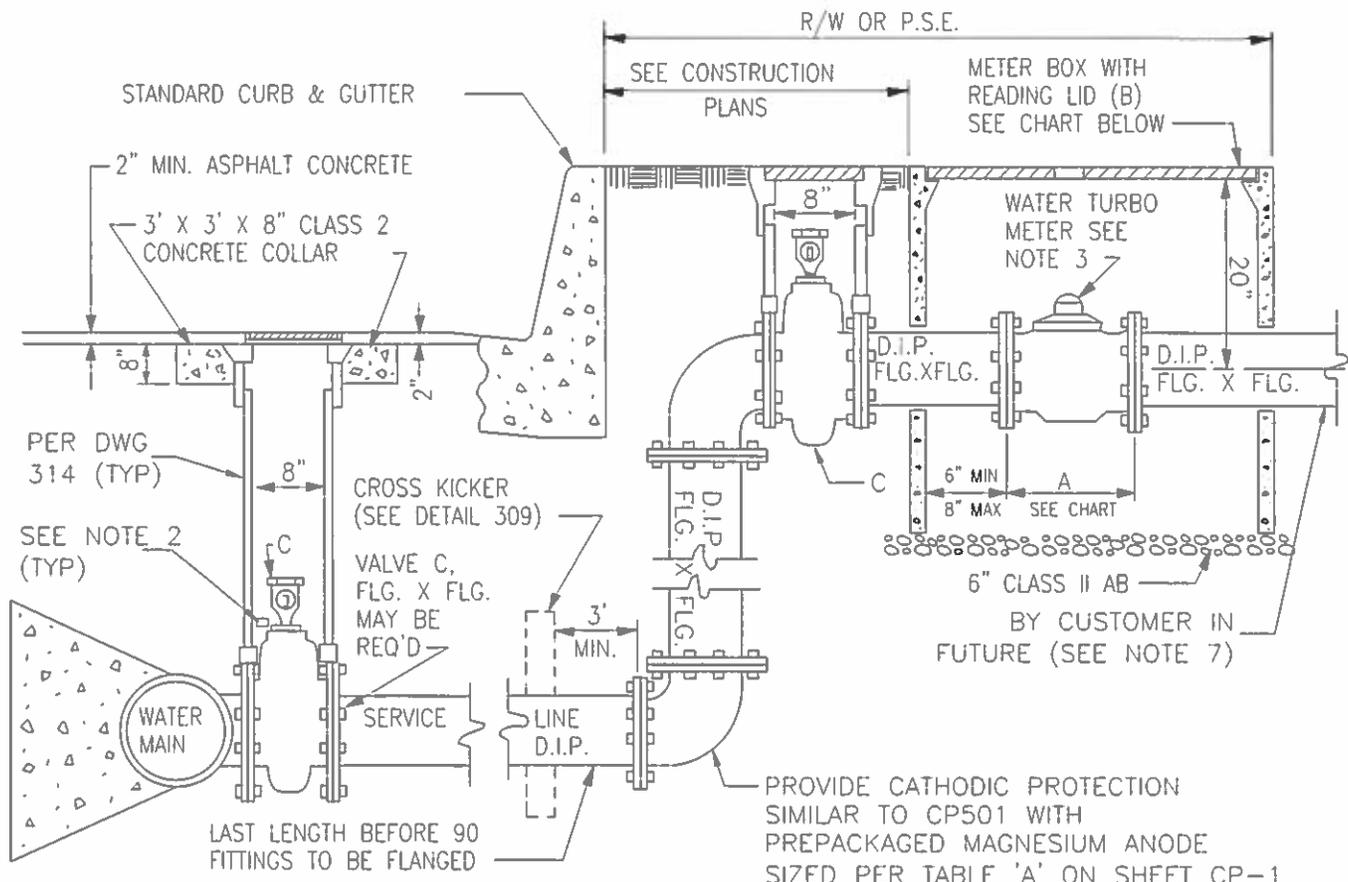
1. WATER METERS SHALL BE PURCHASED FROM AND SET BY THE CITY OF PLEASANTON UTILITY DEPT.
2. 5/8" BRASS BOLTS SHALL BE INSTALLED AT METER OR ADAPTER.
3. SERVICE LINE SHALL BE INSTALLED IN A STRAIGHT LINE PERPINDICULAR FROM MAIN TO PROPERTY LINE
4. 3/4" SCH. 40 PVC FOR 5/8" & 3/4" MTRS. 1" PVC FOR 1" MTRS. 1-1/2" PVC FOR 1-1/2" MRS. 2" PVC FOR 2" MTRS. PIPE SHALL BE PURPLE.
5. CLASS 200 POLYETHYLENE TUBING SHALL CONFORM TO A.S.T.M. D-2737 & AWWA C-901 WITH A PRESSURE RATING OF 200 PSI & SHALL BE "INTERSTATE POLY TUBING" RECLAIMED WATER PURPLE OR APPROVED EQUAL.
6. WARNING TAPE MARKED "CAUTION" RECYCLED WATER LINE BURIED BELOW "SHALL BE INSTALLED 2" ABOVE THE WATER SERVICE. SEE SPEC. 22-01B.7.
7. IF METER & SERVICE SIZE ARE OTHER THAN THOSE LISTED BELOW, PROVIDE A DETAIL DRAWING.
8. TAPS ABOVE 1" REQUIRES A SADDLE (1-1/2" & 2")
 1. ACP - REQUIRES BRONZE DOUBLE STRAP
 2. D.I.P. - REQUIRES D.I. DOUBLE STRAP
 3. P.V.C. - REQUIRES BRONZE STRAP DESIGNED FOR C900 P.V.C. AND SADDLE.
9. STUB PVC LINE:
 1. 12" OUTSIDE OF METER BOX OR 12" BEHIND PROPERTY LINE.
 2. 4" BEHIND CURB, WHERE PLANTER AREA EXIST BETWEEN CURB & SIDEWALK.
 3. 4" BEHIND SIDEWALK, WHERE SIDEWALK IS MONOLITHIC TO CURB.
10. JOINT TRENCH DEPTH SHALL BE DETERMINED BEFORE WATER SERVICE IS INSTALLED.
11. METER BOX LIDS SHALL BE PURPLE AND HAVE "RECYCLED" PRINTED.

METER-SIZE	A	B	C*	D*	LID	INSIDE DIMENSIONS
3/4"x5/8"	1"	8"	FORD BA-43-342W-G	CHRISTY PURPLE FL09	FL09D	10-1/2"x17-1/4"
3/4"	1"	8"	FORD BA-43-342W-G	CHRISTY PURPLE FL12	FL12D	12"x20"
1"	1"	8"	FORD BA-43-444W-G	CHRISTY PURPLE FL12	FL12D	12"x20"
1"	1-1/2"	8"	FORD BFA-43-666W-G	CHRISTY PURPLE FL30	FL30D	13-1/4"x24"
1-1/2"	1-1/2"	9"	FORD BFA-43-666W-G	CHRISTY PURPLE FL30	FL30D	13-1/4"x24"
2"	2"	9"	FORD BFA-43-777W-G	CHRISTY PURPLE FL36	FL36D	17-1/4"x30"



CITY OF PLEASANTON
STANDARD DETAILS
RECYCLED WATER SERVICE

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 1001



METER SIZE	A	B*	C
3	SPACER PROVIDED BY CITY UTILITY DEPARTMENT	CHRISTY PURPLE FL36	GATE VALVE
4		CHRISTY PURPLE FL36	GATE VALVE
6		CONTACT ENGINEERING	GATE VALVE
		* OR APPROVED EQUAL	

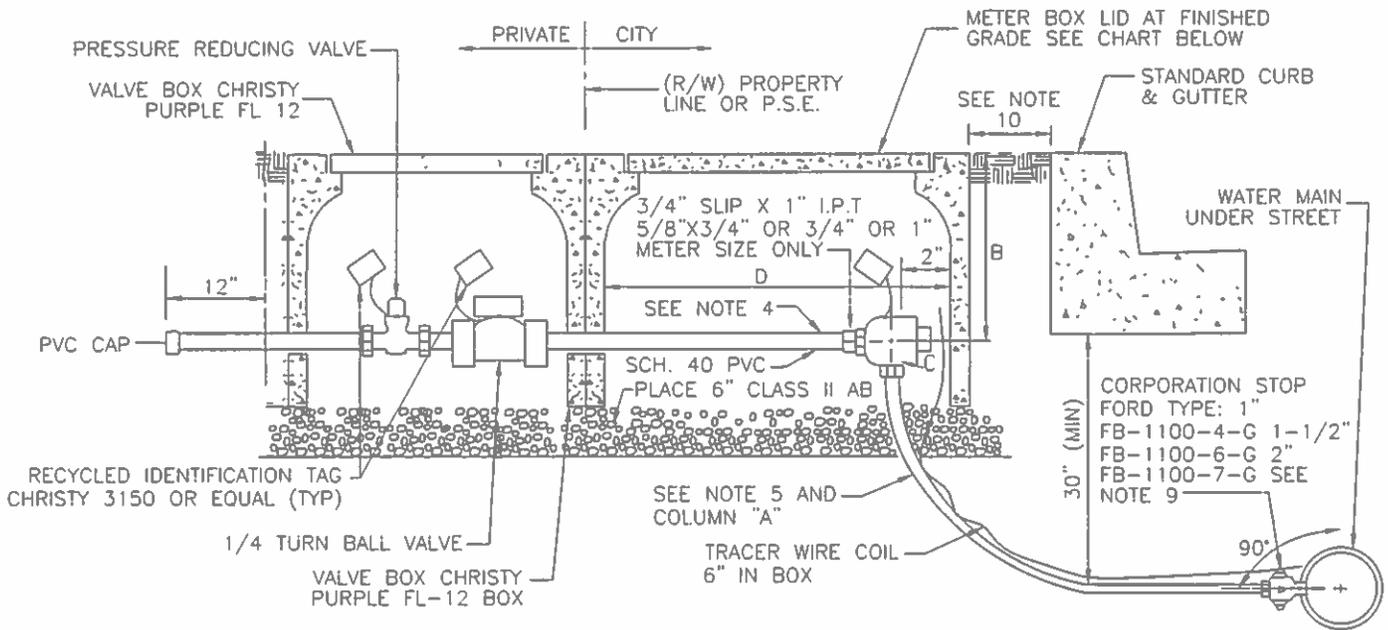
NOTES:

- ADDITIONAL VALVES SHALL BE REQUIRED TO ISOLATE ADDITIONAL METERS OR WATER SERVICES.
- SEE VALVE TAG REQUIREMENTS, DETAIL 1007
- WATER METER SHALL BE FURNISHED AND SET BY THE CITY OF PLEASANTON
- ALL THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.
- WARNING TAPE MARKED "CAUTION" RECYCLED WATER LINE BURIED BELOW" SHALL BE INSTALLED 2' ABOVE THE WATER THE WATER SERVICE. SEE SPEC. 22-01B.7
- SERVICE LINE SHALL BE INSTALLED IN A STRAIGHT LINE PERPENDICULAR FROM MAIN TO PROPERTY LINE
- IF CUSTOMER PIPE IS METALLIC, INSTALL PVC SPOOL PIECE BETWEEN CITY'S PIPE AND CUSTOMER PIPE.



CITY OF PLEASANTON
 STANDARD DETAILS
RECYCLED WATER
COMMERCIAL AND INDUSTRIAL
WATER SERVICE

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 1001A



NOTES:

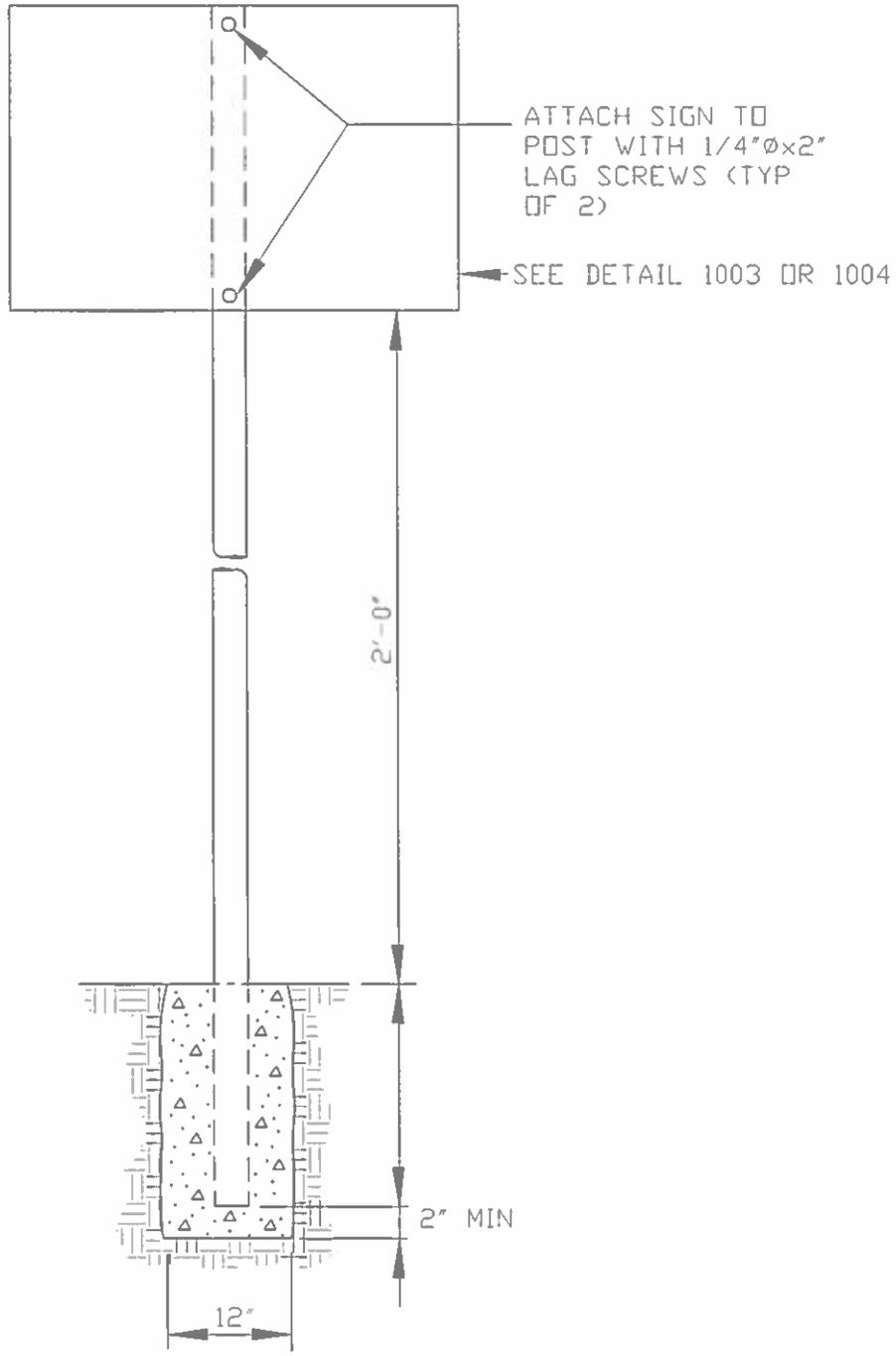
1. WATER METERS SHALL BE PURCHASED FROM AND SET BY THE CITY OF PLEASANTON UTILITY DEPT.
2. 5/8" BRASS BOLTS SHALL BE INSTALLED AT METER OR ADAPTER.
3. SERVICE LINE SHALL BE INSTALLED IN A STRAIGHT LINE PERPENDICULAR FROM MAIN TO PROPERTY LINE
4. 3/4" SCH. 40 PVC FOR 5/8" & 3/4" MTRS. 1" PVC FOR 1" MTRS. 1-1/2" PVC FOR 1-1/2" MTRS. 2" PVC FOR 2" MTRS. PIPE SHALL BE PURPLE.
5. CLASS 200 POLYETHYLENE TUBING SHALL CONFORM TO A.S.T.M. D-2737 & AWWA C-901 WITH A PRESSURE RATING OF 200 PSI & SHALL BE "INTERSTATE POLY TUBING" RECLAIMED WATER PURPLE OR APPROVED EQUAL.
6. WARNING TAPE MARKED "CAUTION" RECYCLED WATER LINE BURIED BELOW "SHALL BE INSTALLED 2" ABOVE THE WATER SERVICE. SEE SPEC. 22-01B.7.
7. IF METER & SERVICE SIZE ARE OTHER THAN THOSE LISTED BELOW, PROVIDE A DETAIL DRAWING.
8. TAPS ABOVE 1" REQUIRES A SADDLE (1-1/2" & 2")
 1. ACP - REQUIRES BRONZE DOUBLE STRAP
 2. D.I.P. - REQUIRES D.I. DOUBLE STRAP
 3. P.V.C.- REQUIRES BRONZE STRAP DESIGNED FOR C900 P.V.C. AND SADDLE.
9. STUB PVC LINE:
 1. 12" OUTSIDE OF METER BOX OR 12" BEHIND PROPERTY LINE.
 2. 4" BEHIND CURB, WHERE PLANTER AREA EXIST BETWEEN CURB & SIDEWALK.
 3. 4" BEHIND SIDEWALK, WHERE SIDEWALK IS MONOLITHIC TO CURB.
10. JOINT TRENCH DEPTH SHALL BE DETERMINED BEFORE WATER SERVICE IS INSTALLED.
11. METER BOX LIDS SHALL BE PURPLE AND HAVE "RECYCLED" PRINTED.
12. PRESSURE REDUCING VALVE SHALL BE WILKINS MODEL 500x6 WITH HLR & SC, WITH 2" RED BRASS NIPPLE AND OUTLET UNION.

METER-SIZE	A	B	C*	D*	LID	INSIDE DIMENSIONS
3/4"x5/8"	1"	8"	FORD BA-43-342W-G	CHRISTY PURPLE FL09	FL09D	10-1/2"x17-1/4"
3/4"	1"	8"	FORD BA-43-342W-G	CHRISTY PURPLE FL12	FL12D	12"x20"
1"	1"	8"	FORD BA-43-444W-G	CHRISTY PURPLE FL12	FL12D	12"x20"
1"	1-1/2"	8"	FORD BFA-43-666W-G	CHRISTY PURPLE FL30	FL30D	13-1/4"x24"
1-1/2"	1-1/2"	9"	FORD BFA-43-666W-G	CHRISTY PURPLE FL30	FL30D	13-1/4"x24"
2"	2"	9"	FORD BFA-43-777W-G	CHRISTY PURPLE FL36	FL36D	17-1/4"x30"



CITY OF PLEASANTON
STANDARD DETAILS
RECYCLED WATER SERVICE WITH
PRESSURE REDUCING VALVE

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 1001B



- NOTES:
- 1) RECYCLED WATER NOTIFICATION SIGN POST TO BE PROVIDE.
 - 2) 4"X4" POST AND STIFFENERS SHALL BE REDWOOD OR TREATED DOUGLAS FIR (STATE OF CALIFORNIA NO. 56-2.02B).
 - 3) FOOTING SHALL BE 24" IN DEPTH, IN CONCRETE.
 - 4) SIGNS SHALL BE PURCHASED FROM CITY OF PLEASANTON.

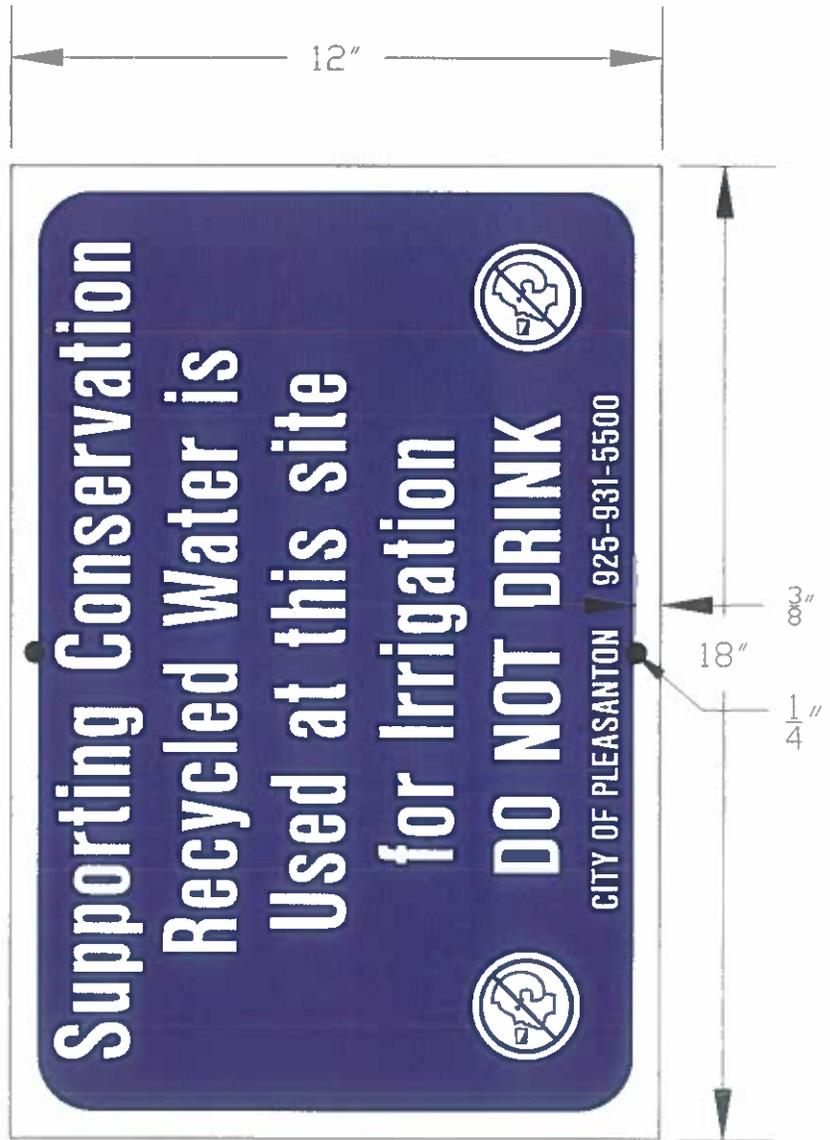


CITY OF PLEASANTON
 STANDARD DETAILS
 RECYCLED WATER SIGN POST

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 1002

NOTES:

1. RECYCLED WATER NOTIFICATION DECAL TO BE OBTAINED BY DEVELOPER. DECAL AVAILABLE FOR SALE AT CITY OFFICE, 3333 BUSCH ROAD.
2. WARNING SIGN SHALL BE 0.63 GAUGE ALUMINUM PURPLE (PMS#2587) IN COLOR WITH WHITE TEXT AND SHALL BE AFFIXED TO THE GROUND BY A WOODEN POST.
3. SEE DETAIL 1002 SIGN POST DETAILS.
4. SIGN SHALL STATE "RECYCLED WATER DO NOT DRINK" ACCORDING TO TITLE 22, ARTICLE 4, SECTION 60310(G) OF THE STATEWIDE REGULATION.
5. $\frac{1}{4}$ " MOUNTING HOLES SHALL BE DRILLED ON CENTER LINE AS SHOWN.
6. EDGES SHALL BE ROUNDED WITH $\frac{1}{2}$ " RADIUS



CITY OF PLEASANTON
 STANDARD DETAILS
 RECYCLED WATER ALUMINUM SIGN

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 1003

NOTES:

1. RECYCLED WATER NOTIFICATION DECAL TO BE OBTAINED BY DEVELOPER. DECAL AVAILABLE FOR SALE AT CITY OFFICE, 3333 BUSCH ROAD.
2. WARNING SIGN SHALL BE 0.63 GAUGE ALUMINUM PURPLE (PMS#2587) IN COLOR WITH WHITE TEXT AND SHALL BE AFFIXED TO THE GROUND BY A WOODEN POST.
3. SEE DETAIL 1002 SIGN POST DETAILS.
4. SIGN SHALL STATE "RECYCLED WATER DO NOT DRINK" ACCORDING TO TITLE 22, ARTICLE 4, SECTION 60310(G) OF THE STATEWIDE REGULATION.
5. 1/4" MOUNTING HOLES SHALL BE DRILLED ON CENTER LINE AS SHOWN.
6. EDGES SHALL BE ROUNDED WITH 1/2" RADIUS



CITY OF PLEASANTON

STANDARD DETAILS

RECYCLED WATER ALUMINUM
SMALL SIGN

DRAWN BY: SN
 CHECKED BY: AN
 SCALE: NTS
 DATE: 8/2016
 DWG NO.: 1004

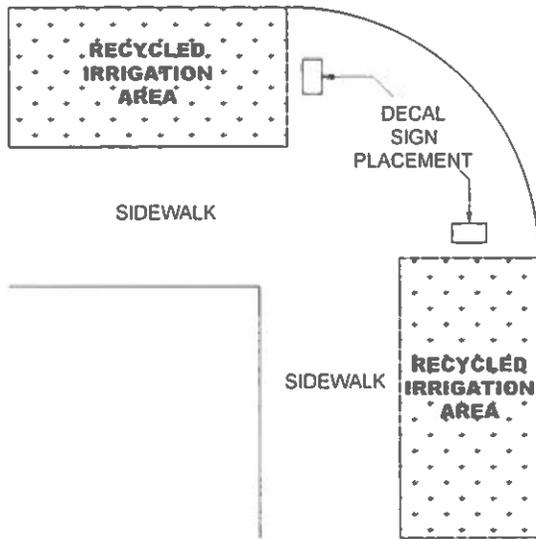


Fig. 1 Corner Pedestrian Crossing

Fig. 2 MID-STREET PEDESTRIAN CROSSING

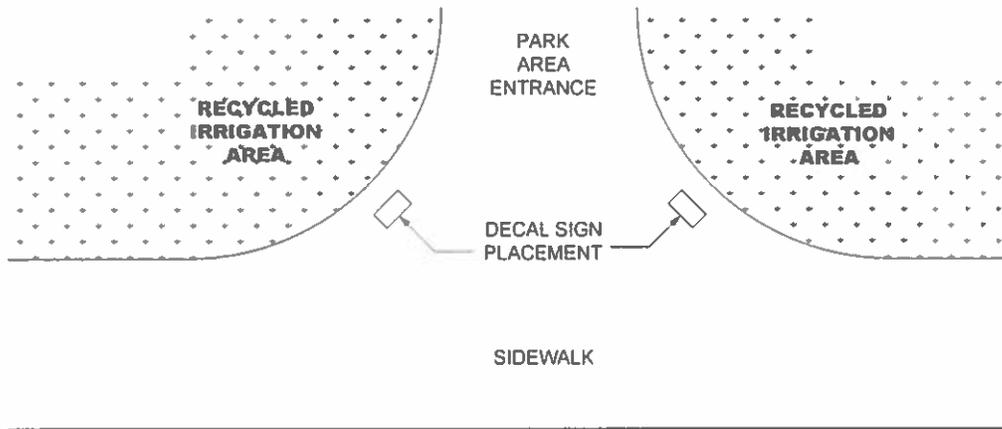
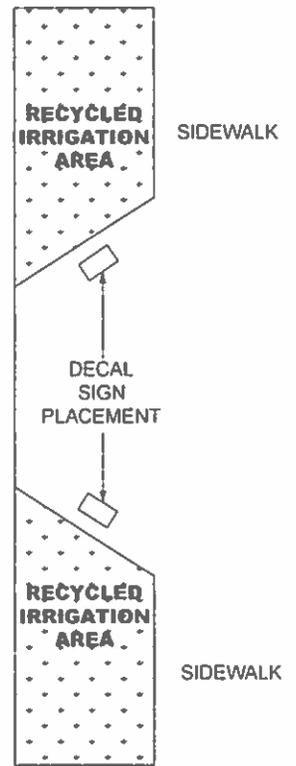


Fig. 3 PARK AREA ENTRANCE PLACEMENT



CITY OF PLEASANTON

STANDARD DETAILS

RECYCLED WATER IRRIGATION
DECAL SIGNS

DRAWN BY: SN

CHECKED BY: AN

SCALE: NTS

DATE: 8/2016

DWG NO.: 1005

NOTES:

1. RECYCLED WATER NOTIFICATION DECAL TO BE OBTAINED BY DEVELOPER. DECAL AVAILABLE FOR SALE AT CITY OFFICE, 3333 BUSCH ROAD.
2. WARNING SIGN DECALS SHALL BE UV FADE RESISTANT *das* CURB MARKER (www.dasmanufacturing.com) OR APPROVED EQUAL DURACAST STYLE MARKERS PURPLE (PMS #2587) IN COLOR WITH WHITE TEXT. SIGN DECALS SHALL BE ALL-WEATHER, SLIP RESISTANT, AND PERMANENTLY AFFIXED TO THE GROUND AND SHALL HAVE ROUNDED CORNERS (1/2" RADIUS).
3. SEE DETAIL 1005 FOR PLACEMENT.
4. SIGN SHALL STATE "RECYCLED WATER DO NOT DRINK" ACCORDING TO TITLE 22, ARTICLE 4, SECTION 60310(G) OF THE STATEWIDE REGULATION.

INSTALLATION:

5. SURFACE MUST BE DRY AND FREE OF ANY LOOSE DEBRIS. FOLLOW THE ADHESIVE GUIDE. A BEAD OF ADHESIVE SHOULD BE SHOWN AROUND THE ENTIRE EDGE.

ADHESIVE SHALL BE *das* CURB

6. MARKER ADHESIVE OR APPROVED EQUAL.



CITY OF PLEASANTON

STANDARD DETAILS

RECYCLED WATER DECAL SIGN

DRAWN BY: SN

CHECKED BY: AN

SCALE: NTS

DATE: 8/2016

DWG NO.: 1006



CHRISTY "NO". 3150 MAXI-I.D. TAG IN BOTH ENGLISH AND SPANISH. USE IN ALL VALVE BOXES. USE PURPLE TAGS FOR RECYCLED WATER.

WARNING
TAPE

CHRISTY "NO". 3 ND PRW NON-DETECTABLE PURPLE TAPE LABELED "CAUTION" RECYCLED WATER BELOW" LOCATE ABOVE ALL MAINLINE.

WARNING
LABEL

CHRISTY "NO". 4100 CONTROLLER UNIT LABEL - 3.5 MIL VINYL BASE (PURPLE) - ATTACH TO FACE OF CONTROLLER ENCL.

RISER
LABEL

CHRISTY "NO". 5100 CONTROLLER UNIT LABEL - 3.5 MIL VINYL BASE (PURPLE) - ATTACH TO IRRIGATION RISERS.

NOTES:

THE CONTRACTOR MAY OFFER ANY MATERIAL CONSIDERED TO BE EQUIVALENT TO THAT INDICATED. THE SUBSTITUTION OF MATERIAL SHALL BE SUBMITTED IN WRITING AND APPROVED IN WRITING BY THE CITY ENGINEER.



CITY OF PLEASANTON

STANDARD DETAILS

RECYCLED WATER TAG

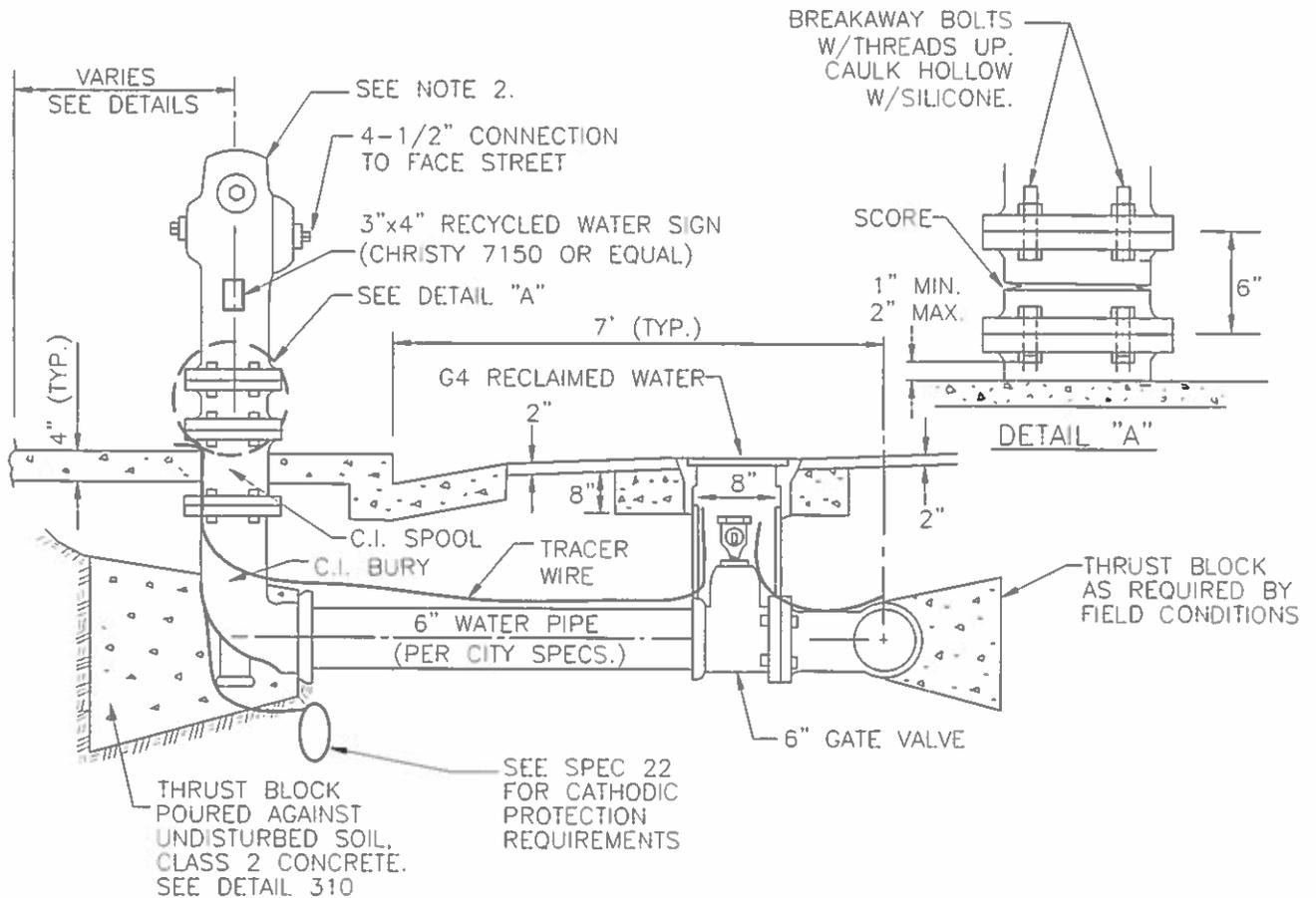
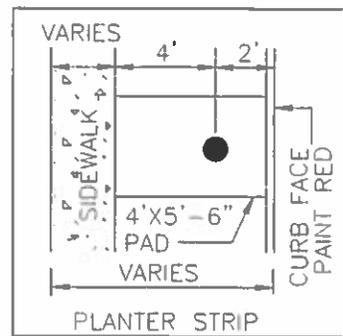
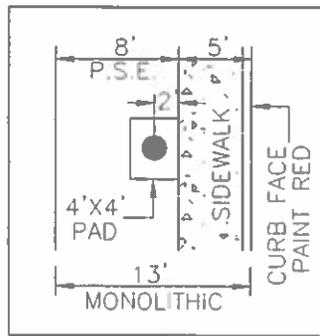
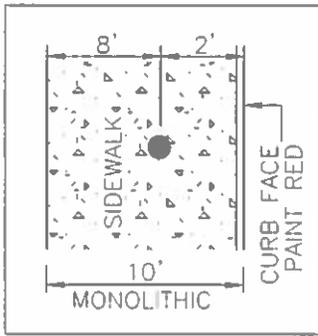
DRAWN BY: SN

CHECKED BY: AN

SCALE: NTS

DATE: 8/2016

DWG NO.: 1007



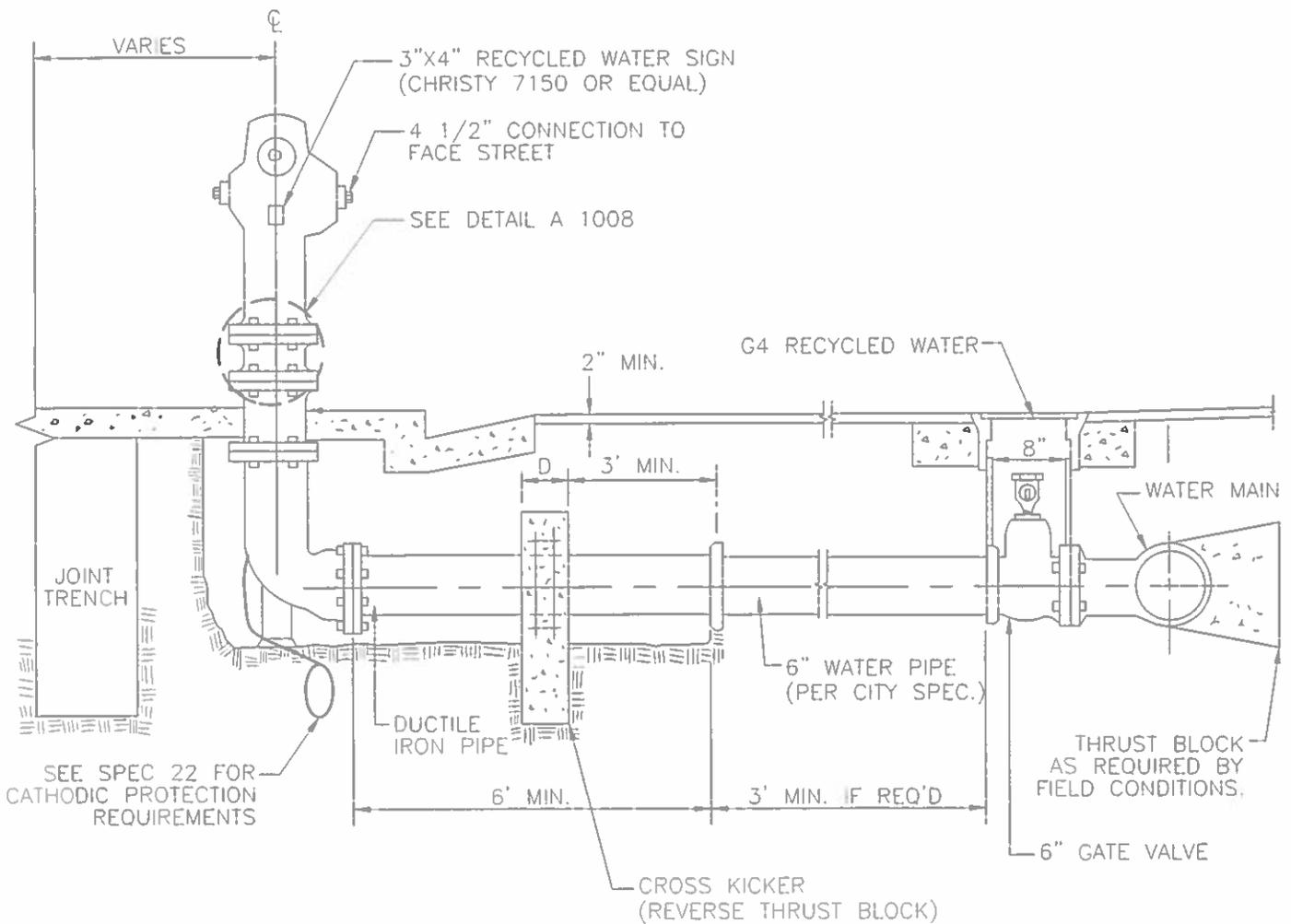
NOTES:

1. WHEN THE HYDRANT IS ON THE SAME SIDE OF THE STREET AS THE JOINT TRENCH, SEE DETAIL 1009.
2. CLOW F900 SERIES WET BARREL HYDRANT WITH HYDRA-SHIELD HYDRANT SECURITY CAP.
3. ALL FITTINGS SHALL BE FACTORY CEMENT LINED OR FUSION EPOXY COATED.
4. THE FACE AND TOP OF CURB SHALL BE PAINTED RED FOR 4.5' ON BOTH SIDES OF THE HYDRANT, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. HYDRANT EXTERIOR PAINT TO BE "PURPLE" KELLEY-MORE DURA-POXY COLOR # 70251-0608



CITY OF PLEASANTON
STANDARD DETAILS
RECYCLED WATER FLUSHING
HYDRANT CONNECTION

DRAWN BY: SN
CHECKED BY: AN
SCALE: NTS
DATE: 8/2016
DWG NO.: 1008



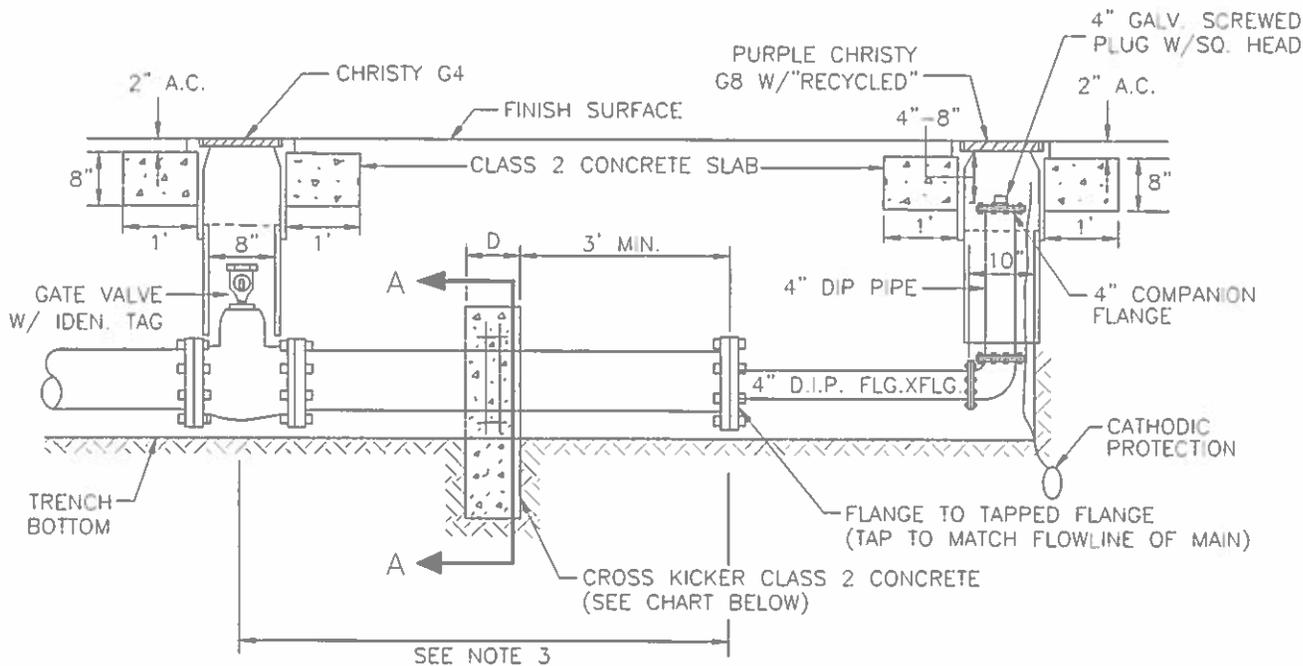
NOTES:

1. SEE DETAIL 1007 FOR GENERAL FIRE HYDRANT NOTES AND DETAILS.
2. AT THE CONTRACTORS OPTION THE CROSS KICKER MAY BE ELIMINATED IF THE PIPE IS FLANGED FROM THE MAIN TO THE HYDRANT.
3. DUCTILE IRON PIPE SHALL ALSO BE USED IF THE JOINT TRENCH IS IN FRONT OF THE HYDRANT.
4. TRACER WIRE SHALL BE INSTALLED IF PVC PIPE IS USED



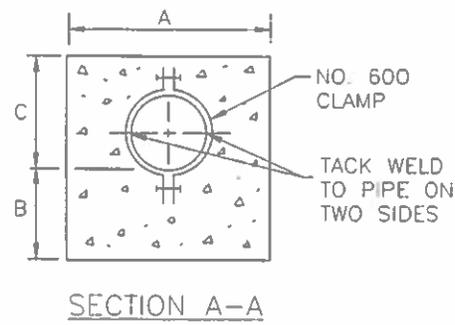
CITY OF PLEASANTON
STANDARD DETAILS
RECYCLED WATER FLUSHING CONNECTION
(WITH HYDRANT ON SAME SIDE OF
STREET AS JOINT TRENCH)

DRAWN BY: SN
CHECKED BY: AN
SCALE: NTS
DATE: 8/2016
DWG NO.: 1009



TYPICAL CROSS KICKER DIMENSIONS ADJUST SIZE FOR SOIL CONDITIONS

PIPE-SIZE	A	B	C	D	CU.YDS.
6"	18"	12"	12"	6"	0.1
8"	24"	16"	14"	8"	0.1
10"	30"	21"	18"	10"	0.2
12"	36"	24"	20"	12"	0.4

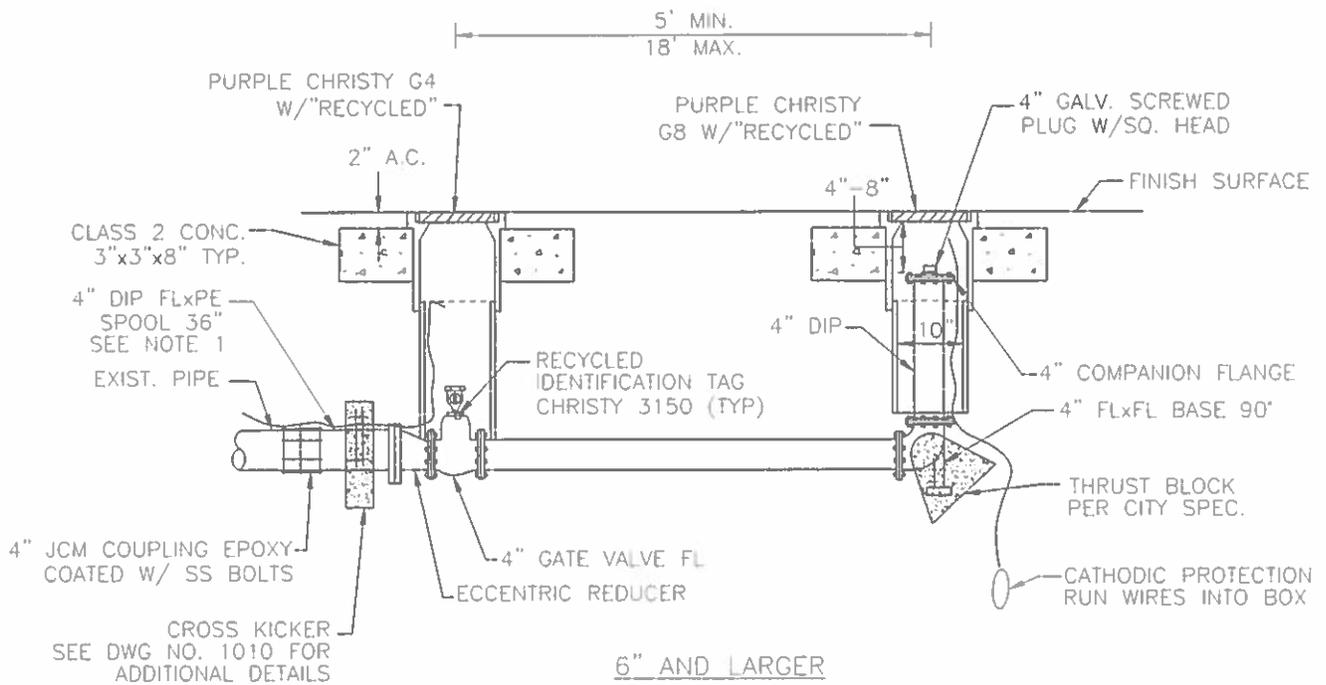
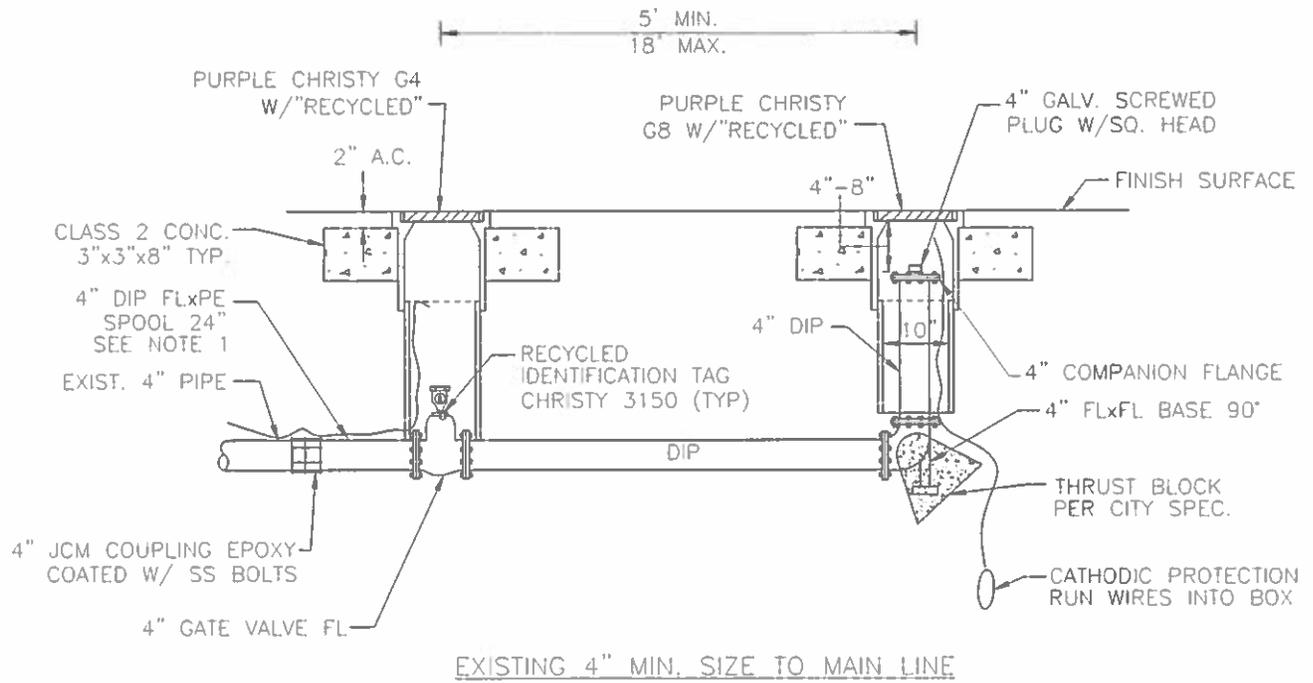


- NOTES:**
1. VALUES SHOWN ARE BASED ON 1500 P.S.F. SOIL BEARING PRESSURE AND 200 P.S.I. TEST PRESSURE. AREAS MAY BE INCREASED BY THE ENGINEER IF FIELD CONDITIONS WARRANT.
 2. SECTION WITH NO. 600 CLAMP SHALL BE DUCTILE IRON.
 3. DISTANCE SHALL NOT EXCEED 18' UNLESS OTHERWISE APPROVED BY CITY ENGINEER, NO SERVICES MAY BE CONNECTED BETWEEN VALVE AND END OF WATER MAIN.
 4. ALL BLOWOFFS TO BE 4".
 5. SEE SPEC SEC 22 FOR CATHODIC PROTECTION.
 6. ALL DIP SHALL BE BAGGED.



CITY OF PLEASANTON
STANDARD DETAILS
RECYCLED WATER
BLOWOFF FUTURE EXTENSION

DRAWN BY: SN
CHECKED BY: AN
SCALE: NTS
DATE: 8/2016
DWG NO.: 1010



NOTES:

1. IF EXISTING PIPE IS LARGER THAN 4", JCM COUPLING AND 36" MIN. DIP SPOOL SHALL BE SAME DIAMETER AS EXISTING PIPE AND AN ADDITIONAL FLxFL REDUCER SHALL BE INSTALLED BETWEEN 36" SPOOL AND 4" GATE VALVE. INSTALL CROSS TRENCH KICKER ON SPOOL.
2. SEE SPEC SEC 22 FOR CATHODIC PROTECTION DETAILS, PIPES SHALL BE BONDED.



CITY OF PLEASANTON
STANDARD DETAILS
RECYCLED BLOWOFF AT DEAD END

DRAWN BY: SN
CHECKED BY: AN
SCALE: NTS
DATE: 8/2016
DWG NO.: 1011

12 September 2016

Job No. 1608244
Cust. No. 11521

Ms. Yanet Zepeda
ENGEIO Incorporated
6399 San Ignacio Avenue, Suite 150
San Jose, CA 95119

Subject: Project No.: 6621.300.008
Project Name: Valley Avenue Pavement Investigation
Corrosivity Analysis – ASTM Test Methods

Dear Ms. Zepeda:

Pursuant to your request, CERCO Analytical has analyzed the soil samples submitted on August 26, 2016. Based on the analytical results, this brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurements, samples 001, 002, 004 & 005 are classified as “moderately corrosive” and sample 003 is classified as “mildly corrosive”. All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentrations range from none detected to 27 mg/kg. Because the chloride ion concentrations are less than 300 mg/kg, they are determined to be insufficient to attack steel embedded in a concrete mortar coating.

The sulfate ion concentrations range from none detected to 38 mg/kg and are determined to be insufficient to damage reinforced concrete structures and cement mortar-coated steel at these locations.

The sulfide ion concentrations reflect none detected with a detection limit of 50 mg/kg.

The pH of the soils range from 7.13 to 8.63, which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potentials range from 320 to 460-mV. Samples 001, 002 & 003 are indicative of aerobic soil conditions and samples 004 & 005 are indicative of potentially “slightly corrosive” soils resulting from anaerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc. at (925) 927-6630.*

Very truly yours,

CERCO ANALYTICAL, INC.


Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure

Client: ENGeo Incorporated
 Client's Project No.: 6621.300.008
 Client's Project Name: Valley Ave., Pavement Investigation
 Date Sampled: 26-Aug-16
 Date Received: 26-Aug-16
 Matrix: Soil
 Authorization: Signed Chain of Custody

Date of Report: 12-Sep-2016

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity			Sulfate (mg/kg)*
					(100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	
1608244-001	1C-3 @ 3'-5'	450	8.29	-	4,000	N.D.	16	38
1608244-002	1C-1 @ 3'-5'	440	8.63	-	3,200	N.D.	27	33
1608244-003	1C-5 @ 3'-5'	460	7.13	-	17,000	N.D.	N.D.	N.D.
1608244-004	1C-7 @ 3'-5'	320	7.74	-	4,900	N.D.	N.D.	N.D.
1608244-005	1C-8 @ 3'-5'	340	7.95	-	4,200	N.D.	N.D.	N.D.

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327
Reporting Limit:	-	-	10	-	50	15
Date Analyzed:	2-Sep-2016	2-Sep-2016	-	2-Sep-2016	2-Sep-2016	2-Sep-2016


 Cheryl McMillen
 Laboratory Director

* Results Reported on "As Received" Basis
 N.D. - None Detected



LOG OF BORING B1

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 322 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (ksf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			4½-inches AC										
			10-inches AB										
1													
2	320		SANDY LEAN CLAY (CL), olive brown to dark brown, slightly moist										
3													
4													
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B2

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 326 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			4-inches AC										
			15-inches AB										
1	325												
2			SANDY LEAN CLAY (CL), olive brown to dark brown, slightly moist										
3													
4													
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B3

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 327 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			4-inches AC										
			1 1/2-inches AB										
1			SANDY LEAN CLAY (CL), yellowish brown to dark yellowish brown, slightly moist										
2	325												
3													
4													
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B4

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 328 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			7-inches AC										
			11-inches AB										
1			CLAYEY SAND (SC), yellowish brown, slightly moist										
2													
3	325												
4													
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B5

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 330 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			5-inches AC										
			Geotextile encountered at approximately 2-inches below pavement grade.										
1			24-inches AB										
2													
3			POORLY GRADED SAND WITH GRAVEL (SP), yellowish brown to dark yellowish brown, slightly moist										
4													
5	325		Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B6

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 333 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			5-inches AC										
			10-inches AB										
1			SANDY LEAN CLAY (CL), very dark brown to olive brown, slightly moist										
2													
3	330												
4													
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B7

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 331 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			4½-inches AC										
			Geotextile encountered at approximately 2-inches below pavement grade.										
1	330		11-inches AB										
2			SANDY LEAN CLAY (CL), grayish green, slightly moist, minor rootlets										
3													
4													
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										



LOG OF BORING B8

Pavement Investigation
 Valley Avenue
 Pleasanton, CA
 6621.300.008

DATE DRILLED: 8/26/2016
 HOLE DEPTH: Approx. 5 ft.
 HOLE DIAMETER: 4.0 in.
 SURF ELEV (SRTM): 324 ft.

LOGGED / REVIEWED BY: Y. Zepeda / RB
 DRILLING CONTRACTOR: West Coast Exploration
 DRILLING METHOD: Solid Flight Auger
 HAMMER TYPE: N/A

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits			Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Unconfined Strength (tsf) *field approx
							Liquid Limit	Plastic Limit	Plasticity Index				
			3-inches AC										
			Geotextile encountered at approximately 2-inches below pavement grade.										
1			18-inches AB										
2			SANDY LEAN CLAY (CL), very dark brown, slightly moist										
3													
4	320												
5			Bottom of boring at approximately 5 feet below existing grade. Groundwater not encountered.										

