

# City of San Diego

**CONTRACTOR'S NAME:** El Cajon Grading and Engineering Co, Inc.

**ADDRESS:** PO BOX 967, Lakeside, CA 92040

**TELEPHONE NO.:** 619-561-9840 **FAX NO.:** 619-561-9908

**CITY CONTACT:** Ronald McMinn, Jr. Contract Specialist, Email: [RMcMinn@sandiego.gov](mailto:RMcMinn@sandiego.gov)

**Phone No.** (619) 533-4618

G.Torres / RW.Bustamante / LA.Davis

## BIDDING DOCUMENTS



**FOR**

## OTAY 1<sup>ST</sup> & 2<sup>ND</sup> PIPELINES – WEST OF HIGHLAND AVE

BID NO.: K-20-1833-DBB-3-A

SAP NO. (WBS/IO/CC): S-12016

CLIENT DEPARTMENT: 2000

COUNCIL DISTRICT: 3, 9

PROJECT TYPE: KA

**THIS CONTRACT WILL BE SUBJECT TO THE FOLLOWING:**

- PHASED-FUNDING
- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM
- PREVAILING WAGE RATES: STATE  FEDERAL
- APPRENTICESHIP

**BID DUE DATE:**

**2:00 PM**

**AUGUST 1, 2019**

**CITY OF SAN DIEGO'S ELECTRONIC BIDDING SITE, PLANETBIDS**

<http://www.sandiego.gov/cip/bidopps/index.shtml>

**ENGINEER OF WORK**

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Registered Engineer:

  
1) Registered Engineer \_\_\_\_\_  
Date 6/28/19

Seal:



  
2) For City Engineer \_\_\_\_\_  
Date 6/20/19

Seal:



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## NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for **Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines – West of Highland Ave.** For additional information refer to Attachment A.
2. **FULL AND OPEN COMPETITION:** This solicitation is subject to full and open competition and may be bid by Contractors on the City's approved Prequalified Contractors List. For information regarding the Contractors Prequalified list visit the City's web site: <http://www.sandiego.gov>.
3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$21,916,000.**
4. **BID DUE DATE AND TIME ARE: AUGUST 1, 2019 at 2:00 PM..**
5. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.
6. **LICENSE REQUIREMENT:** To be eligible for award of this contract, Prime contractor must possess the following licensing classifications: **A**
  - 6.1. **ADDITIONAL LICENSE REQUIREMENTS:** All observation wells or piezometers shall be installed by C-57 well drilling contractirs.
7. **SUBCONTRACTING PARTICIPATION PERCENTAGES:** Subcontracting participation percentages apply to this contract.
  - 7.1. The City has incorporated **mandatory** SLBE-ELBE subcontractor participation percentages to enhance competition and maximize subcontracting opportunities. For the purpose of achieving the mandatory subcontractor participation percentages, a recommended breakdown of the SLBE and ELBE subcontractor participation percentages based upon certified SLBE and ELBE firms has also been provided to achieve the mandatory subcontractor participation percentages:

1. SLBE participation	<b>9.4%</b>
2. ELBE participation	<b>12.9%</b>
3. Total mandatory participation	<b>22.3%</b>
  - 7.2. The Bid may be declared non-responsive if the Bidder fails to meet the following requirements:
    - 7.2.1. Include SLBE-ELBE certified subcontractors at the overall mandatory participation percentage identified in this document; **OR**
    - 7.2.2. Submit Good Faith Effort documentation, saved in searchable Portable Document Format (PDF) and stored on a Universal Serial Bus (USB) Type-A, Compact Disc (CD) or Digital Video Disc (DVD), demonstrating the Bidder made a good faith effort to outreach to and include SLBE-ELBE Subcontractors

required in this document within 3 Working Days of the Bid opening if the overall mandatory participation percentage is not met.

**8. AWARD PROCESS:**

- 8.1.** The Award of this contract is contingent upon the Contractor's compliance with all conditions of Award as stated within these documents and within the Notice of Intent to Award.
- 8.2.** Upon acceptance of bids and determination of the apparent low bidder, the City will prepare the contract documents for execution within approximately 21 days of the date of the bid opening. The City will then award the contract upon receipt of properly signed Contract, bonds, and insurance documents.
- 8.3.** This contract will be deemed executed and effective only upon the signing of the Contract by the Mayor or his designee and approval as to form by the City Attorney's Office.
- 8.4.** The low Bid will be determined by the Base Bid plus all the Alternates.
- 8.5.** Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base Bid alone; or for the Base Bid plus one or more alternates.

**9. SUBMISSION OF QUESTIONS:**

- 9.1.** The Director (or Designee) of Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. Any questions related to this solicitation shall be submitted to:

Public Works Contracts  
525 B Street, Suite 750 (7<sup>th</sup> Floor)  
San Diego, California, 92101  
Attention: Ronald McMinn, Jr.

OR:

[RMcMinn@sandiego.gov](mailto:RMcMinn@sandiego.gov)

- 9.2.** Questions received less than 14 days prior to the date for opening of Bids may not be considered.
- 9.3.** Questions or clarifications deemed by the City to be material shall be answered via issuance of an addendum and posted to the City's online bidding service.
- 9.4.** Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Bidder's

responsibility to be informed of any addenda that have been issued and to include all such information in its Bid.

**10. PHASED FUNDING:** For Phased Funding Conditions, see Attachment B.

**11. ADDITIVE/DEDUCTIVE ALTERNATES:**

**11.1.** The additive/deductive alternates have been established to allow the City to compare the cost of specific portions of the Work with the Project's budget and enable the City to make a decision whether to incorporate these portions prior to award. The award will be established as described in the Bid. The City reserves the right to award the Contract for the Base Bid only or for the Base Bid plus one or more Alternates.

**11.2.** For water pipeline projects, the Plans typically show all cut and plug and connection work to be performed by City Forces. However, Bidders shall refer to Bidding Documents to see if all or part of this work will be performed by the Contractor.

## INSTRUCTIONS TO BIDDERS

### 1. PREQUALIFICATION OF CONTRACTORS:

- 1.1. Contractors submitting a Bid must be pre-qualified for the total amount proposed, including all alternate items, prior to the date of submittal. Bids from contractors who have not been pre-qualified as applicable and Bids that exceed the maximum dollar amount at which contractors are pre-qualified may be deemed **non-responsive** and ineligible for award.
- 1.2. The completed application must be submitted online no later than 2 weeks prior to the bid opening.
- 1.3. **Joint Venture Bidders Cumulative Maximum Bidding Capacity:** For projects with an engineer's estimate of \$30,000,000 or greater, Joint Ventures submitting bids may be deemed responsive and eligible for award if the cumulative maximum bidding capacity of the individual Joint Venture entities is equal to or greater than the total amount proposed.
  - 1.3.1. Each of the entities of the Joint Venture must have been previously prequalified at a minimum of \$15,000,000.
  - 1.3.2. Bids submitted with a total amount proposed of less than \$30,000,000 are not eligible for Cumulative Maximum Bidding Capacity prequalification. To be eligible for award in this scenario, the Joint Venture itself or at least one of the Joint Venture entities must have been prequalified for the total amount proposed.
  - 1.3.3. Bids submitted by Joint Ventures with a total amount proposed of \$30,000,000 or greater on a project with an engineer's estimate of less than \$30,000,000 are not eligible for Cumulative Maximum Bidding Capacity prequalification.
  - 1.3.4. The Joint Venture designated as the Apparent Low Bidder shall provide evidence of its corporate existence and furnish good and approved bonds in the name of the Joint Venture within 14 Calendar Days of receipt by the Bidder of a form of contract for execution.
- 1.4. Complete information and links to the on-line prequalification application are available at:  
  
<http://www.sandiego.gov/cip/bidopps/prequalification>
- 1.5. Due to the City's responsibility to protect the confidentiality of the contractors' information, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on [PlanetBids™](#).

2. **ELECTRONIC FORMAT RECEIPT AND OPENING OF BIDS:** Bids will be received in electronic format (eBids) EXCLUSIVELY at the City of San Diego's electronic bidding (eBidding) site, at: <http://www.sandiego.gov/cip/bidopps/index.shtml> and are due by the date, and time shown on the cover of this solicitation.
- 2.1. **BIDDERS MUST BE PRE-REGISTERED** with the City's bidding system and possess a system-assigned Digital ID in order to submit and electronic bid.
- 2.2. The City's bidding system will automatically track information submitted to the site including IP addresses, browsers being used and the URLs from which information was submitted. In addition, the City's bidding system will keep a history of every login instance including the time of login, and other information about the user's computer configuration such as the operating system, browser type, version, and more. Because of these security features, Contractors who disable their browsers' cookies will not be able to log in and use the City's bidding system.
- 2.3. The City's electronic bidding system is responsible for bid tabulations. Upon the bidder's or proposer's entry of their bid, the system will ensure that all required fields are entered. **The system will not accept a bid for which any required information is missing.** This includes all necessary pricing, subcontractor listing(s) and any other essential documentation and supporting materials and forms requested or contained in these solicitation documents.
- 2.4. **BIDS REMAIN SEALED UNTIL BID DEADLINE.** eBids are transmitted into the City's bidding system via hypertext transfer protocol secure (https) mechanism using SSL 128-256 bit security certificates issued from Verisign/Thawte which encrypts data being transferred from client to server. Bids submitted prior to the "Bid Due Date and Time" are not available for review by anyone other than the submitter who has until the "Bid Due Date and Time" to change, rescind or retrieve its proposal should it desire to do so.
- 2.5. **BIDS MUST BE SUBMITTED BY BID DUE DATE AND TIME.** Once the bid deadline is reached, no further submissions are accepted into the system. Once the Bid Due Date and Time has lapsed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, EOCP compliance and other issues. The City may require any Bidder to furnish statement of experience, financial responsibility, technical ability, equipment, and references.
- 2.6. **RECAPITULATION OF THE WORK.** Bids shall not contain any recapitulation of the Work. Conditional Bids may be rejected as being non-responsive. Alternative proposals will not be considered unless called for.
- 2.7. **BIDS MAY BE WITHDRAWN** by the Bidder only up to the bid due date and time.



**2.7.1. Important Note:** Submission of the electronic bid into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.

**2.8. ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE:** To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed on the cover of this solicitation at least five (5) working days prior to the Bid/Proposal due date to ensure availability.

### **3. ELECTRONIC BID SUBMISSIONS CARRY FULL FORCE AND EFFECT**

**3.1.** The bidder, by submitting its electronic bid, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.

**3.2.** By submitting an electronic bid, the bidder certifies that the bidder has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its bid proposal, the bidder acknowledges, agrees to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.

**3.3.** The Bidder, by submitting its electronic bid, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this bid are true and correct.

**3.4.** The Bidder agrees to the construction of the project as described in Attachment "A-Scope of Work" for the City of San Diego, in accordance with the requirements set forth herein for the electronically submitted prices. The Bidder guarantees the Contract Price for a period of 120 days from the date of Bid opening. The duration of the Contract Price guarantee shall be extended by the number of days required for the City to obtain all items necessary to fulfill all conditions precedent.

**4. BIDS ARE PUBLIC RECORDS:** Upon receipt by the City, Bids shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Bid. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.

**5. CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:**

**5.1.** **Prior** to the Award of the Contract or Task Order, you and your Subcontractors and Suppliers must register with the City’s web-based vendor registration and bid management system. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg>

**5.2.** The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.

**6. JOINT VENTURE CONTRACTORS:** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 14 Calendar Days after receiving the Contract forms.

**7. INSURANCE REQUIREMENTS:**

**7.1.** All certificates of insurance and endorsements required by the contract are to be provided upon issuance of the City’s Notice of Intent to Award letter.

**7.2.** Refer to sections 5-4, “INSURANCE” of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

**8. REFERENCE STANDARDS:** Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction (“The GREENBOOK”) <a href="http://www.greenbookspecs.org/">http://www.greenbookspecs.org/</a>	2018	PWPI010119-01
City of San Diego Standard Specifications for Public Works Construction (“The WHITEBOOK”)* <a href="https://www.sandiego.gov/publicworks/edocref/greenbook">https://www.sandiego.gov/publicworks/edocref/greenbook</a>	2018	PWPI010119 -02
City of San Diego Standard Drawings* <a href="https://www.sandiego.gov/publicworks/edocref/standarddraw">https://www.sandiego.gov/publicworks/edocref/standarddraw</a>	2018	PWPI010119 -03
Citywide Computer Aided Design and Drafting (CADD) Standards <a href="https://www.sandiego.gov/publicworks/edocref/drawings">https://www.sandiego.gov/publicworks/edocref/drawings</a>	2018	PWPI010119 -04
California Department of Transportation (CALTRANS) Standard Specifications – <a href="http://www.dot.ca.gov/des/oe/construction-contract-standards.html">http://www.dot.ca.gov/des/oe/construction-contract-standards.html</a>	2018	PWPI030119-05
CALTRANS Standard Plans <a href="http://www.dot.ca.gov/des/oe/construction-contract-standards.html">http://www.dot.ca.gov/des/oe/construction-contract-standards.html</a>	2018	PWPI030119-06

Title	Edition	Document Number
California Manual on Uniform Traffic Control Devices Revision 3 (CA MUTCD Rev 3) <a href="http://www.dot.ca.gov/trafficops/camutcd/">http://www.dot.ca.gov/trafficops/camutcd/</a>	2014	PWPI030119-07
<p><b>NOTE:</b>           *Available online under Engineering Documents and References at:  <a href="http://www.sandiego.gov/publicworks/edocref/index.shtml">http://www.sandiego.gov/publicworks/edocref/index.shtml</a></p> <p>*Electronic updates to the Standard Drawings may also be found in the link above</p>		

9. **CITY'S RESPONSES AND ADDENDA:** The City, at its discretion, may respond to any or all questions submitted in writing via the City's eBidding web site in the **form of an addendum**. No other responses to questions, oral or written shall be of any force or effect with respect to this solicitation. The changes to the Contract Documents through addenda are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt of Addenda at the time of bid submission.
10. **CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Notice Inviting Bids at any time, and further reserves the right to reject submitted Bids, without giving any reason for such action, at its sole discretion and without liability. Costs incurred by the Bidder(s) as a result of preparing Bids under the Notice Inviting Bids shall be the sole responsibility of each bidder. The Notice Inviting Bids creates or imposes no obligation upon the City to enter a contract.
11. **CONTRACT PRICING:** This solicitation is for a Lump Sum contract with Unit Price provisions as set forth herein. The Bidder agrees to perform construction services for the City of San Diego in accordance with these contract documents for the prices listed below. The Bidder further agrees to guarantee the Contract Price for a period of 120 days from the date of Bid opening. The duration of the Contract Price guarantee may be extended, by mutual consent of the parties, by the number of days required for the City to obtain all items necessary to fulfill all contractual conditions.
12. **SUBCONTRACTOR INFORMATION:**
- 12.1. **LISTING OF SUBCONTRACTORS.** In accordance with the requirements provided in the "Subletting and Subcontracting Fair Practices Act" of the California Public Contract Code, the Bidder shall provide the **NAME** and **ADDRESS** of each Subcontractor who will perform work, labor, render services or who specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Contractor's total Bid. The Bidder shall also state within the description, whether the subcontractor is a **CONSTRUCTOR, CONSULTANT** or **SUPPLIER**. The Bidder shall state the **DIR REGISTRATION NUMBER** for all subcontractors and shall further state within the description, the **PORTION** of the work which will be performed by each subcontractor under this Contract. The Contractor shall list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement may result in the Bid being rejected as **non-responsive** and ineligible for award. The

Bidder's attention is directed to the Special Provisions – Section 3-2, “SELF-PERFORMANCE”, which stipulates the percent of the Work to be performed with the Bidders' own forces. The Bidder shall list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which Bidders are seeking recognition towards achieving any mandatory, voluntary (or both) subcontracting participation goals.

Additionally, pursuant to California Senate Bill 96 and in accordance with the requirements of Labor Code sections 1771.1 and 1725.5, by submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the California Department of Industrial Relations (DIR). **The Bidder shall provide the name, address, license number, DIR registration number of any Subcontractor – regardless of tier** - who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract.

**12.2. LISTING OF SUPPLIERS.** Any Bidder seeking the recognition of Suppliers of equipment, materials, or supplies obtained from third party Suppliers towards achieving any mandatory or voluntary (or both) subcontracting participation goals shall provide, at a minimum, the **NAME, LOCATION (CITY), DIR REGISTRATION NUMBER** and the **DOLLAR VALUE** of each supplier. The Bidder will be credited up to 60% of the amount to be paid to the Suppliers for materials and supplies unless vendor manufactures or substantially alters materials and supplies, in which case, 100% will be credited. The Bidder is to indicate within the description whether the listed firm is a supplier or manufacturer. If no indication is provided, the listed firm will be credited at 60% of the listed dollar value for purposes of calculating the Subcontractor Participation Percentage.

**12.3. LISTING OF SUBCONTRACTORS OR SUPPLIERS FOR ALTERNATES.** For subcontractors or suppliers to be used on additive or deductive alternate items, in addition to the above requirements, bidder shall further note “ALTERNATE” and alternate item number within the description.

**13. SUBMITTAL OF “OR EQUAL” ITEMS:** See Section 4-6, “Trade Names” in The WHITEBOOK and as amended in the SSP.

**14. AWARD:**

**14.1.** The Award of this contract is contingent upon the Contractor’s compliance with all conditions precedent to Award.

**14.2.** Upon acceptance of a Bid, the City will prepare contract documents for execution within approximately 21 days of the date of the Bid opening and award the Contract approximately within 7 days of receipt of properly executed Contract, bonds, and insurance documents.

- 14.3.** This contract will be deemed executed and effective only upon the signing of the Contract by the Mayor or his designee and approval as to form the City Attorney's Office.
- 15. SUBCONTRACT LIMITATIONS:** The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 3-2, "SELF-PERFORMANCE" in The GREENBOOK and as amended in the SSP which requires the Contractor to self-perform not less than the specified amount. Failure to comply with this requirement shall render the bid **non-responsive** and ineligible for award.
- 16. AVAILABILITY OF PLANS AND SPECIFICATIONS:** Contract Documents may be obtained by visiting the City's website: <http://www.sandiego.gov/cip/>. Plans and Specifications for this contract are also available for review in the office of the City Clerk or Public Works Contracts.
- 17. ONLY ONE BID PER CONTRACTOR SHALL BE ACCEPTED:** No person, firm, or corporation shall be allowed to make, file, or be interested in more than one (1) Bid for the same work unless alternate Bids are called for. A person, firm or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or from submitting a Bid in its own behalf. Any Bidder who submits more than one bid will result in the rejection of all bids submitted.
- 18. SAN DIEGO BUSINESS TAX CERTIFICATE:** The Contractor and Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, First floor and submit to the Contract Specialist upon request or as specified in the Contract Documents. Tax Identification numbers for both the Bidder and the listed Subcontractors must be submitted on the City provided forms within these documents.
- 19. BIDDER'S GUARANTEE OF GOOD FAITH (BID SECURITY) FOR DESIGN-BID-BUILD CONTRACTS:**
- 19.1.** For bids \$250,000 and above, bidders shall submit Bid Security at bid time. Bid Security shall be in one of the following forms: a cashier's check, or a properly certified check upon some responsible bank; or an approved corporate surety bond payable to the City of San Diego for an amount of not less than 10% of the total bid amount.
- 19.2.** This check or bond, and the monies represented thereby, will be held by the City as a guarantee that the Bidder, if awarded the contract, will in good faith enter into the contract and furnish the required final performance and payment bonds.
- 19.3.** The Bidder agrees that in the event of the Bidder's failure to execute this contract and provide the required final bonds, the money represented by the cashier's or certified check will remain the property of the City; and the Surety agrees that it will pay to the

City the damages, not exceeding the sum of 10% of the amount of the Bid, that the City may suffer as a result of such failure.

- 19.4. At the time of bid submission, bidders must upload and submit an electronic PDF copy of the aforementioned bid security. Whether in the form of a cashier's check, a properly certified check or an approved corporate surety bond payable to the City of San Diego, the bid security must be uploaded to the City's eBidding system. Within twenty-four (24) hours after the bid due date and time, the first five (5) apparent low bidders must provide the City with the original bid security.
- 19.5. Failure to submit the electronic version of the bid security at the time of bid submission AND failure to provide the original within twenty-four (24) hours may cause the bid to be rejected and deemed **non-responsive**.

**20. AWARD OF CONTRACT OR REJECTION OF BIDS:**

- 20.1. This contract may be awarded to the lowest responsible and reliable Bidder.
- 20.2. Bidders shall complete ALL eBid forms as required by this solicitation. Incomplete eBids will not be accepted.
- 20.3. The City reserves the right to reject any or all Bids, to waive any informality or technicality in Bids received, and to waive any requirements of these specifications as to bidding procedure.
- 20.4. Bidders will not be released on account of their errors of judgment. Bidders may be released only upon receipt by the City within 3 Working Days of the bid opening, written notice from the Bidder which shows proof of honest, credible, clerical error of a material nature, free from fraud or fraudulent intent; and of evidence that reasonable care was observed in the preparation of the Bid.
- 20.5. A bidder who is not selected for contract award may protest the award of a contract to another bidder by submitting a written protest in accordance with the San Diego Municipal Code.
- 20.6. The City of San Diego will not discriminate in the award of contracts with regard to race, religion creed, color, national origin, ancestry, physical handicap, marital status, sex or age.
- 20.7. Each Bid package properly signed as required by these specifications shall constitute a firm offer which may be accepted by the City within the time specified herein.
- 20.8. The City reserves the right to evaluate all Bids and determine the lowest Bidder on the basis of the base bid and any proposed alternates or options as detailed herein.

**21. BID RESULTS:**

- 21.1.** The availability of the bids on the City's eBidding system shall constitute the public announcement of the apparent low bidder. In the event that the apparent low bidder is subsequently deemed non-responsive or non-responsible, a notation of such will be made on the eBidding system. The new ranking and apparent low bidder will be adjusted accordingly.
- 21.2.** To obtain the bid results, view the results on the City's web site, or request the results by U.S. mail and provide a self-addressed, stamped envelope. If requesting by mail, be sure to reference the bid name and number. The bid tabulations will be mailed to you upon their completion. The results will not be given over the telephone.

**22. THE CONTRACT:**

- 22.1.** The Bidder to whom award is made shall execute a written contract with the City of San Diego and furnish good and approved bonds and insurance certificates specified by the City within 14 days after receipt by Bidder of a form of contract for execution unless an extension of time is granted to the Bidder in writing.
- 22.2.** If the Bidder takes longer than 14 days to fulfill these requirements, then the additional time taken shall be added to the Bid guarantee. The Contract shall be made in the form adopted by the City, which includes the provision that no claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
- 22.3.** If the Bidder to whom the award is made fails to enter into the contract as herein provided, the award may be annulled and the Bidder's Guarantee of Good Faith will be subject to forfeiture. An award may be made to the next lowest responsible and reliable Bidder who shall fulfill every stipulation embraced herein as if it were the party to whom the first award was made.
- 22.4.** Pursuant to the San Diego City Charter section 94, the City may only award a public works contract to the lowest responsible and reliable Bidder. The City will require the Apparent Low Bidder to (i) submit information to determine the Bidder's responsibility and reliability, (ii) execute the Contract in form provided by the City, and (iii) furnish good and approved bonds and insurance certificates specified by the City within 14 Days, unless otherwise approved by the City, in writing after the Bidder receives notification from the City, designating the Bidder as the Apparent Low Bidder and formally requesting the above mentioned items.
- 22.5.** The award of the Contract is contingent upon the satisfactory completion of the above-mentioned items and becomes effective upon the signing of the Contract by the Mayor

or designee and approval as to form by the City Attorney's Office. If the Apparent Low Bidder does not execute the Contract or submit required documents and information, the City may award the Contract to the next lowest responsible and reliable Bidder who shall fulfill every condition precedent to award. A corporation designated as the Apparent Low Bidder shall furnish evidence of its corporate existence and evidence that the officer signing the Contract and bond for the corporation is duly authorized to do so.

- 23. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK:** The Bidder shall examine carefully the Project Site, the Plans and Specifications, other materials as described in the Special Provisions, Section 3-9, "TECHNICAL STUDIES AND SUBSURFACE DATA", and the proposal forms (e.g., Bidding Documents). The submission of a Bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work, the quantities of materials to be furnished, and as to the requirements of the Bidding Documents Proposal, Plans, and Specifications.
- 24. CITY STANDARD PROVISIONS:** This contract is subject to the following standard provisions. See The WHITEBOOK for details.
- 24.1.** The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.
- 24.2.** The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.
- 24.3.** The City of San Diego Municipal Code §22.3004 for Contractor Standards.
- 24.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
- 24.5.** Sections 1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.
- 24.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
- 24.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.
- 25. PRE-AWARD ACTIVITIES:**
- 25.1.** The contractor selected by the City to execute a contract for this Work shall submit the required documentation as specified in the herein and in the Notice of Award. Failure to provide the information as specified may result in the Bid being rejected as **non-responsive**.



- 25.2.** The decision that bid is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

**PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND**

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**FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:**

El Cajon Grading and Engineering Co, Inc., a corporation, as principal, and LIBERTY MUTUAL INSURANCE COMPANY, a corporation authorized to do business in the State of California, as Surety, hereby obligate themselves, their successors and assigns, jointly and severally, to The City of San Diego a municipal corporation in the sum of Twenty Million One Hundred Seventy Eight Thousand Nine Hundred One Dollars and Sixty Four Cents (\$20,178,901.64) for the faithful performance of the annexed contract, and in the sum of Twenty Million One Hundred Seventy Eight Thousand Nine Hundred One Dollars and Sixty Four Cents (\$20,178,901.64) for the benefit of laborers and materialmen designated below.

**Conditions:**

If the Principal shall faithfully perform the annexed contract with the City of San Diego, California, then the obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for or performing labor in the execution of this contract, and shall pay all amounts due under the California Unemployment Insurance Act then the obligation herein with respect to laborers and materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all persons, firms and corporations entitled to file claims under the provisions of Article 2. Claimants, (iii) public works of improvement commencing with Civil Code Section 9100 of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives notice of same.

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND (continued)


The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated AUGUST 29, 2019

Approved as to Form

EL CAJON GRADING & ENGINEERING CO., INC.

Principal

By 

WILLIAM R. YOUNG, VICE PRESIDENT

Printed Name of Person Signing for Principal

Mara W. Elliott, City Attorney

By 

Deputy City Attorney

THE OHIO CASUALTY INSURANCE COMPANY

Surety

By 

Attorney-in-fact, MARK D. IATAROLA

Approved:

790 THE CITY DRIVE SOUTH, SUITE 200

Local Address of Surety

By 

James Nagelvoort

Director

Public Works

ORANGE, CA 92868

Local Address (City, State) of Surety

714/634-5728

Local Telephone No. of Surety

Premium \$ 129,333.00 PREMIUM IS FOR CONTRACT TERM AND IS SUBJECT TO ADJUSTMENT BASED ON FINAL CONTRACT PRICE

Bond No. 24240650

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of SAN DIEGO

On 8/29/2019 before me, JESSICA SCHMAL, NOTARY PUBLIC  
*Date Here Insert Name and Title of the Officer*  
personally appeared MARK D. IATAROLA  
*Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal and/or Stamp Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature [Handwritten Signature]  
*Signature of Notary Public*

**OPTIONAL**

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_  
Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_  
Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: MARK D. IATAROLA Signer's Name: \_\_\_\_\_  
 Corporate Officer – Title(s): \_\_\_\_\_  Corporate Officer – Title(s): \_\_\_\_\_  
 Partner –  Limited  General  Partner –  Limited  General  
 Individual  Attorney in Fact  Individual  Attorney in Fact  
 Trustee  Guardian of Conservator  Trustee  Guardian of Conservator  
 Other: \_\_\_\_\_  Other: \_\_\_\_\_  
Signer is Representing: \_\_\_\_\_ Signer is Representing: \_\_\_\_\_



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8201849-024100

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Sandra Figueroa, Mark D. Iatarola, Helen Maloney, John G. Maloney, Jessica Schmal

all of the city of Escondido state of California each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 12th day of August, 2019.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 12th day of August, 2019 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 29TH day of AUGUST, 2019.



By: Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

## ATTACHMENTS

**ATTACHMENT A**  
**SCOPE OF WORK**

## SCOPE OF WORK

1. **SCOPE OF WORK:** Involves new and replacement of a total 5.2 miles of Water transmission main and Water Distribution main. The project will replace old deteriorated steel transmission mains with 36", 24" CMLS transmission main. The project will also replace CI and AC water distribution mains with new 16", 12" and 8" PVC distribution mains.
  - 1.1. The Work shall be performed in accordance with:
    - 1.1.1. The Notice Inviting Bids and Plans numbered **39114-01-D** through **39114-94-D**, and **39114-T01-D** through **39114-T24-D** inclusive.
2. **LOCATION OF WORK:** The location of the Work is as follows:

See Appendix E for Location Map.
3. **CONTRACT TIME:** The Contract Time for completion of the Work, shall be **500 Working Days**.



**ATTACHMENT B**  
**PHASED FUNDING PROVISIONS**

## PHASED FUNDING PROVISIONS

### 1. PRE-AWARD

- 1.1. Within 10 Working Days of the Notice of Intent to Award, the Contractor must contact the Project Manager to discuss fund availability for each phase and shall also submit the following:
  - 1.1.1. Construction Cost Loaded Schedule in accordance with 6-1, "CONSTRUCTION SCHEDULE AND COMMENCEMENT OF THE WORK" and 7-3, "PAYMENT."
- 1.2. Contractor's failure to perform any of the following may result cancelling the award of the Contract:
  - 1.2.1. Meeting with the City's Project Manager to discuss the Phased Funding Schedule.
  - 1.2.2. Agreeing to a Phased Funding Schedule within **thirty** days of meeting with the City's Project Manager.

### 2. POST-AWARD

- 2.1. Do not start any construction activities for the next phase until the Notice to Proceed (NTP) has been issued by the City. The City will issue a separate NTP for each phase.
- 2.2. The City may issue the NTP for a subsequent phase before the completion of the preceding phase.

**PHASED FUNDING SCHEDULE AGREEMENT**

The particulars left blank below, such as the total number of phases and the amounts assigned to each phase, will be completed with funding specific information from the Pre-Award Schedule and Construction Cost Loaded Schedule submitted to and approved by the City.

**BID NUMBER:** K-20-1833-DBB-3-A

**CONTRACT OR TASK TITLE:** Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines – West of Highland Ave

**CONTRACTOR:** El Cajon Grading & Engineering Co. Inc.

Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1	Work to be completed in Phase 1 shall include, Bonds, Mobilization, Project Initiation, Transmission Water Main and Distribution Water Main Installation with associated appurtenances, and all associated Work such as traffic Control, Testing, and implementation of BMPs under Construction Phases 1- 6, which are labeled in the contract drawings on sheets 64-69.	NTP	10/31/2020	\$9,354,209
2	Work to be completed in Phase 2 shall include the continuation of the construction activities associated with the contract and specifications under Construction Phases 7 -14, which are labeled in the contract drawings on sheets 64-69.	11/1/2020	NOC	\$10,824,692.64
Contract Total				\$20,178,901.64

**Notes:**

- 1) WHITEBOOK section 7-3.10, "Phased Funding Compensation" applies.
- 2) The total of all funding phases shall be equal to the TOTAL BID PRICE as shown on BID SCHEDULE 1 -PRICES.
- 3) This PHASED FUNDING SCHEDULE AGREEMENT will be incorporated into the CONTRACT and shall only be revised by written modifications to the CONTRACT.

**CITY OF SAN DIEGO**

PRINT NAME: Nabil Batta  
Construction Manager

Signature: Nabil Batta

Date: November 7, 2019

**CONTRACTOR**

PRINT NAME: William R Young

Title: V.P.

Signature: William R Young

PRINT NAME: BRIAN VITELLE

Project Manager

Signature: <sup>SENIOR ENGINEER</sup>  
Brian Vitelle

Date: 11/12/19

Date: 11/12/19

**ATTACHMENT C**

**RESERVED**

**ATTACHMENT D**  
**PREVAILING WAGE**

## PREVAILING WAGE

1. **PREVAILING WAGE RATES:** Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.
  - 1.1. **Compliance with Prevailing Wage Requirements.** Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.
    - 1.1.1. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.
    - 1.1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.
  - 1.2. **Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed. This shall be in addition to any other applicable penalties allowed under Labor Code sections 1720 – 1861.

- 1.3. Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.
- 1.3.1.** Contractor and their subcontractors shall also furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.
- 1.4. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.
- 1.5. Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on contractors and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.
- 1.6. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- 1.7. Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California 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."
- 1.8. Labor Compliance Program.** The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or assistance, please contact the City of San Diego's Prevailing Wage Unit at 858-627-3200.



- 1.9. Contractor and Subcontractor Registration Requirements.** This project is subject to compliance monitoring and enforcement by the DIR. A contractor or subcontractor shall not be qualified to bid on, be listed in a bid or proposal, subject to the requirements of section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.
- 1.9.1.** A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.
- 1.9.2.** By submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration for themselves and all listed subcontractors to the City at the time of bid or proposal due date or upon request.
- 1.10. Stop Order.** For Contractor or its subcontractors engaging in the performance of any public work contract without having been registered in violation of Labor Code sections 1725.5 or 1771.1, the Labor Commissioner shall issue and serve a stop order prohibiting the use of the unregistered contractors or unregistered subcontractor(s) on ALL public works until the unregistered contractor or unregistered subcontractor(s) is registered. Failure to observe a stop order is a misdemeanor.
- 1.11. List of all Subcontractors.** The Contractor shall provide the list of subcontractors (regardless of tier), along with their DIR registration numbers, utilized on this Contract prior to any work being performed; and the Contractor shall provide a complete list of all subcontractors with each invoice. Additionally, Contractor shall provide the City with a complete list of all subcontractors (regardless of tier) utilized on this contract within ten working days of the completion of the contract, along with their DIR registration numbers. The City shall withhold final payment to Construction Management Professional until at least thirty (30) days after this information is provided to the City.

**1.12. Exemptions for Small Projects.** There are limited exemptions for installation, alteration, demolition, or repair work done on projects of \$25,000 or less. The Contractor shall still comply with Labor Code sections 1720 et. seq. The only recognized exemptions are listed below:

**1.12.1.** Registration. The Contractor will not be required to register with the DIR for small projects. (Labor Code section 1771.1).

**1.12.2.** Certified Payroll Records. The records required in Labor Code section 1776 shall be required to be kept and submitted to the City of San Diego, but will not be required to be submitted online with the DIR directly. The Contractor will need to keep those records for at least three years following the completion of the Contract. (Labor Code section 1771.4).

**1.12.3.** List of all Subcontractors. The Contractor shall not be required to hire only registered subcontractors and is exempt from submitting the list of all subcontractors that is required in section 1.11 above. (Labor code section 1773.3).

**ATTACHMENT E**  
**SUPPLEMENTARY SPECIAL PROVISIONS**

## SUPPLEMENTARY SPECIAL PROVISIONS

The following Supplementary Special Provisions (SSP) modifies the following documents:

1. The **2018 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").
2. The **2018 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:
  - a) General Provisions (A) for all Construction Contracts.

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### SECTION 1 – GENERAL, TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

**1-2 TERMS AND DEFINITIONS.** To the "WHITEBOOK", item 54, "Normal Working Hours", ADD the following:

The **Normal Working Hours** are **8:30 AM to 3:30 PM**, unless stated differently on the traffic control plans.

To the "WHITEBOOK", item 43, DELETE in its entirety and SUBSTITUTE with the following:

43. **Field Order** - A Field Order is a written agreement by the Engineer to compensate you for Work items in accordance with 2-8, "EXTRA WORK" or 2-9, "CHANGED CONDITIONS". A Field Order does not change the Contract Price, Contract Time, or the scope intent of the Contract.

### SECTION 2 - SCOPE OF THE WORK

**2-2.2 Caltrans Encroachment Permit.** To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. You shall apply and obtain the Caltrans Encroachment Permit.
  - a) You shall pay for and secure the permit prior to construction.
  - b) You shall arrange and pay for inspection as required by Caltrans.

**2-2.3 Payment.** To the "WHITEBOOK", item 2, DELETE in its entirety and SUBSTITUTE with the following:

2. The payment for applying and obtaining the Caltrans Encroachment Permit shall be included in the Allowance Bid item for "**Caltrans Encroachment Permit Submittal**" and shall include preparing plans and addressing Caltrans comments.

## SECTION 3 – CONTROL OF THE WORK

**3-2 SELF-PERFORMANCE.** To the “GREENBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

1. You shall perform, with your own organization, Contract Work amounting to at least 50% of the base Bid **AND** 50% of any alternates.

**3-8.7 Contractor’s Quality Control Plan (QCP).** To the “WHITEBOOK”, ADD the following:

7. The establishment and implementation of a Quality Control Plan (QCP), as defined in the standard specifications, shall be required for this Contract. See example in **Appendix G**.

**3-9 TECHNICAL STUDIES AND SUBSURFACE DATA.** To the “WHITEBOOK”, ADD the following:

5. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests at the Work Site:

- a) Geotechnical Report dated July 28, 2016 by Allied Geotechnical Engineers, Inc.

6. The report listed above is available for review at the following link:

<https://filecloud.sandiego.gov/url/wtnf4g6nsy2th8ms>

**3-12.1 General.** To the “WHITEBOOK”, ADD the following:

2. You shall provide a PM-10 certified self-loading motorized street sweeper equipped with a functional water spray system for this project.
3. You shall sweep all paved areas within the Work site and all paved haul routes as specified below:
  - a) Every Friday on a weekly basis.
  - b) 1 Working Day prior to each rain event.
  - c) As directed by the Engineer.

If these requirements would require you to sweep on a Holiday or Weekend, then you shall sweep the next available Working Day prior to that Holiday or Weekend.

**3-12.7 Drinking Water Discharges Requirements.** To the “WHITEBOOK”, ADD the following:

1. You shall record the results for each discharge event on the City’s Drinking Water Discharge Monitoring form included as **Appendix H - Monthly Drinking Water Discharge Monitoring Form**.

**3-13.3 Warranty.** To the “WHITEBOOK”, item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. You shall warranty and repair all defective materials and workmanship for a period of 1 year. This call back warranty period shall start on the date the Work was accepted by the City unless the City had beneficial use of the project (excluding water, sewer, and storm drain projects). In addition, you shall warranty the Work against all latent defects for a period of 10 years and patent defects for a period of 4 years.

**3-15.3 Coordination.** To the “WHITEBOOK”, ADD the following:

2. Other adjacent City projects are scheduled for construction for the same time period in the vicinity of Howard Ave. Polk Ave. & 30<sup>th</sup>. St. Wightman Ave & 35<sup>th</sup> St. El Cajon Blvd & Boundary St. and University Ave & Highland Ave. See **Appendix “F” – Adjacent Projects Map** for the approximate location. Coordinate the Work with the adjacent projects as listed below:
  - a) Howard Ave PH 2 (Undergrounding Project) Mathew Veverka, Resident Engineer (619 – 533 – 4465)
  - b) Sandag: Howard Bikeway Project, Alison Moss , Project Manager (619-595-5354)
  - c) 30<sup>th</sup> Street Pipeline Replacement, Rick Collete, Construction Manager (760-521-8898)
  - d) Sandag : North Park – Mid City Phase 1 Bikeways, Alison Moss, Project Manager (619-595-5354)
  - e) Remaining Small Diameter CI Water PH 2, Gabriel Torres, Project Manager (619-533-4630)
  - f) Sewer Group 767A, David Engel, Resident Engineer (858-573-5032)
  - g) AC Water & Sewer Group Job 1044 (W), Reyhaneh Martin, Project Manager (619- 533-4131)
  - h) University Avenue Complete Street Phase 1, Steven Bliss, Project Manager (619-533-4668)
  - i) Cherokee Point South SD & GI, Shawn Krause, Project Manager (619-533-5107)

#### **SECTION 4 - CONTROL OF MATERIALS**

**4-1.3.4 Specialty Inspection Paid for by the Contractor.** To the “WHITEBOOK”, ADD the following:

2. The specialty inspections required are listed as follows:
  - a) Welding
  - b) Structural Concrete

**4-3.6 Preapproved Materials.** To the "WHITEBOOK", ADD the following:

3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

**4-6 TRADE NAMES.** To the "WHITEBOOK", ADD the following:

11. You shall submit your list of proposed substitutions for an "equal" item **no later than 5 Working Days after the determination of the Apparent Low Bidder** and on the City's Product Submittal Form available at:

<http://www.sandiego.gov/publicworks/edocref/index.shtml>

## **SECTION 5 – LEGAL RELATIONS AND RESPONSIBILITIES**

**5-4 INSURANCE.** To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

**5-4 INSURANCE.**

1. The insurance provisions herein shall not be construed to limit your indemnity obligations contained in the Contract.

**5-4.1 Policies and Procedures.**

1. You shall procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.
2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
3. You shall maintain this insurance for the duration of this Contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this Contract. Your liabilities under the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this Contract.
4. The payment for insurance shall be included in the Contract Price as bid by you. Except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any Work under this Contract until you have provided and the City has approved all required insurance.
5. Policies of insurance shall provide that the City is entitled to 30 Days (10 Days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

**5-4.2 Types of Insurance.**

**5-4.2.1 Commercial General Liability Insurance.**

1. Commercial General Liability Insurance shall be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.
2. The policy shall cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
3. There shall be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You shall maintain the same or equivalent insurance for at least 10 years following completion of the Work.
4. All costs of defense shall be outside the policy limits. Policy coverage shall be in liability limits of not less than the following:

<u>General Annual Aggregate Limit</u>	<u>Limits of Liability</u>
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

**5-4.2.2 Commercial Automobile Liability Insurance.**

1. You shall provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").
2. All costs of defense shall be outside the limits of the policy.

**5-4.2.3 Contractors Pollution Liability Insurance.**

1. You shall procure and maintain at your expense or require your Subcontractor, as described below, to procure and maintain the Contractors Pollution Liability Insurance including contractual liability coverage to cover liability arising out of cleanup, removal, storage, or handling of hazardous or toxic chemicals, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit for bodily injury and property damage.
2. All costs of defense shall be outside the limits of the policy. Any such insurance provided by your Subcontractor instead of you shall be approved separately in writing by the City.



3. For approval of a substitution of your Subcontractor's insurance, you shall certify that all activities for which the Contractors Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance. The deductible shall not exceed \$25,000 per claim.
4. Contractual liability shall include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There shall be no endorsement or modification of the coverage limiting the scope of coverage for either "insured vs. insured" claims or contractual liability.
5. Occurrence based policies shall be procured before the Work commences and shall be maintained for the Contract Time. Claims Made policies shall be procured before the Work commences, shall be maintained for the Contract Time, and shall include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies that shall continue to be maintained for 12 months after the completion of the Work without advancing the retroactive date.
6. Except as provided for under California law, the policy or policies shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

#### **5-4.2.4**

#### **Contractors Hazardous Transporters Pollution Liability Insurance.**

1. You shall provide at your expense or require your Subcontractor to provide, as described below, Contractors Hazardous Transporters Pollution Liability Insurance including contractual liability coverage to cover liability arising out of transportation of hazardous or toxic, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit per occurrence/aggregate for bodily injury and property damage.
2. All costs of defense shall be outside the limits of the policy. The deductible shall not exceed \$25,000 per claim. Any such insurance provided by a subcontractor instead of you shall be approved separately in writing by the City.
3. For approval of the substitution of Subcontractor's insurance the Contractor shall certify that all activities for which Contractors Hazardous Transporters Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance.
4. Contractual liability shall include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There shall be no endorsement or modification of the coverage limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. Occurrence based policies shall be procured before the Work commences and shall be maintained for the duration of this Contract. Claims Made policies shall be procured before the Work commences, shall be maintained for the duration of this contract, and shall include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies

that shall continue to be maintained for 12 months after the completion of the Work under this Contract without advancing the retroactive date.

5. Except as provided for under California law, the policy or policies shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

**5-4.3 Rating Requirements.** Except for the State Compensation Insurance Fund, all insurance required by this Contract as described herein shall be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

**5-4.3.1 Non-Admitted Carriers.** The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers shall be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

**5-4.4 Evidence of Insurance.** Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document shall be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

**5-4.5 Policy Endorsements.**

**5-4.5.1 Commercial General Liability Insurance.**

**5-4.5.1.1 Additional Insured.**

1. You shall provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.
2. To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.
3. The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more shall include liability arising out of:
  - a) Ongoing operations performed by you or on your behalf,
  - b) your products,
  - c) your Work, e.g., your completed operations performed by you or on your behalf, or
  - d) premises owned, leased, controlled, or used by you.

4. The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 shall include liability arising out of:
  - a) Ongoing operations performed by you or on your behalf,
  - b) your products, or
  - c) premises owned, leased, controlled, or used by you.

**5-4.5.1.2 Primary and Non-Contributory Coverage.** The policy shall be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it shall provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

**5-4.5.1.3 Project General Aggregate Limit.** The policy or policies shall be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work shall reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit shall be in addition to the aggregate limit provided for the products-completed operations hazard.

**5-4.5.2 Commercial Automobile Liability Insurance.**

**5-4.5.2.1 Additional Insured.** Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

**5-4.5.3 Contractors Pollution Liability Insurance Endorsements.**

**5-4.5.3.1 Additional Insured.**

1. The policy or policies shall be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of:
  - a) Ongoing operations performed by you or on your behalf,
  - b) your products,
  - c) your work, e.g., your completed operations performed by you or on your behalf, or
  - d) premises owned, leased, controlled, or used by you.

Except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of § 2782 of the California

Civil Code apply, this endorsement shall not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers, employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.

2. In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that are not covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives shall be limited to obligations permitted by California Insurance Code §11580.04.

**5-4.5.3.2 Primary and Non-Contributory Coverage.** The policy or policies shall be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

**5-4.5.3.3 Severability of Interest.** For Contractors Pollution Liability Insurance, the policy or policies shall provide that your 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 and shall provide cross-liability coverage.

**5-4.5.4 Contractors Hazardous Transporters Pollution Liability Insurance Endorsements.**

**5-4.5.4.1 Additional Insured.**

1. The policy or policies shall be endorsed to include as an Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of:
  - a) Ongoing operations performed by you or on your behalf,
  - b) your products,
  - c) your work, e.g., your completed operations performed by you or on your behalf, or
  - d) premises owned, leased, controlled, or used by you.

Except that in connection with, collateral to, or affecting any construction contract to which the provisions of subdivision (b) of §2782 of the California Civil Code apply, this endorsement shall not provide any duty of indemnity coverage for the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives in any case where an agreement to indemnify the City and its respective elected officials, officers,

employees, agents, and representatives would be invalid under subdivision (b) of §2782 of the California Civil Code.

2. In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that are not covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives shall be limited to obligations permitted by California Insurance Code §11580.04.

**5-4.5.4.2 Primary and Non-Contributory Coverage.** The policy or policies shall be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

**5-4.5.4.3 Severability of Interest.** For Contractors Hazardous Transporters Pollution Liability Insurance, the policy or policies shall provide that your 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 and shall provide cross-liability coverage.

**5-4.6 Deductibles and Self-Insured Retentions.** You shall pay for all deductibles and self-insured retentions. You shall disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.

**5-4.7 Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this Contract.

**5-4.8 Notice of Changes to Insurance.** You shall notify the City 30 Days prior to any material change to the policies of insurance provided under this Contract.

**5-4.9 Excess Insurance.** Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

**5-4.11 Workers' Compensation Insurance and Employers Liability Insurance.**

1. In accordance with the provisions of §3700 of the California Labor Code, you shall provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.

2. Limits for this insurance shall be not less than the following:
 

<u>Workers' Compensation</u>	<u>Statutory Employers Liability</u>
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit
3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which requires 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 you shall comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

**5-4.11.1. Waiver of Subrogation.** The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.

**5-13 ELECTRONIC COMMUNICATION.** To the "WHITEBOOK", ADD the following:

2. Virtual Project Manager shall be used on this Contract. For more information, refer to the VPM training videos at the location below:  
<https://www.sandiego.gov/publicworks/edocref>

**SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK**

**6-1.1 Construction Schedule.** To the "WHITEBOOK", item 1, subsection "s", DELETE in its entirety and SUBSTITUTE with the following:

- s) Submit an updated cash flow forecast with every pay request (for each Project ID or WBS number provided in the Contract) showing periodic and cumulative construction billing amounts for the duration of the Contract Time. If there has been any Extra Work since the last update, include only the approved amounts.
  - i. Refer to the Sample City Invoice materials in **Appendix D – Sample City Invoice with Cashflow Forecast** and use the format shown.
  - ii. See also the "Cashflow Forecast Example" at the location below:  
<https://www.sandiego.gov/publicworks/edocref>

**6-1.2.1 Commencement of Work.** To the "WHITEBOOK", ADD the following:

1. Refer to Construction Phasing Plans for locations. Phase 1 can start immediately upon the "notice to proceed". The transmission mains on Phase 1 are not subject the transmission main summer moratorium.

2. Phase 1 on Wightman Ave (between Wabash Ave and Wilson Ave) shall be paved/ resurfaced immediately after the completion of the watermain installation, this is due to upcoming project.
3. Phase 1 on 43<sup>rd</sup> St and University Ave shall be paved/ resurfaced immediately after the completion of the watermain installation, this is due to upcoming project.
4. The Removal of the existing 536/390 Pressure Regulating Station shall occur after the new 28<sup>th</sup> and Thorn St Pressure Regulating Station is in service, currently under construction, coordination with the "30<sup>th</sup> Street Pipeline Replacement" project is required.

**6-1.5.2 Excusable Non-Compensable Delays.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

**6-1.5.2 Excusable Non-Compensable and Concurrent Delays.**

1. The City shall only issue an extension of time for Excusable Delays that meet the requirements of 6-4.2, "Extensions of Time" for the following circumstances:
  - a) Delays resulting from Force Majeure.
  - b) Delays caused by weather.
  - c) Delays caused by changes to County, State, or Federal law.
2. When a non-excusable delay is concurrent with an Excusable Delay, you shall not be entitled to an extension of Contract Time for the period the non-excusable delay is concurrent with the Excusable Delay.
3. When an Excusable Non-Compensable Delay is concurrent with an Excusable Compensable Delay, you shall be entitled to an extension of Contract Time, but shall not be entitled to compensation for the period the Excusable Non-Compensable Delay is concurrent with the Excusable Compensable Delay.

**6-2.1 Moratoriums.** To the "WHITEBOOK", ADD the following:

3. Do not Work in the areas where there is currently a moratorium issued by the City. The areas subject to moratorium are listed below:
  - a) Summer Moratorium @ Beach from May to October (inclusive).
  - b) All water transmission pipelines have a summer moratorium in place. No transmission pipeline shall be taken out of service between the months of June through October.
  - c) In the proximity of any School at any time school is not on an extended break work shall not be permitted to begin until after school begins in the morning and must end prior to school being dismissed in the afternoon. It is the responsibility of the Contractor to be informed of school seasons and class times and conduct its work accordingly. Any work on school campus must occur when the school is on break. Contractor shall contact the school and coordinate all work with the school.

#### 6-4.2

**Extensions of Time.** To the “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

1. The Contract Time shall not be modified except by Change Order.
2. You shall notify the City in writing within **1 Working Day** after the occurrence and discovery of an event that impacts the Project Schedule.
  - a) If you believe this event requires a Change Order, you shall submit a **written Change Order request with a report to** the City that explains the request for Change Order within **5 Working Days**. The Change Order request must include supporting data, a general description of the discovery, the basis for extension, and the estimated length of extension. The City may grant an extension of time, in writing, for the Change Order request if you require more time to gather and analyze data.
3. The Engineer shall not grant an extension of Contract Time in accordance with 6-1.5, “Excusable Delays” unless you demonstrate, through an analysis of the critical path, the following:
  - a) The event causing the delay impacted the activities along the Project’s critical path.
  - b) The increases in the time to perform all or part of the Project beyond the Contract Time arose from unforeseeable causes beyond your control and without your fault or negligence and that all project float has been used.
4. Any modifications to the Contract Time will be incorporated into the weekly document that the Engineer issues that stipulates the Contract Time. If you do not agree with this document, submit to the Engineer for review a written protest supporting your objections to the document within **30 Calendar Days** after receipt of the statement. Your failure to file a timely protest shall constitute your acceptance of the Engineer’s weekly document.
  - a) Your protest will be considered a claim for time extension and shall be subject to 2-10.1, “Claims”.

#### ADD:

##### 6-6.1.1

#### **Environmental Document.**

1. The City of San Diego has prepared a Notice of Exemption for **Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines – West of Highland Ave**, Project No. **S-12016**, as referenced in the Contract Appendix. You shall comply with all requirements of the **Notice of Exemption** as set forth in **Appendix A**.
2. Compliance with the City’s environmental document shall be included in the Contract Price.



**6-6.4 Written Notice and Report.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Your failure to notify the Resident Engineer within **1 Working Day** OR provide a Change Order request within **5 Working Days** after the event, in accordance with 6-4.2, "Extensions of Time", will be considered grounds for refusal by the City to consider such request if your failure to notify prejudices the City in responding to the event.

## **SECTION 7 – MEASUREMENT AND PAYMENT**

**7-3.1 General.** To the "WHITEBOOK" ADD the following:

3. The Lump Sum Bid item for "**Cathodic Protection**" shall include installation and Testing as specified in the Plans, Contract Documents, Technical Section 13110 under **Appendix J**.
4. The Payment for "**Removal of Existing 536/390 Pressure Reducing Station**" shall include the following:
  - a) Contractor shall break the bottom of the existing concrete vault slab and fill the vault with CLSM up to 24 inches from existing finish surface.
  - b) Contractor shall remove and dispose of existing pressure reducing control valves (3 – 12 inch valves), gate valves, dresser couplings, access manhole frame and cover, gate well covers and any piping inside vault.
  - c) Contractor shall provide all necessary piping and appurtenances to make connections as shown on plans.
  - d) Contractor shall coordinate all work with City Forces.

**7-3.2 Partial and Final Payment.** To the "GREENBOOK", paragraph (3), DELETE in its entirety and SUBSTITUTE with the following:

Upon commencement of the Work, an escrow account shall be established in a financial institution chosen by you and approved by the City. Documentation for an escrow payment shall have an escrow agreement signed by you, the City, and the escrow agent. From each progress payment, no less than 5% will be deducted and deposited by the City into the escrow account. Upon completion of the Contract, the City will notify the Escrow agent in writing to release the funds to you. Only the designated representative of the City shall sign the request for the release of Escrow funds.

**7-3.9 Field Orders.** To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. If the cumulative total of Field Order items of Work does not exceed the "Field Orders" Bid Item, the City shall pay those Field Orders as shown below:

**TABLE 7-3.9  
FIELD ORDER LIMITS**

<b>Contract Price</b>	<b>Maximum Field Order Work Amount</b>
Less than \$100,001	\$2,500
\$100,001 to \$1,000,000	\$5,000
\$1,000,001 to \$5,000,000	\$10,000
\$5,000,001 to \$15,000,000	\$20,000
\$15,000,001 to \$30,000,000	\$40,000
Greater than \$30,000,000	\$50,000

2. Field Order items of Work for contracts greater than \$15,000,000 will require additional approvals from the City prior to its approval by the Resident Engineer.
3. The City will issue a Field Order only after the City's acceptance of the cost of the field order amount.
4. Field Orders shall not be used to add scope or to include extensions of time related to changes in work.
5. If in the event there is a change related to the critical path on the project which necessitates an extension of time and the change amount is within the Field Order limits shown on Table 7-3.9, then a Field Order can be issued to compensate you for the approved costs. Any extensions of time associated with the change shall be included in a subsequent Change Order and no additional compensation shall be granted as part of the change order for the extension of time.
6. The unused portions of Field Orders Bid item shall revert to the City upon Acceptance.

**7-3.11 Compensation Adjustments for Price Index Fluctuations.** To the "WHITEBOOK" ADD the following:

5. This Contract is not subject to the provisions of The "WHITEBOOK" for Compensation Adjustments for Price Index Fluctuations for paving asphalt.

## SECTION 209 – PRESSURE PIPE

**209-1.1.1 General.** To the “WHITEBOOK”, ADD the following:

2. PVC products, specifically type C900 and C905, as manufactured or distributed by J-M Manufacturing Company or JM Eagle shall not be used on the Contract for pressurized pipe.
3. Refer to AWWA C900-16 for all references to AWWA C905.

**209-2.1 General.** To the “GREENBOOK”, ADD the following:

**ACCEPTABLE PIPE MATERIALS FOR THIS PROJECT.** WELDED STEEL PIPE (WS) AWWA C200, SPIRAL-SEAM OR STRAIGHT-SEAM AND AWWA M-11 WITH FIELD WELDED JOINTS:

The manufacturer shall furnish a sworn statement that the inspection and all specified tests have been made and the results thereof comply with the requirements of the specified AWWA standards. Drawings and design calculations of the pipe shall be submitted to the Engineer of Work, City Resident Engineer and Inspection Lab for approval. Pipe shall be of the type described below to the minimum size shown and minimum pressure rating as indicated in these specifications or as shown on the drawings. The size shown shall mean the clear inside dimension measured to the lining. Pipe class shown on the plans is the pressure in psi measured by the distance between the pipe centerline and the operating hydraulic gradient.

Welded steel pipe, fittings and specials shall conform to AWWA C200, "Standard for Steel Water Pipe 6-inches and Larger," and shall be cement mortar lined in conformance with AWWA C205, "Standard for Cement Mortar Protective Lining and Coating for Steel Water Pipe, 4-inches and Larger - Shop Applied" and coated in conformance with AWWA C214, "Tape Coating Systems for the Exterior of Steel Water Pipelines" and AWWA C209, "Cold Applied Tape Coatings for Exterior of Special Sections, Connections and Fittings for Steel Water Pipelines," and as amended in these specifications.

The minimum steel thickness shall be as follows:

For 16-inch diameter pipe, Class 150, the minimum steel thickness shall be ¼-inch and the minimum specials and fittings steel thickness shall be ¼-inch.

For 24-inch diameter pipe, Class 150, the minimum steel thickness shall be ¼-inch and the minimum specials and fittings steel thickness shall be ¼-inch.

For 30-inch diameter pipe, Class 150, the minimum steel thickness shall be ¼-inch and the minimum specials and fittings steel thickness shall be 5/16-inch.

For 36-inch diameter pipe, Class 150, the minimum steel thickness shall be ¼-inch and the minimum specials and fittings steel thickness shall be 5/16-inch.

**209-2.2.1**

**Materials.** To the "GREENBOOK", Table 209-2.2.1, "Pipe", "Design Standards", DELETE in its entirety and SUBSTITUTE with the following:

<b>Pipe</b>	<b>Design Standards</b>	<p>Pipe and fitting wall thickness shall be selected that which meets the most severe requirements of inside pressure and outside loading considered separately. Design shall limit deflection under selected installation method in accordance with AWWA M-11.</p> <p>Deflection shall be computed by using the modified Iowa formula developed by Spangler in accordance with AWWA M-11. The cement mortar overcoat specified for the dielectric tape coated steel pipe shall not be included in the calculations for pipe deflection. If pipe deflection exceeds that allowed by AWWA M-11, the pipe manufacturer shall increase steel cylinder wall thickness in order that the pipe deflection is less than or equal to the allowable deflection. For cement mortar lined and coated steel pipe manufactured in accordance with AWWA C200 and C205, the mortar coating may be included in the calculations for pipe deflection.</p>
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To Table 209-2.2.1, "Pipe", "Material", DELETE in its entirety and SUBSTITUTE with the following:

<b>Pipe</b>	<b>Material</b>	<p>Steel plates or sheets used in the manufacture of fabricated steel pipe shall comply with Table 1 in AWWA C200, with minimum yield point strength of 33,000 psi. Steel to be fully killed and made to a fine grain practice. Design stress shall not exceed 16,500 psi.</p>
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To Table 209-2.2.1, "Pipe", "Size", DELETE in its entirety and SUBSTITUTE with the following:

<b>Pipe</b>	<b>Size</b>	<p>As shown on the Plans.</p> <p>Fabricated steel pipe shall be a minimum net instead diameter, after application of the interior protective lining, equal to the nominal diameter of the pipe shown on the Plans or in the Special Provisions, with a permissible tolerance of minus 3 mm (1/8 inch).</p>
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To Table 209-2.2.1, "Pipe", "Lengths", DELETE in its entirety and SUBSTITUTE with the following:

<b>Pipe</b>	<b>Lengths</b>	<p>Unless otherwise specified, fabricated steel pipe shall be manufactured in lengths to fit the pipeline alignment shown on the Plans, subject to a maximum pipe length of 40 feet (12 m).</p> <p>Shorter lengths may be used to facilitate curves or fit horizontal or vertical alignment.</p>
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To Table 209-2.2.1, "Lining and Exterior Coating", "Cold-Applied Tape Exterior Coatings", ADD the following:

Lining and Exterior Coating	Cold-Applied Tape Exterior Coatings	<p>Except as described below, the tape coating system for straight line pipe shall be in accordance with AWWA C214, "Tape Coating Systems for the Exterior of Steel Water Pipelines", the system shall consist of four layers consisting of the following:</p> <ol style="list-style-type: none"> <li>1. Primer layer</li> <li>2. Inner layer tape - corrosion protective tape (20 mils) with black exterior.</li> <li>3. Outer layer tape - mechanical protective tape (30 mils) with grey exterior.</li> <li>4. Outer layer tape - mechanical protective tape (30 mils) with white exterior.</li> </ol> <p>The total thickness of the tape coating shall be at least 80 mils. The coated pipe shall be tested and inspected in accordance with AWWA C214. Certified reports of the testing and inspection shall be submitted to the Engineer. The Contractor and/or manufacturer shall submit a list of the tape coating materials to be used which indicates manufacturer, product numbers and manufacturer recommended thickness of material. For each material, technical data sheets shall be submitted which indicate technical and performance information per AWWA C214 and shall provide information that verifies that the material supplied conforms with the appropriate tables in AWWA C214.</p> <p>Coating repair in the shop shall be in accordance with AWWA C214, and coating repair in the field shall be in accordance with AWWA C209.</p> <p>The required cut back for welded pipe ends shall be such that the tape will not be damaged during the welding process. The minimum hold back should be three (3)</p>
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		<p>inches for the tape and six (6) inches for the mortar. The cut back dimensions shall be shown on the pipe shop drawings.</p> <p>All field welded joints shall be tape coated and cement mortar coated in accordance with AWWA C209 and AWWA C205. The total thickness of the field tape wrapping shall be at least 80 mils. The field applied tape wrapping shall have a minimum of 3 inches of overlap over the factory applied tape coating, and even if greater than 3 inches of overlap is obtained, the field applied tape wrapping shall extend from the cement mortar overcoat holdback on one side of the joint up to the cement mortar holdback on the other side of the joint. The inspector shall visually inspect that all joints are taped and cement mortar coated on the outside and hand pointed mortared at the joints on the inside of the pipe.</p> <p>Fittings and specials which cannot be machine coated in accordance with AWWA C214, shall be coated in accordance with AWWA C209. The system shall consist of 3 layers consisting of the following:</p> <ol style="list-style-type: none"> <li>1. Primer layer</li> <li>2. Inner layer tape - corrosion protective tape (50 mils)</li> <li>3. Outer layer tape - mechanical protective tape (30 mils)</li> </ol> <p>The total thickness of the tape coating shall be at least 80 mils.</p> <p>Coating repair for fittings and specials shall be in accordance with the procedure described above for straight line pipe.</p> <p>Flanged fittings shall be factory coated in accordance with AWWA C214 and C209. The holdback from the flange shall be zero (0) inches for both the tape and mortar. All flanges shall come with the standard manufacturer's coating and this shall be shown on the shop drawings. The flange and connecting valve or appurtenance shall be wax coated in accordance with AWWA C217 "Petrolatum and Petroleum Wax Tape Coatings for the Exterior of Connections and Fittings for Steel Water Pipelines." The field applied tape shall overlap the shop applied tape by at least three (3) inches. Field- applied mortar coating shall be applied after the</p>
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		<p>flange connection and taping is complete. All tape dimensions, properties, and thickness shall be in accordance with AWWA C217.</p> <p>All mainline outlets for appurtenances shall be factory lined and coated as specified for the main steel pipeline. The minimum hold back from the flange shall be zero (0) inches for both the tape and the mortar. The flange shall be factory primed and tape wrapped in the field.</p> <p>All buried appurtenances, flanges, bolts, etc. shall also be coated in accordance with AWWA C217.</p>
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To Table 209-2.2.1, "Lining and Exterior Coating", ADD the following:

Lining and Exterior Coating	Field Lining at Cement-Mortar Lined Joints	<p>All cement to be used shall be Type II low alkali Portland cement conforming to ASTM C150.</p> <p>The material to be used for cement mortar lining and coating of field welded pipe joints shall be as follows: for cement mortar lining - Jet Set Complete Repair, or approved equal; for cement mortar coating - the product used must comply with AWWA C-205.</p> <p>The cement mortar lining placed after the joints are welded, shall be inspected by the City. An inspection report shall be prepared to document the condition of the interior mortar joints. The report shall be submitted to the Resident Engineer for approval prior to final acceptance of the pipeline.</p> <p>After the completion of the inspection of the cement mortar lining, the City of San Diego shall perform a video inspection of the pipeline. The Contractor shall provide the Project Manager written notification as to when the pipeline will be ready for the video inspection. After the City receives the written notification, they will have one week to perform the video inspection. After one week the Contractor shall proceed with the next phase of the pipeline work.</p>
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To Table 209-2.2.1, "Lining and Exterior Coating", ADD the following:

Lining and Exterior Coating	Field Coating at Tape Coated Steel Pipe Joints	All field welded joints shall be tape coated and cement mortar coated in accordance with AWWA C209 and AWWA C205.
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**209-2.2.2 Submittals.** To the "GREENBOOK", Sentence (1), DELETE in its entirety and SUBSTITUTE with the following:

Prior to fabricating pipe, the Contractor shall submit, in accordance with 2-5.3, Shop Drawings, and 209-2.2.2.1, Shop Drawings for the fabrication of pipe, pipe specials, and joint details.

**ADD:**

**209-2.2.2.1 Shop Drawings.**

Manufacturer shall submit copies to the Engineer of Work for approval prior to manufacture of any pipe and fittings for the following:

1. Detailed drawings.
2. Tabulated layout schedule.
3. Design calculations for pipe wall thickness. (Use E' value of 750 in accordance with City of San Diego, Standard Drawing SDS-100)
4. Field joint details.
5. Technical data and information on the tape coating to be used.
6. Required tests for tape coating to be used.

Shop drawings shall be in accordance with the requirements of AWWA C200, C205 and C214.

Data to be furnished by the Contractor shall be in accordance with all applicable provisions of Section 2-5.3, "Shop Drawings," of the standard specifications where not inconsistent with the plans and the express provisions of these specifications.

The drawings accompanying these specifications indicate only the general features of the work, and all proportioning and detailing for the pipeline, specials, and connections shall be done by the Contractor. The Contractor shall prepare, and submit for review and approval before starting fabrication, a tabulated layout schedule and detailed fabrication drawings.

The drawings shall include the configuration, essential dimensions, and materials to be used in fabricating the pipe, pipe specials, and fittings, and shall include details of standard pipe joints, and of typical field welded joints showing the lining and coating holdback. The minimum radius of any fabricated bend shall be at least 2.5 times the nominal pipe diameter.



The layout and marking schedule shall include the specific number of each pipe and fitting and the location of each pipe and the direction of each fitting in the completed line. In addition, the layout schedule shall include: the pipe station and top of pipe elevation at all changes in grade or horizontal alignment; the station and top of pipe elevation to which the bell end of each pipe will be laid; and all elements of curves and bends, both in horizontal and vertical alignment. Dimensional drawings of all valves, fittings and appurtenances shall be provided with the layout schedule.

Joint and pipe/fitting wall construction details which indicate the type and thickness of cylinder; the position, type, size, and area of wire or reinforcement if required; manufacturing tolerances; and all other pertinent information required for the manufacture of the product.

Fittings and specials details such as elbows, wyes, tees, outlets, connections, test bulkheads, and nozzles or other specials where shown on the drawings which indicate amount and position of all reinforcement. All fittings and specials shall be properly reinforced to withstand the internal pressure, both circumferential and longitudinal, and the external loading conditions as indicated in the contract documents. Material lists and steel reinforcement schedules which include and describe all materials to be utilized.

Joints below existing utilities shall be avoided.

The Contractor shall determine where to use cut-to-fit pieces and/or field weld on flanges. These shall be shown on the pipe shop drawings.

The pipe alignment and grade, the location of valves, fittings and appurtenances, as shown on the Contractor's layout schedule shall conform essentially with those shown on the contract plans. The Engineer, at his discretion, may approve minor changes made for economy or convenience in manufacture or construction. Unless otherwise ordered or permitted by the Engineer, construction shall conform to the approved layout schedule and fabrication drawings.

When approved by the Engineer, changes in alignment or grade may be accomplished by deflections at the joints between lengths of standard pipe, or by use of beveled pipe, or by a combination of the two.

Before preparing the schedule and fabrication drawings, the Contractor shall expose the existing main at points of connection and determine their precise locations and alignment relative to the alignment of the new pipe as shown on the drawings. The Contractor shall furnish the Agency with tracings or transparencies of the approved schedule and drawings, from which the Agency can obtain the required prints.

#### **SHOP DRAWING D-SHEETS**

Once the pipe shop drawings are approved and released for production, the pipe fabricator shall assemble all the approved and corrected shop drawings onto City of San Diego D-sheets and shall have a State of California registered engineer, who was

responsible to oversee the preparation of the shop drawings, stamp and sign each D-sheet. The final D-sheets to be stamped and signed by the pipe fabricator's Registered Engineer shall be photo mylars or mylar plots from digital files. The preparation of the shop drawing mylars shall be coordinated with the Engineer to assure proper sheet numbering and title block information. The Engineer shall be responsible for processing the shop drawing sheets through the City of San Diego as a Construction Change. The pipe fabricator shall be responsible for preparing and modifying the sheets to conform to City of San Diego requirements.

**209-2.2.4 Joints.** To the "GREENBOOK", ADD the following:

All nonflanged pipe joints shall be field welded. All pipe shall have lap welded slip joints and shall be field welded on the inside and outside for pipe sizes greater than 24 inches diameter. For pipe size less than or equal to 24 inches diameters, welding shall be on the outside of the joint. Fillet welds shall be used and shall be of a size equal to the thickness of the bell or cylinder, whichever is greater, and shall be built up in passes of not more than one-eighth inch (1/8") per pass. Field welding shall conform to AWWA C206, "Standard for Field Welding of Steel Water Pipe."

For lap joint pipe prepared for field welding, the inside circumference of the bell end shall not exceed the outside circumference of the spigot end by more than 0.1563 inch (5/32 inch).

In order that the proper shop modifications may be made to the joints to be field welded, the shop fabrications shall indicate details of the typical field welded joint and the required coating and lining holdback.

All closure and makeup joints shall be made with butt straps for field welding in accordance with the latest version of the applicable City of San Diego Standard Drawing. Butt straps shall be field welded on the outside of the pipe joint using a fillet weld. The fillet weld shall be of a size equal to the thickness of the cylinder or butt strap, whichever is greater, and shall be built up in passes of not more than one-eighth inch (1/8") per pass.

Handholes shall be provided in accordance with the plans and the latest version of the applicable City of San Diego Standard Drawing.

**209-2.2.5 Special Sections.** To the "GREENBOOK", ADD the following:

Reinforcement and/or crotch plate design for wyes, tees, outlets and nozzles shall be designed in accordance with AWWA Manual M-11, "Steel Water Pipe - a Guide for Design and Installation." Reinforcement shall be designed for the working pressure. Pipe materials used in fittings shall be of the same material as the pipe with minimum steel plate thickness as indicated in Section 207-10.2.1 of these specifications.

The minimum radius of elbows shall be 2.5 times the pipe diameter and the maximum miter angle on each section of the elbow shall not exceed 11 1/4 degrees. Fittings shall be equal in pressure design strength and shall have the same lining and coating as the

abutting pipe. Specials and fittings, unless otherwise shown on the plans, shall be made of segmentally welded sections from hydrostatically tested pipe, with ends to mate with the type of joint or coupling specified for the pipe.

Specials and fittings that cannot be mechanically lined and coated shall be factory lined and coated by hand-application using the same materials as are used for the pipe and in accordance with the applicable AWWA standards. Coating and lining applied in this manner shall provide protection equal to that specified for the pipe. Fittings may be fabricated from pipe that has been mechanically lined and/or coated. Areas of lining and coating that have been damaged by such fabrication shall be repaired by hand- applications in accordance with applicable AWWA standards.

**209-2.2.6 Welding.** To the "GREENBOOK", ADD the following:

All welding procedures used to fabricate pipe shall be prequalified under the provisions of ANSI/AWS D1.1 or ASME SEC. IX. Welding procedures shall be required for, but not necessarily limited to, 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.

All welding shall be done by skilled welders, welding operators, and tackers who have had adequate experience in the methods and materials to be used.

Welders shall be qualified under the provisions of ANSI/AWS D1.1 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 manufacturer shall furnish all material and bear the expense of qualifying welders. The Contractor shall furnish the Engineer with a certified laboratory report stating the results of required welding tests performed during pipe fabrication.

Field welding shall be performed by certified welders in accordance with AWWA C206.

**ADD:**

**209-2.2.6.1 Special Inspection and Testing of Field Welds.** All costs for special welding inspection and testing of field welds shall be the responsibility of the Contractor in accordance with Section 4-1.3.4 of the "WHITEBOOK".

A. Qualification of Welders, Equipment and Procedures:

Prior to the start of welding, the special inspector shall check welder qualifications and verify that procedure specifications to be used have been approved.

B. Inspection of Field Welds:

The special inspector shall visually examine 100% of all welds performed in the field.

Acceptance Standards for Visual Examination. The following indications are unacceptable:

1. Cracks - external surface;
2. Undercut on surface which is greater than 1/32-inch (1.0 mm) deep;
3. Lack of fusion on surface;
4. Incomplete penetration (applies only when opposite surface is readily accessible).

Any weld not conforming to the above acceptance standards shall be ground smooth and blended in to the satisfaction of the special inspector.

C. Nondestructive Testing of Field Welds:

Nondestructive testing of field welds shall be performed by the special inspector, as directed by the Resident Engineer, using testing and acceptance criteria as set forth in the ASME Boiler and Pressure Vessel Code, Section V, and as specified herein.

Nondestructive test methods and acceptance criteria shall be submitted to the Resident Engineer for review and approval thirty (30) working days prior to beginning any field welding operations and in accordance with Subsection 2-5.3 of Standard Specifications for Public Works Construction. Nondestructive testing shall be performed as follows:

WELDED SLIP JOINTS:

Nondestructive testing shall be performed on a random sampling of all slip joint field welds provided that not less than twenty percent (20%) of such field welds are tested. The special inspector shall ensure that the work of each welder is tested in accordance with this section.

BUTT STRAPS AND NON-SLIP JOINTS:

Nondestructive testing shall be performed on one-hundred percent (100%) of all butt strap welds and other non-slip joint welds performed in the field.

Portions of welds not conforming to the applicable acceptance standards shall be completely removed in a manner, which will permit proper and complete repair by welding. All repair welds shall be re-tested by the special inspector.

D. Air/Soap Testing of Field Welds:

One ¼-inch tapped hole per joint is required for welded steel pipe requiring double welding of joints. Test procedure shall be per AWWA C206, Section 5.2.2.2.

**ADD:**

**209-2.2.7 Affidavit of Compliance.** Affidavit of compliance is required from the manufacturer that the pipe, specials, and fittings furnished under this contract comply with these special provisions, applicable standards and as specified in AWWA C200, C205, C214 and C217 and the following supplemental requirements:

1. Physical and chemical properties of all steel
2. Hydrostatic test reports
3. Results of production weld tests
4. Coating and lining tests
5. Technical data and information on the tape coating to be used.

All expenses incurred in making samples for certification of tests shall be borne by the Contractor and/or manufacturer.

**ADD:**

**209-2.2.8 Field Painting.** Metal components which are furnished with shop-applied protective coating shall be carefully installed to avoid damage to the coatings. Any areas of such coatings which show damage after installation is complete shall be cleaned and recoated. The touch-up coating materials shall be identical to the shop-applied coating, or a suitable substitute therefore, recommended by the component manufacturer and approved by the Engineer.

Steel surfaces, other than stainless steel, which are not galvanized or shop-coated, shall be epoxy coated in accordance with AWWA C210. The minimum dry film thickness shall be 16 mils, and the epoxy shall meet NSF Standards for contact with potable water.

**ADD:**

**209-2.2.9 Installation, Storage and Handling.** Bracing shall consist of at least three (3) sets of stulls for each standard length pipe. Stull struts and stull blocks shall be of such size, shape and material that the pipe is held round and its interior surface protected from damage under all loads encountered in handling, installing and backfilling. Bracing shall remain in place until after the pipe is laid in the trench, bedding and backfill compacted and pipe is firmly held in place.

Pipe shall be stored on sand ribbons during both curing operations and during yard storage.

When storage of the pipe at the manufacturer's yard shall exceed two calendar weeks after the completion of the pipe manufacturing and standard curing process, the manufacturer shall periodically wet the interior and exterior of the pipe to maintain sufficient moisture content in the cement mortar to avoid the development of mortar cracks greater than one-sixteenth of one inch. The end caps on the pipe shall be replaced after each addition of water in order to maintain the required seal for the interior mortar.

Until the pipe installation and backfilling are completed, all concrete surfaces of the pipe shall be sprinkled periodically to prevent excessive drying and thermal stressing.

At all times after application of the mortar coating or removal of the exterior forms, standard pipe lengths shall be handled only with belt slings of sufficient width to avoid damage to the exterior surface. Specials and fittings shall be handled by approved means, which avoid inflicting any damage. Chain slings shall not be used, and wire rope slings may be used only if encased in heavy rubber hose.

During transportation, pipe shall be mounted on padded bolsters curved to fit the pipe. Heavy padding shall be used under the tie chains. The pipe ends shall be closed to prevent air circulation and drying of the pipe interior in transit and during storage until the pipe is laid.

The pipe shall be handled by use of 12" wide nylon slings, padded cradles, or other devices, acceptable to the Engineer, designed and constructed to prevent damage to the pipe coating/exterior. The use of chains, hooks, or other equipment which might injure the pipe coating/exterior will not be permitted. All other pipe handling equipment and methods shall be acceptable to the Engineer.

The Contractor shall be fully liable for the cost of replacement or repair of pipe, which is damaged.

Stockpiled pipe shall be supported on sand or earth berms. The pipe shall not be rolled and shall be secured to prevent accidental rolling.

The Contractor and/or manufacturer shall consult the Owner if any anticipated outdoor storage will be required prior to installation so that necessary precautions can be taken.

**ADD:**

**209-2.2.10 Side Outlets.** Outlets shall be installed as shown on the plans for connections to the new pipe. The outlets shall remain uncovered until all joint assembly, field welding, lining, and coating is accomplished and hydrostatic testing and inspection is completed. Outlets shall be backfilled with sand densified as provided in Subsection 306-1.3. The outlets shall then be covered and the finish pavement laid.

All pipe with side outlets shall be considered as a special section and requires the main steel pipeline to be a minimum wall thickness as defined in Section 207-10.2.1.

All side outlets for appurtenances shall be factory lined and coated as specified for the main steel pipeline. The minimum hold back from the flange shall be zero (0) inches for the tape and the mortar. The flange shall be factory primed and the tape wrapped in the field.

**ADD:**

- 209-4.8 Flexible Couplings.** Flexible couplings shall be carbon steel and all parts shall be fusion epoxy coated with carbon steel hardware. The manufacturer of the flexible couplings shall be from the City of San Diego's approved materials list. All flexible couplings installed in buried applications shall be wax tape wrapped in accordance with AWWA C217.PTFE Bearing and assembly shall be paid for per each Bearing System per location.

**SECTION 306 – OPEN TRENCH CONDUIT CONSTRUCTION**

**ADD:**

**306-1.1 High-line Phasing.**

1. Build the Project in accordance with the water high-lining phasing shown on the Plans.
2. When installing pipelines within the City's streets, for the following streets, the total time allowed for the completion of Work shall not exceed **10 Working Days** per 500 feet of pipeline installation:
  - a) El Cajon Blvd, University Ave., Wabash Ave. , 33<sup>rd</sup> St.
  - b) For the coordination of the shutdown of transmission mains (16 inches and larger), contact the City's Senior Water Distribution Operations Supervisor Jesus Ramos at JRamos@sandiego.gov or at (619) 527-7438. For coordination of the shutdown of distribution mains (less than 16 inches), contact the City's Water Operations District Manager Bernard Powell at bpowell@sandiego.gov or at (619) 527-3945.

**306-7.8.2.1 General.** To the "WHITEBOOK", item 2, DELETE in its entirety and SUBSTITUTE with the following:

2. Pressure testing of pipe and fittings at the lowest elevation shall be performed at 150% of the specified test pressure and no less than 100% of the specified test pressure at the highest elevation.
  - a) Specified test pressure for Class 235 pipe shall be 150 psi and is tested at 225 psi.
  - b) Specified test pressure for Class 305 pipe shall be 200 psi and is tested at 300 psi.

**306-15.8 Pipeline Appurtenances.** To the "WHITEBOOK", ADD the following:

9. Payment for Access Manholes shall be included in the Bid item **"Modified Manhole SDS-106 (per sheet C-43)"**, and includes all items indicated on **Detail 4 per Sheet 39114-45-D** of the Plans.

## SECTION 400 – UTILITIES

**402-2**      **PROTECTION.** To the “WHITEBOOK”, item 2, ADD the following:

- g)      Refer to **Appendix M - Advanced Metering Infrastructure (AMI) Device Protection** for more information on the protection of AMI devices.

**402-6**      **COOPERATION.** To the “GREENBOOK”, ADD the following:

- 1.      Notify SDG&E at least 10 Working Days prior to excavating within 10 feet of SDG&E Underground High Voltage Transmission Power Lines (69 KV and higher).

## SECTION 700 – MATERIALS

**700-5.1**      **Vehicle Detectors.** To the “WHITEBOOK”, item 1, DELETE in its entirety and SUBSTITUTE with the following:

- 1.      Loop wire shall be Type 2. Loop detector lead-in cable shall be Type “B”. Slots shall be filled with elastomeric sealant, epoxy sealant, or hot-melt rubberized asphalt sealant, except asphaltic emulsion loop sealant and cold tar loop sealant are acceptable if the pavement surface will receive an asphaltic concrete overlay.

## SECTION 900 – MATERIALS

**900-2.3**      **Payment.** To the “WHITEBOOK”, item 3, DELETE in its entirety and SUBSTITUTE with the following:

- 3.      The payment for furnishing materials for your connection, cut and plug, and cut-in Work shall cover all necessary materials (fittings and hardware, excluding valves), delivery, and unloading. The payment shall be included within the Bid item of the Work involved and no separate payment for furnishing those materials shall be made. The payment for furnishing valve materials for your connection, cut and plug, and cut-in Work shall be included in the separate Bid items for each valve.

## SECTION 1001 – CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs)

**1001-1**      **GENERAL.** To the “WHITEBOOK”, ADD the following:

- 7.      Based on a preliminary assessment by the City, this Contract is subject to WPCP.



**SUPPLEMENTARY SPECIAL PROVISIONS**  
**APPENDICES**

**APPENDIX A**  
**NOTICE OF EXEMPTION**

**NOTICE OF EXEMPTION**

(Check one or both)

TO:  X  Recorder/County Clerk  
P.O. Box 1750, MS A-33  
1600 Pacific Hwy, Room 260  
San Diego, CA 92101-2400

FROM: City of San Diego  
Public Works Department  
525 B Street, Suite 750, MS908A  
San Diego, CA 92101

     Office of Planning and Research  
1400 Tenth Street, Room 121  
Sacramento, CA 95814

Project/WBS No.: S-12016.02.06

Project Title: Otay 1<sup>st</sup> and 2<sup>nd</sup> Pipelines – West of Highland Avenue

Project Location-Specific: Design services for approximately 6.6 miles of new water pipeline within the following three alignments: 1) Otay 1<sup>st</sup> Pipeline – Polk Avenue (between 33<sup>rd</sup> Street and Oregon Street [and underneath Interstate 805]) and Idaho Street (between Polk Avenue and Howard Avenue); 2) Otay 2<sup>nd</sup> Pipeline – Highland Avenue (between Polk Avenue and Wightman Avenue), Wightman Avenue (between Highland Avenue and Wabash Avenue), Swift Avenue (between Wightman Avenue and Landis Street), Landis Street (between Swift Avenue and Boundary Street [underneath Interstate 805]), Boundary Street (between Felton Street and Upas Street), Upas Street (between Felton Street and 30<sup>th</sup> Street), and Myrtle Street (between Felton Street and 30<sup>th</sup> Street); and 3) Otay 2<sup>nd</sup> Pipeline Extension – Wightman Avenue (between Swift Avenue and Wabash Avenue), Wabash Avenue (between Wightman Avenue and Lincoln Avenue), Lincoln Avenue (between Wabash Avenue and Boundary Street [and underneath Interstate 805]), Boundary Street (between Lincoln Avenue and Howard Avenue), Howard Avenue (between Boundary Street and Idaho Street), and 33<sup>rd</sup> Street (between Polk Avenue and Lincoln Avenue) in the Greater North Park Community Planning Area (Council District 3) and Mid-City (City Heights) Communities Planning Area (Council 9).

Project Location-City/County: San Diego/San Diego

Description of nature and purpose of the Project: The project’s scope of work includes the replacement of 24,791 linear-feet (LF) of existing 6-, 8-, 10-, 12-, 30-, and 36-inch water main within existing alignments at depths ranging from 3-5 feet. Approximately 1,200 LF of this replacement length will be installed via tunneling (three locations crossing Interstate 805). The total length of water main that will be installed is 34,051 LF, the largest being 42 inches in diameter. Approximately 1,546 LF of existing water main will be abandoned. The project will also update all existing curb ramps along the alignment to current standards. This project lies entirely within urban, developed areas and is not located within or adjacent to the City’s Multi-Habitat Planning Area (MHPA).

Name of Public Agency Approving Project: City of San Diego

Name of Person or Agency Carrying Out Project: City of San Diego, Public Works Department  
Gabriel Torres, Project Manager  
525 B Street, Suite 750, San Diego, CA 92101  
(619) 533-4630

Exempt Status: (CHECK ONE)

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(a));
- Emergency Project (Sec. 21080(b)(4); 15269 (b)(c))
- Categorical Exemption: 15302 (Replacement or Reconstruction); 15304 (Minor Alterations to Land)

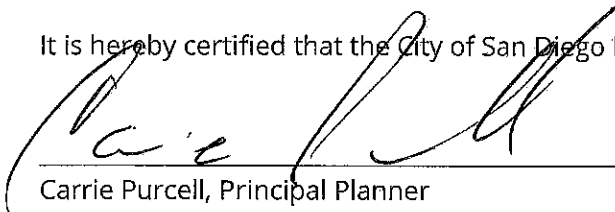
Reasons why project is exempt: The City of San Diego conducted an environmental review which determined the project meets the categorical exemption criteria set forth in CEQA State Guidelines Section 15302 (Replacement or Reconstruction) which allows for the replacement or reconstruction of existing facilities, where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced as well as 15304 (Minor Alterations to Land) which allows minor alterations in the condition of land, water, and/or vegetation including minor trenching and backfilling where the surface is restored. The project is not expected to impact sensitive resources.

Lead Agency Contact Person: Jerry Jakubauskas, Senior Planner Telephone: (619) 533-3755

If filed by applicant:

- 1. Attach certified document of exemption finding.
- 2. Has a notice of exemption been filed by the public agency approving the project? ( ) Yes ( ) No

It is hereby certified that the City of San Diego has determined the above activity to be exempt from CEQA




---

Carrie Purcell, Principal Planner

9/22/2016  
Date

Check One:

- Signed By Lead Agency
- Signed by Applicant

Date Received for Filing with County Clerk or OPR:

**APPENDIX B**  
**FIRE HYDRANT METER PROGRAM**

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
<b>SUBJECT  FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)</b>	<b>PAGE 1 OF 10</b>	<b>EFFECTIVE DATE  October 15, 2002</b>
	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

2.1 All authorities and references shall be current versions and revisions.

2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15

2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986

2.4 California Code of Regulations, Titles 17 and 22

2.5 California State Penal Code, Section 498B.0

2.6 State of California Water Code, Section 110, 500-6, and 520-23

2.7 Water Department Director

**Reference**

2.8 State of California Guidance Manual for Cross Connection Programs

2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention

2.10 American Water Works Association Standards for Water Meters

2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

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- 3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.
- 3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. **POLICY**

- 4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.
- 4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.
- 4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:
  - a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.
  - b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:
    - 1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

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2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
7. All private fire hydrant meters shall have backflow devices attached when installed.
8. The customer must maintain and repair their own private meters and private backflows.
9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.



<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
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11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.
  12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
  13. The outlet shall have a 2 ½ “National Standards Tested (NST) fire hydrant male coupling.
  14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).
- 4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.
- 4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.
- 4.6 **Conditions and Processes for Issuance of a Fire Hydrant Meter**
- Process for Issuance
- a. Fire hydrant meters shall only be used for the following purposes:
    1. Temporary irrigation purposes not to exceed one year.

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	<b>SUPERSEDES DI 55.27</b>	<b>DATED April 21, 2000</b>

2. Construction and maintenance related activities (see Tab 2).
  - b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
  - c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
  - d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
  - e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
  - f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
  - g. After the fees have been paid and an account has been created, the

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meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

#### 4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as “Hotline”), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter’s relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

#### 4.8 Disconnection of Fire Hydrant Meter

- a. After ten (10) months a “Notice of Discontinuation of Service” (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

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for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. **EXCEPTIONS**

- 5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

- a) **Vehicle Mounted Meters:** Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

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inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

- 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
- 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

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7. **FEE AND DEPOSIT SCHEDULES**

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. These deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. **UNAUTHORIZED USE OF WATER FROM A HYDRANT**

8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.

8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.

8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.

8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

<b>CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS</b>	<b>NUMBER DI 55.27</b>	<b>DEPARTMENT Water Department</b>
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- 8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

**Water Department Director**

- Tabs: 1. Fire Hydrant Meter Application  
2. Construction & Maintenance Related Activities With No Return To Sewer  
3. Notice of Discontinuation of Service

**APPENDIX**

**Administering Division:** Customer Support Division

**Subject Index:** Construction Meters  
Fire Hydrant  
Fire Hydrant Meter Program  
Meters, Floating or Vehicle Mounted  
Mobile Meter  
Program, Fire Hydrant Meter

**Distribution:** DI Manual Holders



# Application for Fire Hydrant Meter (EXHIBIT A)

(For Office Use Only)

NS REQ	FAC#
DATE	BY

METER SHOP (619) 527-7449

## Meter Information

Application Date	Requested Install Date:
------------------	-------------------------

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) <u>Zip:</u>	T.B.	G.B. (CITY USE)
Specific Use of Water:		
Any Return to Sewer or Storm Drain, if so, explain:		
Estimated Duration of Meter Use:	<input type="checkbox"/>	<input type="checkbox"/> Check Box if Reclaimed Water

## Company Information

Company Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
*Business license#		*Contractor license#	
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: <small>(PERSON IN ACCOUNTS PAYABLE)</small>			Phone: ( )
Site Contact Name and Title:			Phone: ( )
Responsible Party Name:			Title:
Cal ID#			Phone: ( )
Signature:		Date:	
<small>Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter</small>			

<b>Fire Hydrant Meter Removal Request</b>	Requested Removal Date:
Provide Current Meter Location if Different from Above:	
Signature:	Title: Date:
Phone: ( )	Pager: ( )

<input type="checkbox"/> City Meter	<input type="checkbox"/> Private Meter	
Contract Acct #:	Deposit Amount: <b>\$ 936.00</b>	Fees Amount: <b>\$ 62.00</b>
Meter Serial #	Meter Size: <b>05</b>	Meter Make and Style: <b>6-7</b>
Backflow #	Backflow Size:	Backflow Make and Style:
Name:	Signature:	Date:



**WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER**

Auto Detailing  
Backfilling  
Combination Cleaners (Vactors)  
Compaction  
Concrete Cutters  
Construction Trailers  
Cross Connection Testing  
Dust Control  
Flushing Water Mains  
Hydro Blasting  
Hydro Seeing  
Irrigation (for establishing irrigation only; not continuing irrigation)  
Mixing Concrete  
Mobile Car Washing  
Special Events  
Street Sweeping  
Water Tanks  
Water Trucks  
Window Washing

**Note:**

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.

Date

Name of Responsible Party  
Company Name and Address  
Account Number: \_\_\_\_\_

Subject:           Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter # \_\_\_\_\_, located at *(Meter Location Address)* ends in 60 days and will be removed on or after *(Date Authorization Expires)*. Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please contact the Water Department, or mail your request for an extension to:

City of San Diego  
Water Department  
Attention: Meter Services  
2797 Caminito Chollas  
San Diego, CA 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619) \_\_\_\_\_ - \_\_\_\_\_.

Sincerely,

Water Department

**APPENDIX C**

**MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE**

## MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

**APPENDIX D**

**SAMPLE CITY INVOICE WITH CASH FLOW FORECAST**



WBS #:	B18108
Date Submitted:	10/10/2018
NTP Date:	3/23/2018
Final Statement of WD Date:	5/23/2020
Contract #:	K-XX-XXXX-XXX-X
Contract Amount:	\$5,617,000

Construction Cash Flow Forecast  
 "Sewer and Water Group Job 965 (W)"

Year	January	February	March	April	May	June	July	August	September	October	November	December
2018				15,000	25,000	52,000	52,000	100,000	10,000	100,000	100,000	100,000
2019	10,000	10,000	85,000	58,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000	1,000,000
2020	100,000	100,000	100,000	1,000,000	1,000,000							
2021												
2022												
2023												
2024												
2025												

SAMPLE REFERENCE

**APPENDIX E**  
**LOCATION MAP**



The City of **SAN DIEGO** Public Works

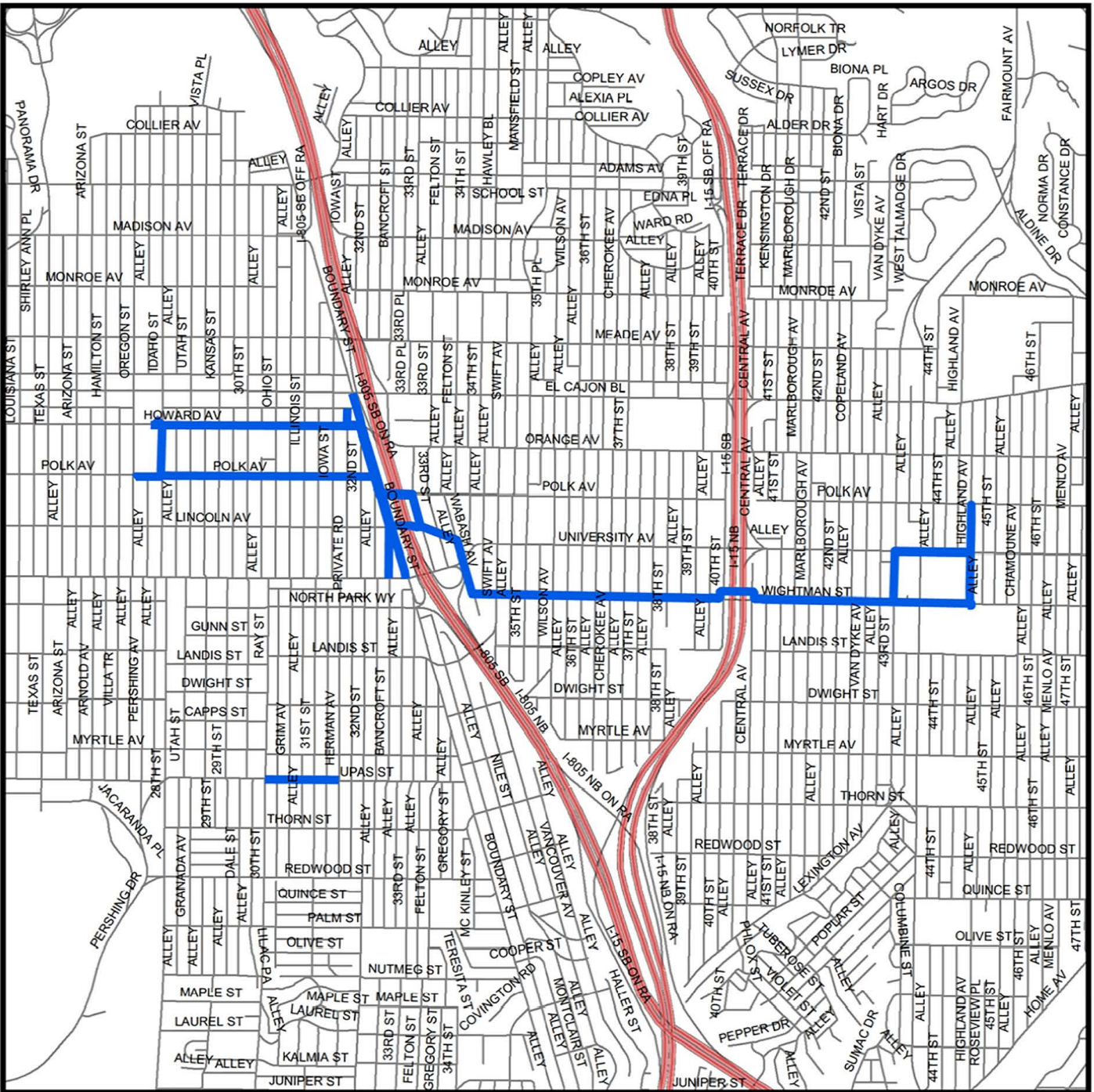
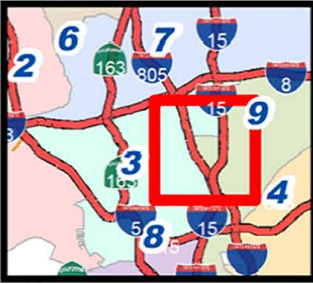
**OTAY 1ST & 2ND PIPELINES WEST OF HIGHLAND AVENUE**

SENIOR ENGINEER  
BRIAN VITELLE  
619-533-5105

PROJECT MANAGER  
GABRIEL TORRES  
619-533-4630

PROJECT ENGINEER  
ROY GANZON  
619-533-5247

FOR QUESTIONS ABOUT THIS PROJECT  
Call: 619-533-4207  
Email: [engineering@sandiego.gov](mailto:engineering@sandiego.gov)



**Legend**

Otay 1st & 2nd Pipelines West of Highland Avenue



COMMUNITY NAME: GREATER NORTH PARK MID CITY: CITY HEIGHTS

SAP ID: S12016 (W)

Date: December 12, 2017  
Otagy 1st & 2nd Pipelines - West of Highland Ave.  
Appendix E - Location Map

COUNCIL DISTRICT: 3 & 9



THIS MAP/DATA IS PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Note: This product may contain information from the SANDAG Regional Information System which cannot be reproduced without the written permission of SANDAG. This product may contain information reproduced with permission granted by RAND MCNALLY & COMPANY to SanGIS. This map is copyrighted by RAND MCNALLY & COMPANY. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without the prior, written permission of RAND MCNALLY & COMPANY.

**APPENDIX F**  
**ADJACENT PROJECTS**

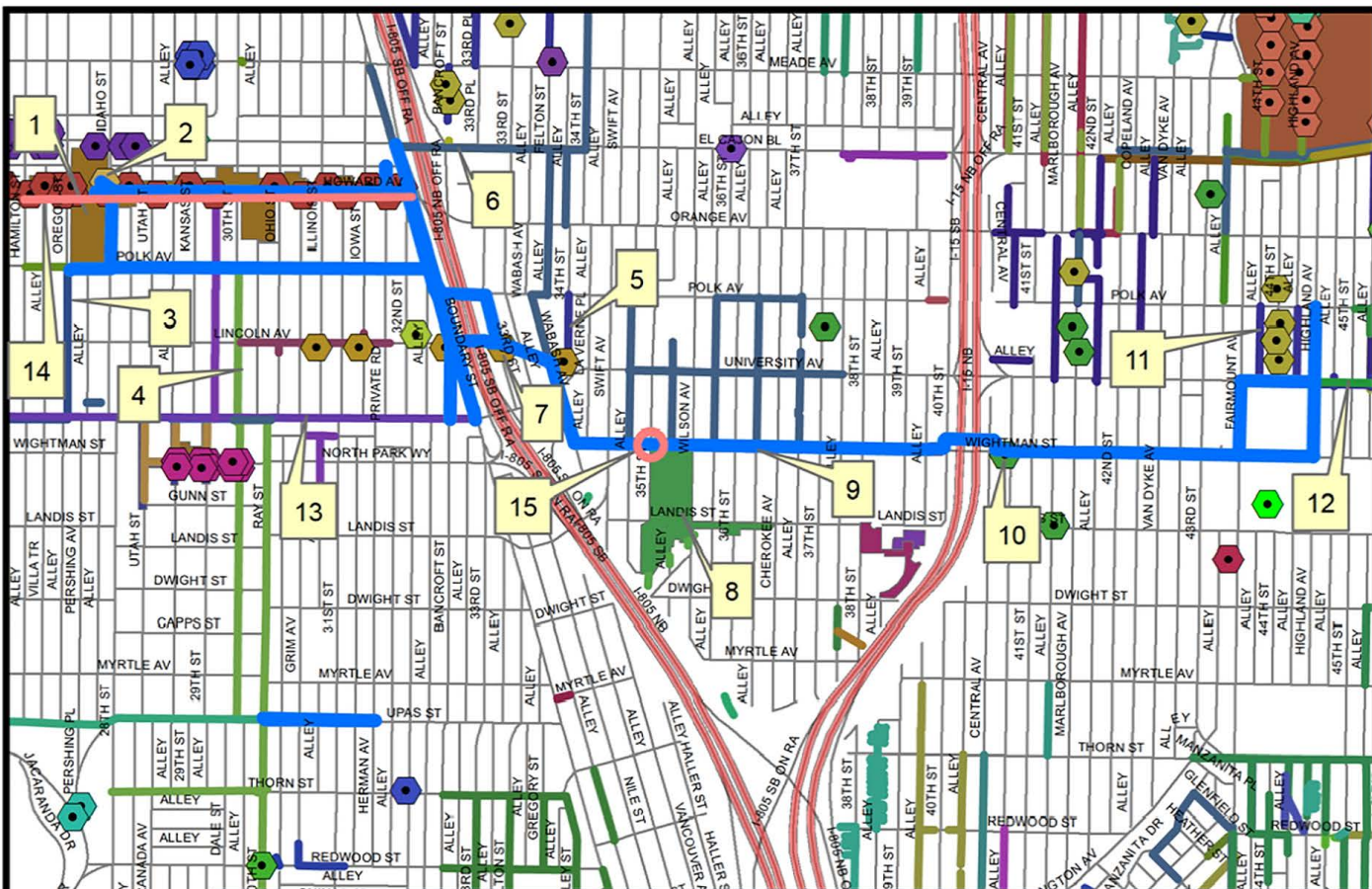
**OTAY 1ST & 2ND PIPELINES WEST OF HIGHLAND AVENUE**

SENIOR ENGINEER  
BRIAN VITELLE  
619-533-5105

PROJECT MANAGER  
GABRIEL TORRES  
619-533-4630

PROJECT ENGINEER  
ROY GANZON  
619-533-5247

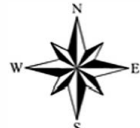
FOR QUESTIONS ABOUT THIS PROJECT  
Call: 619-533-4207  
Email: [engineering@sandiego.gov](mailto:engineering@sandiego.gov)



1. B13146 Howard Av UUD(Park BI-I-805) Jie Xiao 619-533-5496
2. S17006 University Heights Water Tower, Maryam Kargar 619-533-6673
3. S11021 University Av Pipeline Replacement, Mike Bajoua 619-533-4628
4. S12010, 30th Street Pipeline Replacement, Rick Collete, Construction Manager 760-521-8898
5. B11077, Sewer Group 767A, David Engel, RE 858-573-5032
6. B16023 Remaining Small Diameter CI Water PH2, Gabriel Torres 619-533-4630
7. B12066 Lincoln Av UUD, Farlito Valenzuela 619-235-1947
8. B15214 Cherokee Point South SD & GI, Shawn Krause 619-533-5107
9. B18075 Water Group Job 970 CI, Joshua Adelman 619-533-4656
10. B16008 City Street Lights Group 16B, Fernando Lasaga 619-533-7406
11. B17186, Ac Water & Sewer Group 1044(W), Martin, Reyhaneh, 619-533-4131
12. S18001, University Avenue Complete Street Phase 1, Bliss, Steven, 619-533-4668
13. S00915 University Av Mobility Plan (UAMP), Chun Chan 6195337416
14. Sandag: Howard Bikeway Project, Alison Moss, 6195955354
15. Sandag: North Park-Mid City Phase 1 Bikeways, Alison Moss, 6195955354

**Legend**

S12016



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**APPENDIX G**

**CONTRACTOR'S DAILY QUALITY CONTROL INSPECTION REPORT**

**Appendix G**

City of San Diego  
Asphalt Concrete Overlay

**Contractor's Daily Quality Control Inspection Report**

Project Title: \_\_\_\_\_ Date: \_\_\_\_\_

Locations: 1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

Asphalt Mix Specification: Attached Supplier: \_\_\_\_\_

Dig out Locations: 1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

Tack Coat Application Rate @ Locations:  
1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

Asphalt Temperature at Placement @ Locations:  
1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

Asphalt Depth @Locations:  
1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

Compaction Test Result @Locations:  
1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_

Location and nature of defects:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Remedial and Corrective Actions taken or proposed for Engineer's approval:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Date's City Laboratory representative was present:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Verified the following:

1. Proper Storage of Materials & Equipment
2. Proper Operation of Equipment
3. Adherence to Plans and Specs
4. Review of QC Tests
5. Safety Inspection

Initials:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Deviations from QCP \_\_\_\_\_ (see attached)

Quality Control Plan Administrator's Signature:

Date Signed:

\_\_\_\_\_

\_\_\_\_\_

**APPENDIX H**

**MONTHLY DRINKING WATER DISCHARGE MONITORING FORM**

# DRINKING WATER DISCHARGE MONITORING FORM

(Use for All Discharges to the Storm Drain)

All discharge activities related to this project comply with the State Water Resources Control Board ORDER WQ 2014-0194-DWQ, STATEWIDE GENERAL NPDES PERMIT FOR DRINKING WATER SYSTEMS DISCHARGES as referenced by ([http://www.waterboards.ca.gov/water\\_issues/programs/npdes/docs/drinkingwater/final\\_statewide\\_wqo2014\\_0194\\_dwq.pdf](http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/drinkingwater/final_statewide_wqo2014_0194_dwq.pdf)), and as follows:

<b>Project Name:</b>		<b>WBS No.:</b>		<b>Watershed No.</b>	
<b>Qualified Person Conducting Tests:</b>		<b>signature</b>			

BMPs MUST BE IN PLACE PRIOR TO ANY SCHEDULED DISCHARGE

By signing, I certify that all of the statements and conditions for drinking water discharge events are correct.

Event #1												
Discharge Location <sup>1</sup>	Category <sup>2</sup> (Select one)	Notification <sup>3</sup> (Select all that apply)	BMPs in Place <sup>4</sup> (Select all that apply)	Volume <sup>5</sup> (gal)	Sampling <sup>6</sup> (take samples at 10 mins, 50-60 mins & last 10 mins)				Exceedence <sup>7</sup>			Notes Report exceedence to RE & complete page 2 of 2
					Measure	Unit	Time	Result	Limit	No	Yes	
<b>Inlet Location</b>  <b>Start</b>  <b>End</b>  <b>Date:</b> <b>Time:</b>  <b>Date:</b> <b>Time:</b>	<input type="checkbox"/> <b>Superchlorinated</b> <small>(Chlorine added for disinfection)</small>	<input type="checkbox"/> <b>TSW</b> <small>(All Categories)</small>	<input type="checkbox"/> <b>Sweep flow path</b> <small>(gutter, street, etc.)</small>	<b>Total</b>	<b>Chlorine</b>	mg/L			0.1 mg/L= Exceedence	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> <b>Large Volume</b> <small>(≥ 325,850 gal)</small>	<input type="checkbox"/> <b>PUD</b> <small>(All Categories)</small>	<input type="checkbox"/> <b>Dechlorination</b> <small>(diffusers, chemicals, etc.)</small>							<b>Reused</b> <small>(if any)</small>	<b>Turbidity</b>	
	<input type="checkbox"/> <b>Well Dev/Rehab</b> <small>(Not Typical)</small>	<input type="checkbox"/> <b>Water Board</b> <small>(Large Volume Only)</small>	<input type="checkbox"/> <b>Inlet Protection</b>	<b>Erosion Controls</b>	<b>pH</b>	Unit			Range 6.5 to 8.5			
	<input type="checkbox"/> <b>Small Volume/Other</b> <small>(No Sampling Required)</small>	<input type="checkbox"/> <b>County</b> <small>(≥100,000 gal &amp; within ¼ mile of ocean/bay; or if enters the County's MS4)</small>	<input type="checkbox"/> <b>Sediment Controls</b>									

Event #2												
Discharge Location <sup>1</sup>	Category <sup>2</sup> (Select one)	Notification <sup>3</sup> (Select all that apply)	BMPs in Place <sup>4</sup> (Select all that apply)	Volume <sup>5</sup> (gal)	Sampling <sup>6</sup> (take samples at 10 mins, 50-60 mins & last 10 mins)				Exceedence <sup>7</sup>			Notes Report exceedence to RE & complete page 2 of 2
					Measure	Unit	Time	Result	Limit	No	Yes	
<b>Inlet Location</b>  <b>Start</b>  <b>End</b>  <b>Date:</b> <b>Time:</b>  <b>Date:</b> <b>Time:</b>	<input type="checkbox"/> <b>Superchlorinated</b> <small>(Chlorine added for disinfection)</small>	<input type="checkbox"/> <b>TSW</b> <small>(All Categories)</small>	<input type="checkbox"/> <b>Sweep flow path</b> <small>(gutter, street, etc.)</small>	<b>Total</b>	<b>Chlorine</b>	mg/L			0.1 mg/L= Exceedence	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> <b>Large Volume</b> <small>(≥ 325,850 gal)</small>	<input type="checkbox"/> <b>PUD</b> <small>(All Categories)</small>	<input type="checkbox"/> <b>Dechlorination</b> <small>(diffusers, chemicals, etc.)</small>							<b>Reused</b> <small>(if any)</small>	<b>Turbidity</b>	
	<input type="checkbox"/> <b>Well Dev/Rehab</b> <small>(Not Typical)</small>	<input type="checkbox"/> <b>Water Board</b> <small>(Large Volume Only)</small>	<input type="checkbox"/> <b>Inlet Protection</b>	<b>Erosion Controls</b>	<b>pH</b>	Unit			Range 6.5 to 8.5			
	<input type="checkbox"/> <b>Small Volume/Other</b> <small>(No Sampling Required)</small>	<input type="checkbox"/> <b>County</b> <small>(≥100,000 gal &amp; within ¼ mile of ocean/bay; or if enters the County's MS4)</small>	<input type="checkbox"/> <b>Sediment Controls</b>									

**Submit completed Form to RE**

**Instructional Notes found on the Page 2 of 2**  
PAGE 1 OF 2

Construction Management & Field Services Division

Version 4



## Receiving Water Monitoring

(Complete only if limits exceed on Page 1 of 2)

<b>Event #1</b>	
1) Go to the location where the discharge enters the receiving water.	
<input type="checkbox"/> Accessible <input type="checkbox"/> Unable to Determine <input type="checkbox"/> No Safe Access	
2) If accessible, take photos and complete the visual monitoring below. If unable to determine, stop here. If no safe access, stop here.	
3) Visual Monitoring: Is the discharge into the receiving water...	
...causing erosion	<input type="checkbox"/> Yes <input type="checkbox"/> No
...carrying floating or suspended matter	<input type="checkbox"/> Yes <input type="checkbox"/> No
...causing discoloration	<input type="checkbox"/> Yes <input type="checkbox"/> No
...causing and impact to the aquatic life present	<input type="checkbox"/> Yes <input type="checkbox"/> No
...observed with visible film	<input type="checkbox"/> Yes <input type="checkbox"/> No
...observed with an sheen or coating	<input type="checkbox"/> Yes <input type="checkbox"/> No
...causing potential nuisance conditions	<input type="checkbox"/> Yes <input type="checkbox"/> No
3) If all answers are NO, stop here.	
<b>4) If any answers are YES, Notify the RE immediately for further action</b>	

<b>Event #2</b>	
1) Go to the location where the discharge enters the receiving water.	
<input type="checkbox"/> Accessible <input type="checkbox"/> Unable to Determine <input type="checkbox"/> No Safe Access	
2) If accessible, take photos and complete the visual monitoring below. If unable to determine, stop here. If no safe access, stop here.	
3) Visual Monitoring: Is the discharge into the receiving water...	
...causing erosion	<input type="checkbox"/> Yes <input type="checkbox"/> No
...carrying floating or suspended matter	<input type="checkbox"/> Yes <input type="checkbox"/> No
...causing discoloration	<input type="checkbox"/> Yes <input type="checkbox"/> No
...causing and impact to the aquatic life present	<input type="checkbox"/> Yes <input type="checkbox"/> No
...observed with visible film	<input type="checkbox"/> Yes <input type="checkbox"/> No
...observed with an sheen or coating	<input type="checkbox"/> Yes <input type="checkbox"/> No
...causing potential nuisance conditions	<input type="checkbox"/> Yes <input type="checkbox"/> No
3) If all answers are NO, stop here.	
<b>4) If any answers are YES, Notify the RE immediately for further action</b>	

## Instructional Notes to Contractor

- 1) Log the location of the inlet or discharge point. For example: Albatross St & 5th Av. Log the start date and time and the end date and time of the discharge.
- 2) Log the discharge category. "Superchlorinated" are discharges where additional chlorine is added in order to adequately disinfect and sanitize drinking water system facilities. This does NOT include potable water containing residual chlorine from the water treatment process. "Large Volume" discharges are greater than 325,850 gallons of total volume for one event. "Well Dev/Rehab" are discharges of potable ground water from a well. This is not typical. If none of these categories apply, then select "Small Volume/Other."
- 3) Notifications of the location, date, time, category, and estimated volume of discharge must be made to the contacts and per the requirements below:

Contact	Email	When to Notify
TSW	SWPPP@SanDiego.gov	3 days prior to all discharges
PUD	CompReports@SanDiego.gov RDavenport@sandiego.gov	3 days prior to all discharges
San Diego Water Board	SanDiego@WaterBoards.ca.gov cc:Ben.Neill@WaterBoards.ca.gov	3 days prior to a Large Volume discharge
County of San Diego	DEH: joseph.palmer@sdcounty.ca.gov dominique.edwards@sdcounty.ca.gov	3 days prior if ≥100,000 gal within ¼ mile of the ocean/bay
	WPP: Nicholas.DelValle@sdcounty.ca.gov	3 days prior if enters County's MS4 or unincorporated County

- 4) At a minimum, sweep gutters prior to starting discharge and use dechlorination BMPs. The contractor and RE must monitor and determine if BMPs need to be removed/modified. For example if inlet protection is causing flooding at a storm drain inlet, contractor may elect to remove BMPs. Document any modification to BMPs in notes section.
- 5) Total volume must be logged for all discharges. If discharge water is reused for other purposes such as watering a golf course, log that volume under "Reused"
- 6) Sampling is required for categories per the following table:

Category	Measure	Sample Frequency
Superchlorinated	Chlorine, Turbidity, pH	first 10 mins, 50-60 mins, last 10 mins
Large Volume	Chlorine, Turbidity	first 10 mins, 50-60 mins, last 10 mins
Well Dev/Rehab	Chlorine, Turbidity	first 10 mins, 50-60 mins, last 10 mins
Small Volume/Other	None	None

- 7) Effluent limitations must be monitored not to exceed per the following table:

Measure	Method	Limit
Volume	Estimate None	
Chlorine	Field Measurement	0.10 mg/L-Cl
Turbidity	Visual Estimate	20 NTU for inland water 225 NTU for ocean 100 NTU for well water
pH	Field Measurement	6.5 to 8.5

**APPENDIX I**  
**CALTRANS PERMIT**

Click the link below to access the file

<https://filecloud.sandiego.gov/url/255ve87me4h56agt>

**APPENDIX J**  
**CATHODIC PROTECTION**

SECTION 13110  
CATHODIC PROTECTION

PART 1 - GENERAL

1.1 THIS SECTION INCLUDES

- A. The WORK of this Section includes providing a complete impressed current cathodic protection system for the following structure as outlined in this Section and on the Drawings:
  - 1. The metallic portion of the Otay 1<sup>st</sup> and 2<sup>nd</sup> pipelines west of Highland Avenue consisting of approximately 13,200 linear feet of 16-inch, 24-inch and 36-inch diameter, mortar-lined and tape-coated steel pipe. The exterior of the pipeline shall have a concrete armor coat over the tape, field-applied mortar over the tape coated joints, and field-applied mortar over any pipeline fittings or appurtenances that are not encapsulated in petrolatum wax tape.
- B. Electrical isolation of the structure from adjacent metallic structures, steel reinforced concrete structures, structures of dissimilar metal or dissimilar coatings, conduits, and all other metallic components that may impact the operation of the cathodic protection system.
- C. Installation of impressed current rectifiers, deepwell anode beds, flush-mounted test stations, and all other work described herein and on the Drawings.
- D. Identifying location, verifying availability and provision of electrical power for rectifiers including any permits, trenching, conduits, services meters, and other items required. Not all required items are shown on the Drawings.
- E. Bonding of all non-welded, non-insulating pipe joints with stranded copper wires.
- F. Testing of the system during installation, including electrical continuity of the pipeline.
- G. Testing of the system after installation and backfill (Final System Checkout).

1.2 REQUIREMENTS

- A. If the products installed as part of this Section are found to be defective or damaged or if the WORK of this Section is not in conformance with these Specifications, then the products and WORK shall be corrected at the CONTRACTOR's expense.
- B. Any retesting required due to inadequate installation or defective materials shall be paid for by the CONTRACTOR.
- C. The WORK also requires that one Supplier or Subcontractor accept responsibility for the WORK as indicated, but without altering or modifying the CONTRACTOR's responsibilities under the Contract Documents.
- D. The WORK also requires coordination of assembly, installation, and testing between the pipeline contractor and any cathodic protection material supplier or subcontractor.
- E. The Contractor shall provide a "qualified corrosion technician" and "Corrosion Engineer" to perform the Testing. The "qualified corrosion technician shall be a NACE Level 2 CP Technician or NACE Level 3 CP Technologist. Testing shall be performed under the supervision of a Corrosion Engineer. A Corrosion Engineer is a Registered Professional

Corrosion Engineer or a NACE Level 4 Cathodic Protection Specialist.

### 1.3 RELATED SECTIONS

- A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.
1. Site Safety and Regulatory Requirements
  2. Excavation, Trenching, Backfilling, and Compacting
  3. Piping
  4. Cast-In-Place Concrete
  5. Protective Coatings

### 1.4 REFERENCED SPECIFICATIONS, CODES, AND STANDARDS

- A. The WORK of this Section shall comply with the current editions of the following codes and standards:
1. AASHTO                      American Association of State Highway and Transportation Officials
    - a. H20                              Specification for Highway Bridges
  2. ASTM                              ASTM International
    - a. A518                              Standard Specification for Corrosion-Resistant High-Silicon Iron Castings
    - b. B3                                      Standard Specification for Soft or Annealed Copper Wire
    - c. B8                                      Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
    - d. D1248                              Standard Specification for Polyethylene Plastics Extrusion Materials for Wire and Cable
    - e. D1785                              Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe; Schedules 40, 80, and 120.
    - f. C94                                      Standard Specification for Ready-Mixed Concrete
  3. DWR                              Department of Water Resources
    - a. CSB No. 74                      California State Bulletin Number 74
  4. NACE International, the Corrosion Society
    - a. SP0169                              Standard Practice, Control of External Corrosion on

- Underground or Submerged Metallic Piping Systems
- b. SP0286 Electrical Insulation of Cathodically Protected Pipelines
- c. RP0375 Wax Coating Systems for Underground Piping Systems
- d. TM0497 Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems
- e. SP0572 Design, Installation, Operation and Maintenance of Impressed Current Deep Groundbeds
- 5. NEMA National Electrical Manufacturers Association
  - a. 250 Enclosures for Electrical Equipment (1,000 Volts Maximum)
  - b. FB1 Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable
  - c. TC2 Electrical Polyvinyl Chloride (PVC) Tubing and Conduit
  - d. TC3 PVC Fittings for Use with Rigid PVC Conduit and Tubing
- 6. NFPA National Fire Protection Association
  - a. NFPA 70 National Electric Code (NEC)
- 7. SDW City of San Diego, Public Works Department, Standard Drawings for Public Works Construction, Water Systems
  - a. SDW-128 At-Grade Concrete Test Box
  - b. SDW-122 Fitting Bonding Detail
- 8. UL Underwriters Laboratories
  - a. 6 Rigid Metal Conduits
  - b. 514B Fittings for Cable and Conduit

B. Whenever the Drawings or these Specifications require a higher degree of workmanship or better quality of material than indicated in the above codes and standards, these Drawings and Specifications shall prevail.

## 1.5 PERMITS AND JOB ACCESS

- A. Prior to the start of construction, the CONTRACTOR shall apply to the required authorities for permits required for installation of the cathodic protection system.
- B. The CONTRACTOR shall contact Underground Service Alert prior to commencing construction to locate existing utilities in the area of construction. Existing utilities include, but are not limited to, water lines, gas lines, telephone, street lights, sewer and storm drains,

and overhead and underground electric utilities.

- C. The CONTRACTOR shall be responsible for reviewing the rectifier locations to determine if there are any conflicts with obtaining power from the indicated locations. The CONTRACTOR shall report any conflicts to the ENGINEER prior to proceeding with the Work.
- D. The CONTRACTOR shall submit an application to the local power company for AC power to the new rectifiers. CONTRACTOR shall be responsible for all fees and expenses associated with providing power to the rectifiers.
- E. Traffic control shall satisfy the requirements of the governing locality.

#### 1.6 QUALITY ASSURANCE

- A. All well drilling shall be performed by a California licensed (C-57) Well Drilling CONTRACTOR.
- B. All deep well installations shall be installed in accordance with CSB No. 74 well standards and the applicable sections on wells from local regulations.
- C. All testing required to be performed by a “qualified corrosion technician” shall be performed by a NACE Level 2 CP Technician or NACE Level 3 CP Technologist under the supervision of a Corrosion Engineer. A Corrosion Engineer is a Registered Professional Corrosion Engineer or a NACE Level 4 Cathodic Protection Specialist. The Resident Engineer is the first point of contact for scheduling the testing

#### 1.7 SUBMITTALS

- A. The following shall be submitted to the ENGINEER prior to any equipment installation.
  - 1. Catalog cuts, bulletins, brochures, or data sheets for all materials specified herein.
  - 2. Certification that the proposed equipment and materials meet the Specifications and the intent of the Specifications.
  - 3. Schedule, including the expected start date and planned completion date.
  - 4. Copy of well drilling permits.
- B. The following shall be submitted to the ENGINEER after completion of the WORK.
  - 1. Wire connection testing.
  - 2. Insulating joint testing, before and after backfill.
  - 3. Casing insulator testing, before and after backfill.
  - 4. Well completion report.
  - 5. Electrical log with anode-to-earth resistances.
  - 6. System check-out report.

7. Record Drawings shall be submitted to and approved by the ENGINEER before the WORK is considered complete.
- C. The following shall be included in the rectifier's Owner's Manual:
1. Operations and maintenance instructions.
  2. List of spare parts recommended for 2 years of successful operation.

## 1.8 INTERFERENCE AND EXACT LOCATIONS

- A. The locations of cathodic protection equipment, test stations, devices, outlets, and appurtenances, as indicated on the Drawings, are approximate only. Exact locations shall be determined by the CONTRACTOR in the field subject to the approval of the ENGINEER.
- B. The CONTRACTOR shall field verify all data and final locations of work done under other Sections of the Specifications required for placing of the electrical work.
- C. In case of interference with other work or erroneous locations with respect to equipment or structures, the CONTRACTOR shall furnish all labor and materials necessary to complete the WORK in an acceptable manner.

## PART 2 - PRODUCTS

### 2.1 GENERAL

- A. All materials installed must be new. All equipment and materials supplied shall be similar to that which has been in satisfactory service for at least 5 years.

### 2.2 RECTIFIER

- A. Rectifier shall have 120/240-volt AC input and be air-cooled with a single-phase AC input and 18-volt, 12 ampere DC output as manufactured by Universal Rectifiers, Inc., Corppower Rectifiers, Inc., or approved equivalent.
- B. Rectifier shall be designed to operate continuously at an ambient temperature up to 122 degrees F without damage to the rectifier components. Cooling shall be accomplished by natural convection.
- C. Transformer:
  1. Two-winding, insulating type, meeting requirements of NEMA and UL.
  2. Rectifier shall be capable of operating continuously at the rated output current at any voltage from zero to 110% without damaging any rectifier components. Full rated DC output voltage shall be adjustable by not less than 18 equal steps from approximately 5% of rated voltage to full rated output voltage. This adjustment shall be accomplished with silver plated or stainless steel connectors and adjustment link bars.
- D. Rectifying element shall be a full-wave bridge, silicon diode stack with efficiency filter, metal oxide thyristors, and current-limiting devices for overvoltage and overcurrent protection of stack. Silicon stacks shall be equipped with silicon diodes rated at a minimum of 800 peak inverse volts.



- E. All rectifiers shall have overload and lightning protection for both AC and DC circuits.
- F. Both a panel voltmeter and a panel ammeter shall be provided. Voltmeter and ammeter shall be calibrated and adjusted at the factory.
- G. Rectifier shall be installed with a MicroMax GPS300 synchronized interrupter manufactured by American Innovations or approved equivalent.
- H. Electrical tests shall be performed by the manufacturer and recorded as listed below:
  - 1. AC Volts Input
  - 2. AC Amperes Input
  - 3. Apparent Watts Input
  - 4. True Watts Input
  - 5. Power Factor
  - 6. DC Volts Output
  - 7. DC Amperes Output
  - 8. DC Watts Output
  - 9. Conversion Efficiency
  - 10. Dielectric Strength
  - 11. Transformer Primary to Ground
  - 12. Transformer Secondary to Ground
  - 13. Transformer Primary to Secondary
  - 14. Stack AC to Ground
  - 15. Stack DC to Ground
  - 16. Ripple Voltage at Full Output
- I. The following shall be provided for each rectifier. Each item shall be provided in a waterproof bag or container.
  - 1. Operations and Maintenance Manual
  - 2. Circuit Diagram
  - 3. Electrical Test Report

### 2.3 GPS INTERRUPTER, RELAY, AND HEAT SINK

- A. The interrupter shall be an American Innovations MicroMax GPS 300.
- B. The relay for use in the GPS Interruption circuit shall be a solid state, normally open, 40 Amp DC relay. The relay shall be an NTE Electronics, Inc. Model No. RS3-1D40-41M or approved equal.
- C. The relay shall be mounted on an aluminum heat sink. Heat sink shall be Crydom Model HS202 or approved equal.

### 2.4 AC METER PEDESTAL

- A. The AC meter pedestal (per SDG&E Guidelines, latest edition) shall be approved by the ENGINEER. The meter pedestal shall have a 100A main breaker and a 20-amp, double pole breaker for the rectifier and a 20A, single pole breaker for the 120V/20A outlet within the enclosure. Meter pedestal shall be Myers MEUG16-M100-SD or approved equal.

- B. Concrete mounting pad size for the meter pedestal shall be reinforced and be 24 x 24 x 6 inches thick. Reinforcing steel shall be No.4. All conduits shall penetrate the concrete mounting pad to enter the pedestal.

## 2.5 ELECTRICAL ENCLOSURE

- A. Electrical enclosure shall be a Myers Custom Products traffic control enclosure, type MSX, or equal, conforming to NEMA 3R. Enclosure shall be keyed to use existing City of San Diego rectifier cabinet locks, Corbin #1548-1.
- B. Electrical enclosure shall be made of 0.125" thick type 5052-H32 aluminum and the finish shall be powder coated White inside and out.
- C. Enclosure shall have a single door with a full length hinge and a 3-point lockable latch.
- D. Enclosure shall have a conveniently located 120V/20A receptacle with its own 20-amp breaker and circuit coming from the AC meter pedestal.
- E. Ancillary equipment mounting panel shall be fabricated from 1/4-inch thick micarta or Grade XX phenolic.
- F. Enclosures shall be equipped with permanent identification tags affixed to the outside front door. The identification tag shall have white engraving for identification of the rectifier. Minimum height of lettering shall be 3/4-inch. The tags shall have the following legend:

City of San Diego  
Otay 1st and 2nd Pipelines  
Cathodic Protection Rectifier

## 2.6 HIGH SILICON CAST IRON ANODES

- A. Cast iron anodes shall be Type 2684 Z Corrosion Resistant High Silicon Iron Castings manufactured by Anotec Industries or approved equal and shall meet ASTM A518, Grade 3.
- B. High silicon cast iron anodes shall be tubular type anodes with a length of 84-inches, a nominal diameter of 2.7-inches, a minimum surface area of 4.9-square feet, a minimum weight of 70 pounds, and shall be furnished with the wire attached to the interior of the anode and sealed using manufacturer's standard connection.
- C. The wire attached to the anodes shall be stranded copper wire and insulated for 600 Volts. Wire size shall be AWG No. 8. Wire insulation shall be a dual extrusion type. The outer insulation jacket shall be HMWPE and the inner insulation shall be fluorinated polymer. The wire shall be Halar cathodic protection wire or equivalent and shall conform to the requirements of ASTM D1248 Type 1, Class C, Grade 5. Anode wire connection shall have a pulling strength exceeding the wire's tensile strength. Any damage to the wire insulation or anode shall require complete replacement of the wire and anode.
- D. The resistance of each anode wire connection shall not exceed 0.004 ohms. Each anode wire connection should be tested for conformance with these Specifications. A record of tests shall be submitted to the ENGINEER. The records shall include a minimum of three copies of the following information:

1. Anode numbering system to identify anode under test
  2. Anode wire length
  3. Resistance value as indicated by test
  4. Test equipment
  5. Test method
- E. Anodes shall be individually labeled with the length of lead wire and anode number. Anodes shall be consecutively numbered with the deepest anode being Number 1.
- F. Anode wires shall be of one continuous length without splices from the anode connection to the anode terminal board. Anode wires with the attached anodes shall be shipped to the job site with the wire wound on a reel. The minimum core diameter of the reel shall be 5-1/2 inches. The anode wire insulation shall be free of surface damage such as nicks, abrasions, scratches, etc., in all respects throughout the entire length of the wire. Precaution shall be taken during fabrication, transportation, and installation of the anodes to ensure that the wire is not kinked or sharply bent. Bends sharper than 2-1/2 inches in radius are not permissible.

## 2.7 CALCINED COKE BREEZE

- A. Backfill material for impressed current anodes shall be calcined petroleum coke breeze with a resistivity of 25 ohm-cm or less when tested with an applied pressure of 2 psi.
- B. The calcined coke breeze backfill shall have the following chemical properties:
1. Fixed carbon      98.0% minimum
  2. Ash                      0.5% maximum
  3. Sulfur                  2.0% maximum
  4. Volatile matter    1.0% maximum
  5. Moisture              1.0% maximum
- C. Coke breeze backfill shall be Loresco SC-2, Loresco SC-3, or approved equivalent.

## 2.8 ANODE VENT PIPING

- A. Plastic conduit for the impressed current anode vent piping shall be 2-inch diameter PVC, Schedule 80, 1-inch diameter PVC, Schedule 40, and 1-inch diameter PVC, Schedule 80, conforming to ASTM D1785, Type 1, Grade 1, NEMA TC2 for conduit, and TC3 for fittings.
- B. Anode vent pipe shall be two-inch diameter SCH 40 PVC pipe with slots cut in the transverse direction per the plans. The slots shall be 0.006-inch wide. The slots shall be regularly spaced on the pipe to provide a minimum open area of 0.66-square inches per foot of vent pipe. The vent pipe shall have flush threaded joints per ASTM F480. Solvent weld slip fit joints: reinforcement screws are not allowed.

## 2.9 ANODE CENTRALIZERS

- A. Anode centering devices shall be Item No. Cen-52 manufactured by Mesa Products, Model CENTRA2 manufactured by Farwest Corrosion, or approved equivalent. Anode centralizers shall be submitted to the ENGINEER for acceptance prior to use.

## 2.10 ANODE TERMINAL BOARD

- A. Panel boards shall be made of 1/4-inch thick phenolic plastic sized, as indicated on the Drawings.
- B. Connection hardware shall be brass or bronze. All connections shall be double nutted bolts with lock washers.
- C. Copper bus bar shall be 1/8-inch thick and sized to fit. The copper bus bar shall be per ASTM B187 with 98% conductivity.

## 2.11 SOLDERLESS LUG CONNECTORS

- A. Solderless lug connectors shall be made of brass or copper with a brass set screw. The lug shall be designed for direct burial and shall be appropriately sized for the connection wire. The lug shall be ILSCO Type XT-6DB or an approved equivalent.

## 2.12 SHUNTS

- A. Shunts for impressed current anodes shall have a resistance of 0.01 ohms and a capacity of 5 amperes. Shunts shall be Type JB, as manufactured by Holloway, or equivalent.
- B. Shunts for bonding stations shall have a resistance of 0.01 ohms and a capacity of 5 amperes. Shunts shall be Type RS, as manufactured by Holloway, or equivalent.

## 2.13 CONCRETE TRAFFIC VALVE BOXES

- A. Traffic valve boxes shall be rated to withstand AASHTO H20 traffic loading. The traffic valve boxes shall be G5 Utility Boxes manufactured by Christy Concrete Products, Inc., No. 3RT Utility Box manufactured by Brooks Products, or an approved equivalent. Traffic box covers for test stations shall be cast iron. Concrete traffic valve boxes for test stations and lids shall conform to City of San Diego standard drawing SDW-128.
- B. Traffic box covers for anode wellhead traffic box shall be H-20 traffic rated cast iron frame and lid. The lid shall be approximately 14 inches in diameter and shall have precast 1/2-inch high letters that say "CITY OF SAN DIEGO – CATHODIC PROTECTION – ANODE WELL". The well head vault shall be model SBF 1243 as manufactured by Southbay Foundry or equal.

## 2.14 READY-MIXED CONCRETE

- A. Ready-mixed concrete shall be in accordance with ASTM C94.
- B. Concrete used for anode well concrete cap shall have a minimum compressive strength of 4000 PSI.

## 2.15 CONDUIT AND FITTINGS

- A. The minimum conduit size shall be 1 inch unless otherwise indicated. Refer to NFPA 70 (NEC) for additional conduit size requirements.
- B. Conduit and fittings placed below grade shall be PVC, Schedule 80.
- C. Conduit and fittings placed above grade shall be PVC coated and lined rigid steel. Rigid steel conduit shall be galvanized conforming to UL 6.
- D. Conduit straps shall be a 2-hole galvanized steel conduit strap.
- E. Fittings for use with rigid steel conduit shall be galvanized cast ferrous metal with gasketed covers manufactured by Crouse Hinds Condulets, Appleton Unilets, or an approved equivalent. Rigid metallic conduit fittings shall be galvanized and conform to NEMA FB 1 and be UL 514B listed.
- F. Union couplings for conduits shall be the Erickson or Appleton type EC, 0-Z Gedney 3-piece Series 4, or equivalent.

## 2.16 CAUTION TAPE

- A. The caution tape shall be an inert plastic film designed for prolonged underground use. The tape shall be a minimum of 3 inches wide and a minimum of 4 mils thick. The tape shall be continuously printed over the entire length with the wording "CAUTION: CATHODIC PROTECTION CABLE BURIED BELOW." The wording shall be printed using bold black letters. The color of the tape shall be red.

## 2.17 WIRES

- A. Conductors shall consist of stranded copper of the gauge indicated on the Drawings. Wire sizes shall be based on American Wire Gauge (AWG). Copper wire shall be in conformance with ASTM Designations B3 and B8.
- B. All wires terminating on the anode terminal board or in a test station shall have a wire identifier attached within 4 inches from the end of wire at the terminal board, prior to backfill, as specified under "Wire Identification."
- C. High molecular weight polyethylene (HMWPE) insulating jackets shall conform to ASTM D1248.
- D. Wire splicing is not allowed.
- E. Insulation Type and Colors: As shown on Drawings.

## 2.18 WIRE IDENTIFIERS

- A. Wire identifiers shall be mil spec polyolefin heat shrink sleeves. Alpha-numeric characters for pipe/structure identification shall be printed at a minimum size of 3/16 inch.

## 2.19 EXOTHERMIC WELDS

- A. Exothermic welds shall be in accordance with the manufacturer's recommendations.

Exothermic welds shall be Cadweld manufactured by Erico Products, Inc., Thermoweld manufactured by Continental Industries, Inc., or an approved equivalent. Duxseal packing manufactured by Johns-Manville or an approved equivalent shall be used where necessary to prevent leakage of molten weld metal.

- B. The shape and charge of the exothermic weld shall be chosen based on the following parameters:
  - 1. Pipe material
  - 2. Pipe size
  - 3. Wire material/size and requirement for sleeves
  - 4. Number of strands to be welded
  - 5. Orientation of weld (vertical or horizontal)

#### 2.20 WIRE-TO-PIPE COATING MATERIAL

- A. Coating material for exothermic weld connections shall be two part ProPoxy 20 epoxy putty manufactured by the Hercules Chemical Company, Repair Putty Multi-Purpose by Loctite, or an approved equivalent. The epoxy putty shall be non-conductive and have at least 300 volts per mil of dielectric strength. The epoxy putty shall be covered with mortar to match the pipe coating.

#### 2.21 INSULATING FLANGE KITS

- A. Insulating flange gaskets shall include full-faced gaskets, insulating sleeves and washers, and steel bolts, nuts, and washers. The complete assembly shall have a pressure rating equal to or greater than the flanges between which it is installed. Sleeves, gaskets, and insulating washers shall be G-10 composite materials and have a dielectric constant of 300 volts per mil at minimum. Steel washers shall fit well within the bolt facing on the flange. Insulating washers shall fit within the bolt facing the flange over the outside diameter of the sleeve. All materials in contact with potable water shall be NSF 61 approved.

#### 2.22 PETROLATUM WAX TAPE

- A. Petrolatum wax tape system shall be Trenton Primer and #1 Wax-tape manufactured by Trenton Corp., Denso Paste and Densyl Tape manufactured by Denso North America, Inc., or an approved equivalent and in accordance with the City of San Diego White Book, Standard Specifications for Public Works Construction, 2018 Edition, Section 209.

#### 2.23 NEOPRENE MAT

- A. A 1/4-inch thick neoprene mat shall be installed between the project pipeline and the foreign pipeline at each foreign pipeline test station. Each mat shall be sized so that the edge of the mat extends a minimum of 24 inches from both sides of the foreign pipeline.

#### 2.24 PERMANENT REFERENCE ELECTRODE

- A. Reference electrodes shall be copper-copper sulfate and designed for continuous use in water for a minimum of 20 years, as manufactured by Borin Manufacturing or approved equivalent.

The reference electrode shall have a wire which will extend to the traffic box without slicing as indicated on the Drawings.

#### 2.25 ANODE WELLHEAD COVER

- A. Anode wellhead cover shall be South Bay Foundry SBF 1243 or approved equal.

### PART 3 - EXECUTION

#### 3.1 STORAGE OF MATERIALS

- 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 appropriate methods.

#### 3.2 EXCAVATION AND BACKFILL

- A. Buried wires shall have a minimum cover of 24-inches.
- B. Caution tape shall be installed above buried wire. Caution tape shall be installed a minimum of 6 inches above underground wires and conduits.
- C. Anode wire identification tags shall be placed on the wires prior to placing wire in conduit or backfilling.

#### 3.3 RECTIFIER

- A. Approximate stationing of rectifiers and electrical power are shown on the Drawings. Rectifier installation includes provision of AC power and AC meter pedestal to the rectifier by the CONTRACTOR. CONTRACTOR shall furnish and install all required wiring, conduits, cables, meters, splice boxes, and equipment as necessary for operation of the rectifier and as required by the local power agency.
- B. The CONTRACTOR may propose an alternative rectifier location to the CITY for review and approval. The reinforced concrete pad shall be constructed such that water will not collect against the rectifier cabinet. The asphalt adjacent to the concrete pad shall slope away from the concrete pad for a distance of 1 foot. The vent pipe riser and conduits into the enclosure shall be cast into the concrete pad. After the concrete is set, the enclosure shall be securely anchored to the pad with expanding anchor bolts. Use leveling nuts below the cabinet flange to create space for the grout seal. Apply the non-shrink grout as shown on the enclosure detail.

#### 3.4 AC METER PEDESTAL

- A. The AC meter pedestal (per SDG&E Guidelines, latest edition) shall be located by the CONTRACTOR and approved by the at the location shown on the drawings with approval from the ENGINEER.

#### 3.5 IMPRESSED CURRENT ANODE INSTALLATION

- A. Impressed current anode beds shall be installed in accordance with NACE SP0572, CSB No. 74, San Diego County Well Standards, and these Specifications.

## B. Well Drilling

1. The CONTRACTOR shall obtain and pay for all fees and permits required for well drilling.
2. Drilling of the anode wells shall be done in the presence of the ENGINEER. A minimum of 48-hour notice shall be given by the CONTRACTOR to the ENGINEER prior to drilling the well. Drilling of the well shall begin early enough in the day to ensure completion of the well during regular working hours.
3. The CONTRACTOR shall protect the well bore from the intrusion of contaminants into the hole at all times. The CONTRACTOR is responsible for the cost of all cleanup associated with contamination of the well and/or job site resulting from the CONTRACTOR's WORK.
4. Fresh water shall be circulated from the bottom of the hole to clear the well of drilling mud and cuttings after the well is drilled.
5. Loading of anodes and other equipment in the well shall be done in the presence of the ENGINEER. A minimum of 48-hour notice shall be given by the CONTRACTOR to the ENGINEER prior to loading anodes. Loading of the anodes into the well shall begin early enough in the day to ensure completion of all loading, including backfilling, during regular working hours.
6. The well shall be covered with a steel trench plate or other heavy device that blocks access and that cannot be removed by hand whenever the well is left unattended.

## C. Well Casing

1. The CONTRACTOR may elect to install the well with or without a casing. In the event that the well collapses, for any reason, including the elimination of the casing, the well shall be relocated, re-drilled, and the original hole abandoned at the CONTRACTOR's expense. Only a metallic casing may be used in the coke breeze column.

## D. Vent Pipe

1. The bottom of the vent pipe shall be securely capped.
2. The top of the vent pipe shall be temporarily sealed during the coke breeze loading process. Any foreign material entering the vent pipe shall be removed.

## E. Anodes

1. The ENGINEER shall visually inspect the insulation on the anode lead wire for abrasion or other damage to the insulation and wire as the anode is lowered into place. Anodes with damaged insulation or wire are not acceptable and shall not be installed. Splices are not allowed on the anode wire.
2. Attach the centering devices to the anodes using the adjustable stainless steel bands. The terminal end of the anode wires shall be identified with permanent wire markers. Anode No. 1 shall be attached to the bottom section of the anode vent pipe with adjustable stainless steel bands and lowered into the hole. A digital soil resistance meter,



furnished and operated by the ENGINEER, shall be connected between the anode lead wire for Anode No. 1 and the drain wire. The drain wire must be installed and be accessible to the ENGINEER during time of testing. The CONTRACTOR shall stop lowering the anode at 10-foot intervals to tape the anode lead to the vent pipe and to allow the ENGINEER to measure the resistance profile of the anode well. This shall continue to the bottom of the hole and the vent pipe shall be secured in place.

3. Continuing with Anode No. 2, with centralizers attached, the anodes shall be lowered into the hole supported by the attached lead wires. The CONTRACTOR shall fabricate an apparatus that allows the anodes to be lowered by the lead wire but does not bend the wire into a radius less than 2.5 inches. All sharp edges on the centering device assembly shall be taped with vinyl electrical tape to preclude damaging any wires while lowering anodes into place. The vent pipe shall not be attached to Anode No. 2. The ENGINEER may adjust the depths of the individual anodes to avoid high resistance soil layers. When an anode has been placed at the final depth it shall be securely fixed in that position prior to coke breeze backfill. Anodes shall not be backfilled until the ENGINEER has inspected the placement of the anodes and given permission to backfill.

#### F. Coke Breeze Backfill.

1. Coke breeze shall be placed in the hole at a steady rate to ensure that the coke breeze does not bridge or block the hole. The hole shall be kept completely full of water during placement of backfill.
2. Settling of the backfill and coverage of the anodes will be determined by measuring the anode-to-earth resistance from the digital resistance meter. During coke breeze backfill, the ENGINEER will measure the resistance between the lowermost uncovered anode and the protected structure. Coverage of the anode will be indicated by a rapid decrease in resistance, normally by at least 50%. As soon as coverage of a lowered anode is indicated, the circuit shall be attached to the next highest anode in the hole. Testing will continue until coverage of all anodes has been verified. The ENGINEER shall record the resistance of each backfilled anode. Coke breeze shall be added to a minimum of 20 feet above the top anode. The CONTRACTOR shall sound the anode hole with a weighted tape measure and determine the final height of the coke breeze column.
3. Coke shall be allowed 24 hours to settle. After 24 hours, the coke column shall be topped off as required to achieve the coke column length shown on the Drawings.
4. Incomplete coverage of each anode with coke breeze shall be cause for rejection of the anode well.
5. The CONTRACTOR shall record the total weight of coke breeze placed in each anode well.

#### G. Well Seal

1. Backfilling operations above the coke breeze column shall begin no sooner than 24 hours after installation of the coke breeze to allow for settling. Backfilling shall be done continuously, without interruption, until the hole is sealed.
2. Collapse of the hole prior to the introduction of the seal material shall be cause for abandonment of the well at the CONTRACTOR's expense.

3. Sealing materials shall not be allowed to drop from the top of the hole. All materials shall be pumped into the hole from the top of the coke breeze column to the top of the hole.
  4. If well casing materials are used in the construction of the well, then the annular space between the well bore and the casing shall also be sealed with a conductive grout.
  5. Sealing material shall not enter the vent pipe.
  6. The CONTRACTOR shall record the volume of sealing material installed in the hole.
- H. Storage and disposal of drilling fluids, cuttings, and mud:
1. During the drilling and loading process, drilling fluids, cuttings, and mud shall be stored onsite in uncontaminated, watertight, lockable debris boxes. Alternative storage methods may be utilized only with prior approval of the ENGINEER.
  2. Drilling mud and cuttings shall be disposed of by the CONTRACTOR at a suitable disposal site in accordance with all local, state, and federal regulations.

### 3.6 TEST STATIONS

- A. Test stations shall be installed at the approximate stationing's shown on the Drawings. Flush-mounted test stations shall be located behind the curb and other areas not subject to vehicular traffic to allow for safe access by City monitoring personnel without requiring traffic control. The CONTRACTOR shall field verify final location of the test stations. Wire identifiers shall be placed on all wire prior to backfill and installation of test stations.
- B. Installation of test stations shall be done in the presence of the ENGINEER. A minimum of 48-hour notice shall be given by the CONTRACTOR to the ENGINEER prior to installation of a test station. Installation of test stations shall begin early enough in the day to ensure completion of the installation during regular working hours.
- C. The CONTRACTOR shall notify the owner of foreign utility piping for which foreign pipeline test stations are to be installed. Notification shall be provided at least 2 weeks in advance. Test leads to foreign pipelines shall be installed in the presence and to the satisfaction of a representative of the foreign pipeline owner.
- D. The CONTRACTOR shall provide global positioning system (GPS) coordinates of each test station location with a minimum accuracy of 1 meter or 3 feet. The CONTRACTOR shall submit the GPS coordinates of the test stations to the ENGINEER in the final report after installation.

### 3.7 WIRES

- A. Buried wires shall be laid straight without kinks. Each wire run shall be continuous in length and free of joints or splices, unless otherwise indicated. Care shall be taken during installation to avoid punctures, cuts, or other damage to the wire insulation. Damage to insulation shall require replacement of the entire length of wire at the CONTRACTOR's expense.
- B. 18 to 24 inches of slack (coiled) shall be left for each wire at each flush-to-grade test station. Wire slack shall be sufficient to allow removal of wire extension for testing. Wire shall not

be bent into a radius of less than 2 inches.

- C. The wire conduits must be of sufficient diameter to accommodate the wires. This shall be determined by the number and size of wires in accordance with the applicable electrical codes and standards.

### 3.8 WIRE IDENTIFIERS

- A. All wires shall be coded with wire identifiers.
- B. Wire identifiers shall be placed on the wires prior to backfill.

### 3.9 EXOTHERMIC WELD CONNECTIONS

- A. Exothermic weld connections shall be installed in the manner and at the locations indicated. Coating materials shall be removed from the surface over an area of sufficient size to make the connection. The surface shall be cleaned to bare metal by grinding or filing prior to welding the conductor. The use of resin impregnated grinding wheels will not be allowed. A copper sleeve shall be fitted over the conductor. Only enough insulation shall be removed such that the copper conductor can be placed in the welding mold.
- B. The CONTRACTOR shall be responsible for testing all test lead welds. The ENGINEER, at his or her discretion, shall witness these tests.
- C. After the weld has cooled, all slag shall be removed and the metallurgical bond shall be tested for adherence by the CONTRACTOR. A 22-ounce hammer shall be used for adherence testing by striking a blow to the weld. Care shall be taken to avoid hitting the wires. All defective welds shall be removed and replaced.
- D. After backfilling the pipe, all test lead pairs shall be tested for broken welds using a standard ohmmeter. The resistance shall not exceed 150% of the theoretical wire resistance as determined from published wire data.
- E. The CONTRACTOR shall inspect both the interior and exterior of the pipe to confirm that all coatings and linings removed or damaged as a result of the welding have been repaired. The CONTRACTOR shall furnish all materials, clean surfaces and repair protective coatings and linings damaged as a result of the welding. Repair of any coating or lining damaged during welding shall be performed in accordance with the coating or lining manufacturer's recommendations.
- F. All exposed surfaces of the copper and steel shall be covered with insulating materials as indicated on the drawings.
- G. Mortar shall be applied to the project pipeline at all wire-to-pipe connections. The mortar shall match the exterior mortar. Coating repairs shall be performed in accordance with the coating manufacturer's recommendations.

### 3.10 PETROLATUM WAX TAPE SYSTEM APPLICATION

- A. Petrolatum wax tape system shall be applied on insulating joints and all fittings, valves, appurtenances and in-line specials as indicated in the Drawings. Petrolatum wax tape system shall be applied in accordance with NACE RP0375, AWWA C217, and these Specifications.

The materials shall be applied according to the manufacturer's recommendations.

- B. All loose scale shall be removed from the surface to be coated with hand tools (wire brush, scraper, and rags). Debris and moisture shall be wiped from surface with clean rag. Petrolatum wax tape shall be applied immediately after applying the primer, using a 1-inch overlap. A spiral wrap shall be used and a slight tension shall be applied to ensure that there are no air pockets or voids. After applying the tape, the applicator shall firmly press and smooth out all lap seams and crevice areas. The tape shall be in tight intimate contact with all surfaces.

### 3.11 TESTING INSULATED PIPE FLANGES

- A. Test the electrical isolation effectiveness of each insulated pipe flange. This testing shall be performed by the Contractor's Cathodic Protection Technician and witnessed by the Engineer. The Contractor shall provide written notice of this testing to the Engineer a minimum of two days in advance. If the insulated pipe flange will be buried, it shall be tested for electrical isolation by the Contractor before the wax tape coating is applied. At the Engineer's option, the City of San Diego may repeat this testing during or immediately after the installation of the insulating flange. Replace or repair any insulated pipe flange that is determined to not meet the minimum electrical isolation requirements in this specification. The effectiveness of insulating flanges shall be determined using the following test techniques in the order shown until one of the criteria is achieved or as otherwise directed by the Engineer.
  - 1. Electrical Potential Difference Test: Electrically bond the pipe on the vault or unburied side of the insulating flange to an electrical ground with a maximum resistance to remote soil of 5-Ohms. If the pipe on both sides of the insulating flange is mechanically connected to a minimum 50-feet of buried pipe, then the pipe does not need to be bonded to an electrical ground for this test. Measure the CP Potential of the pipe on both sides of the insulating flange using a copper/copper sulfate reference electrode. If the difference in CP Potentials is greater than or equal to 500-millivolts, the insulating flange is providing adequate electrical isolation. This test must be performed with all cathodic protection systems and anodes disconnected from the pipeline. If this criterion is not met, perform the Nilsson 400 Meter Direct Resistance Test to verify the effectiveness of the insulating flange.
  - 2. Direct Resistance Test: Measure the electrical resistance across the insulated flange using a 97-Hertz square wave null balancing ohmmeter such as the Model 400 Nilsson Soil Resistance Meter and the four-wire resistance technique. A standard handheld digital multi-test meter's ohmmeter circuit (e.g. Fluke 97 or Beckman HD110) is not suitable for properly making these resistance measurements. Perform this test by connecting the meter's P1 and C1 terminals to one side of the insulating flange, using two wires, and then connecting the meter's P2 and C2 terminals to the other side of the insulating flange, using two additional wires. Use vise grips or temporary exothermic welds to make the wire connections to the flange or pipe. The criterion for a pipe filled with water is a minimum measurement of 5-Ohms. The criterion for a dry or a partially filled pipe is a minimum measurement of 100-Ohms. If none of the applicable criteria are met, perform the Inductive Ammeter Direct Resistance Test to verify the effectiveness of the insulating flange.
  - 3. Inductive Ammeter Direct Resistance Test: Connect two separate wires via two separate connections to the pipe on both sides of the insulating flange. Use vise grips or temporary exothermic welds to make the wire connections. Use two pairs of test wires,

one for current flow, one for voltage measurement. Using the first set of test wires, apply a minimum 12-volt DC electrical current across the insulating flange. Using the second set of test wires, measure the voltage across the insulating flange developed by the DC current flow. Use an inductive ammeter hoop (e.g. Swain hoop) clamped around the pipe immediately adjacent to the insulating flange to measure the change in DC current flow in the pipe, through the insulated flange. Calculate the electrical resistance across the insulating flange in Ohms by dividing the change in DC Volts by the change in DC Amps (i.e. Ohm's Law). The criterion for a pipe filled with water is a minimum measurement of 5-Ohms. The criterion for a dry pipe is a minimum measurement of 100-Ohms. If either of the applicable criteria is not met, perform the NACE Insulating Flange Leakage Test, per NACE SP0286, to verify the effectiveness of the insulating flange.

4. NACE Insulating Flange Leakage Test: This test procedure shall conform to the "Leakage Test" described in the NACE Standard SP0286, Section 8, "Field Testing and Maintenance", Figure 12. The test current used shall be between 3 and 5 DC Amps. The criterion for a pipe filled with water is a maximum "electrical leakage value" of 10-percent of the test current. The criterion for a dry pipe is a maximum "electrical leakage value" of 5-percent of the test current.
- B. Individual Flange Bolt Testing: For all insulated flanges to be buried and for all other insulating flanges that do not meet any of the other criteria, measure the electrical resistance of each flange bolt to both sides of the insulated flange using a Nilsson Model 400 Soil Resistance Meter and four-wire resistance technique. The measured resistance value for each flange through-bolt shall be a minimum of 1,000-Ohms, as measured from each bolt to both flanges. This criterion applies to the flange through-bolts and does not apply to valve cap bolts which are threaded on one side. Remove, inspect, and replace all dielectric flange bolt sleeves and washers that do not meet the minimum resistance criterion.
  - C. If an insulated flange with threaded cap bolts passes the resistance tests for all the "through-bolts" yet fails the other previous tests, remove all the threaded cap bolts, inspect and replace all imperfect dielectric flange bolt sleeve and washer materials and retest.
  - D. In order to make an accurate resistance measurement that passes any of these criteria it may be necessary to disable the pipe inside a vault, flow control facility, or pump station on one side of the insulated flange (or temporarily remove any electrically grounded appurtenances) so that the pipe is not grounded on one side of the insulated flange. This temporary change may eliminate an electrical path which interferes with making an accurate resistance measurement.

### 3.12 ELECTRICAL CONTINUITY TESTING OF PIPE WITH BONDED JOINTS

- A. Conduct electrical continuity testing to demonstrate that all buried pipe joints (except insulated flanges) are either welded joints or have been electrically bonded across with No. 4 AWG stranded copper bond wires. This testing shall be performed by the Contractor's Cathodic Protection Technician and witnessed by the Engineer. The Contractor shall demonstrate to the Engineer's satisfaction that full electrical continuity has been achieved and shall make all required bond wire connections in the event that electrical continuity of the pipeline is not achieved.
- B. Perform electrical continuity tests at maximum spacings of 1000-feet of pipe. Circulate a 12-volt electrical direct current (DC) through the pipeline. Use two pairs of test wires, one for

current flow, one for voltage measurement. Measure the voltage difference developed by the DC current flow. Calculate the electrical resistance of the pipeline section in Ohms using Ohm's Law.

- C. The resistance acceptance criterion for each pipeline section tested is less than 120 percent of the calculated resistance value. The resistance value shall be calculated using the steel cross section area of the pipe, its length, and consideration for the joint bond wires at each bonded joint.
- D. If other electrical continuity test methods are proposed, the Contractor shall prepare a written test procedure specifying the alternate method and equipment that will be used. A standard handheld digital multi-test meter's ohmmeter circuit (e.g. Fluke 87) is not suitable for properly making these electrical resistance measurements. Submit in writing the alternate proposed test method to the Engineer for approval a minimum of 30 days before the pipe laying begins.

### 3.13 ELECTRICAL ISOLATION TESTING BETWEEN PIPE AND STEEL REINFORCEMENT

- A. Conduct visual and electrical testing at all steel pipe penetrations through reinforced concrete structures before and after the concrete is placed. This testing is required to demonstrate that all buried steel pipe is not in contact with any metallic objects embedded in the concrete wall, concrete slab, or structural concrete pipe encasements. The embedded objects to be verified for metallic isolation from steel pipe include all of the following:
  - 1. rebar
  - 2. rebar tie wire
  - 3. snap ties
  - 4. shebolts
  - 5. tie rods
  - 6. taper ties
  - 7. dowels
- B. Perform this testing no more than 1 day before each concrete placement and no more than 1 day after each concrete placement. Correct all direct contacts detected between sections of pipe to be buried and concrete reinforcing components by trimming or repositioning the reinforcement components. If pipe to reinforcement contacts are detected after concrete is in place, use chipping hammers and other concrete demolition tools to remove as much concrete as is necessary to eliminate all metallic points of contact with the steel pipe. This metallic isolation testing shall be performed by the Contractor's Cathodic Protection Engineer or Technician and witnessed by the Engineer. A representative from the City of San Diego, Water System Operations, Corrosion Section shall be notified a minimum of 7 days before the first pipe-vault penetration concrete is placed in order to review the equipment and test procedure to be used and to witness the contractor actually performing the tests. The failure for a new buried steel pipeline to pass this electrical isolation test may require concrete and reinforcing steel to be incrementally demolished by the contractor at no cost to the City of San Diego until the new steel pipeline passes the electrical isolation test.

- C. Perform all electrical resistance measurements for this test using a 97-Hertz square wave null balancing ohmmeter such as the Nilsson Model 400 Soil Resistance Meter or the MC Miller Model 400A and the four-wire resistance technique to compensate for the test wire and connection resistances. A standard handheld digital multi-test meter's ohmmeter circuit (e.g. Fluke 87) is not suitable for properly making these resistance measurements. Perform this test by connecting the meter's P1 and C1 terminals to the pipe, using two different wires and two different connections, and then connecting the meter's P2 and C2 terminals to the rebar, using two additional wires and connections. Use vise grips or temporary exothermic welds to make the wire connections to the pipe and rebar.
- D. Rebar Ground Wire Connections at Pipe Encasements and Vault Penetrations: Select two exposed pieces of rebar separated by at least 2 feet that are wire tied to a minimum of 6 other perpendicular pieces of rebar for use as electrical ground reference test points. Using temporary connections such as vice grips or other compression clamps measure the electrical resistance between the two different pieces of rebar to ensure that the rebar test points are electrically continuous with the bulk of the rebar in the concrete structure. If either piece of rebar is not securely wire tied to all the other rebar in the encasement or vault, then the electrical resistance measurement will yield erroneous or misleading data. A maximum resistance of 0.10 Ohm between the two rebar test points is required before continuing with the electrical isolation test. Connect two unspliced lengths of minimum size #6 AWG bare copper stranded grounding wire to two different pieces of rebar. Each ground wire connection to the rebar shall be made with a separate exothermic weld or a separate mechanical compression ground clamp.
- E. Direct Resistance Isolation Test: Testing shall first be performed using the Direct Resistance Test. Attach one pair of the resistance test leads to the pipe and one pair of resistance test leads to the rebar then measure the pipe to rebar resistance. If the resistance is 10 Ohms or more, the pipe is sufficiently electrically isolated from the rebar. If the test reading is less than 10 Ohms, proceed with the Steel Polarization Isolation Test described below.
- F. Steel Polarization Isolation Test:
1. Step 1: Measure the baseline CP potentials of the buried pipeline and of the rebar using a stationary location for a copper sulfate reference electrode. Place the reference electrode in soil at an offset distance from the pipeline equal to approximately the length or width (whichever is greater) of the concrete structure under construction. If the difference between the readings of the pipe and rebar is 500 millivolts DC or more, that indicates sufficient electrical isolation. This test must be done with all nearby sources of cathodic protection electrical current turned off or disconnected, and with all welding equipment turned off. If the difference is less than 500 millivolts DC, record the baseline CP Potentials and proceed to the next step.
  2. Step 2: Set up a temporary DC power source such as a truck battery, a minimum 300 Watt, 2 to 4 Ohm, power rheostat, a calibrated electrical shunt, and two minimum #6 AWG test wires. Set up the DC power source with the positive wire connected to the rebar and the negative wire connected to the pipe. Initially adjust the rheostat for the largest resistance/smallest current and measure the current flow. Adjust the electrical power to a minimum current of 1 DC Amp, maximum of 10 DC Amps. Allow the DC current to flow for a minimum of 5 minutes then shut off the test current.
  3. Step 3: Remeasure CP Potentials of the pipe and rebar using the same reference electrode in the same location with the test current off. These are called polarized CP

potentials.

4. Step 4: Compare the polarized CP Potentials with the previously measured baseline CP Potentials. If the pipe is electrically isolated from the rebar, the test current will polarize the buried pipeline's steel cathodically (i.e. a more negative CP Potential) and shift the rebar anodically (i.e. a more positive CP Potential). If the difference between the polarized potentials of the pipeline and rebar is less than 300 millivolts DC, there are one or more metallic contacts between the buried pipeline and the rebar. If the difference is 300 millivolts DC or greater the steel pipeline is sufficiently electrically isolated from the rebar.
- G. If a Contractor wishes to use an alternate test procedure, prepare a written test procedure specifying the methods and equipment that will be used. Submit it to the Engineer for approval a minimum of 30 days before the first concrete placement. **In no case shall an electrical resistance measurement made with a hand held volt-ohm multimeter be accepted as an accurate isolation test procedure.** In the event of a question regarding the electrical isolation of the pipeline, the Engineer shall make the final determination.
- H. Electrical isolation tests shall be conducted for each pipeline encasement; each pipe to vault penetration, and any other reinforced concrete structure that a pipeline passes through. The electrical isolation tests must be performed by the contractor one day before concrete is placed, and the day after concrete is placed. The Engineer will witness the electrical isolation test conducted before the concrete is placed.
- I. After the pipeline passes the rebar isolation test, direct bury the two bare copper ground wires connected to the rebar to a flush-to-grade concrete ground box near the pipe-vault penetration. Provide a cover for the test box marked "GROUND". Provide a minimum of two (2) feet of extra ground wire inside the rebar ground test box. If there is a nearby cathodic protection test box the rebar ground wires can be run into that box. If the rebar test wires are not long enough to reach the permanent test box, splice additional wire to them using two brass split bolts for each splice. No coating is required for the connections.

### 3.14 ELECTRICAL ISOLATION TESTING BETWEEN PIPE AND STEEL CASINGS

- A. Conduct visual and electrical testing at all locations where steel pipe is constructed inside steel casings to ensure nonmetallic casing spacers have been installed properly to prevent any metallic contact between the steel pipe and the casing. This testing must be performed as soon as possible after the steel pipe has been inserted into the casing so that the equipment used to move the pipe can be used to reposition the steel pipe if the electrical isolation testing shows metallic contact is occurring.
- B. Perform this testing the same day that each segment of pipe is installed inside the steel casing. Correct all direct contacts detected between sections of steel pipe and casing by repositioning or replacing components of the nonmetallic casing spacers. **DO NOT USE REDWOOD** inside the casing to support the pipe.
- C. If a pipe to casing contact is detected after the pipe is in place inside a casing, reposition or remove the steel pipe to investigate where the metallic contact is occurring. This metallic isolation testing shall be performed by the Contractor's Cathodic Protection Engineer or Technician and witnessed by the Engineer. A representative from the City of San Diego, Water System Operations, Corrosion Section shall be notified a minimum of 7 days before the first pipe is installed inside a steel casing in order to review the equipment and test



procedure to be used and to witness the contractor actually performing the tests. The failure for a new steel pipeline to pass this electrical isolation test may require the steel pipe sections to be completely removed from the casing by the contractor at no cost to the City of San Diego in order to correct problems with the nonmetallic casing spacers so that the new steel pipeline passes the electrical isolation test.

- D. Perform all electrical resistance measurements for this test using a 97-Hertz square wave null balancing ohmmeter such as the Nilsson Model 400 Soil Resistance Meter or the MC Miller Model 400A and the four-wire resistance technique to compensate for the test wire and connection resistances. A standard handheld digital multi-test meter's ohmmeter circuit (e.g. Fluke 87) is not suitable for properly making these resistance measurements. Perform this test by connecting the meter's P1 and C1 terminals to the steel pipe, using two different wires and two different connections, and then connecting the meter's P2 and C2 terminals to the steel casing, using two additional wires and connections. Use vise grips or temporary exothermic welds to make the wire connections to the pipe and casing.
- E. Casing Ground Wire Connections: Connect two unspliced lengths of minimum size #6 AWG bare copper stranded grounding wire to the casing at any location. Each ground wire connection to the casing shall be made with a separate exothermic weld.
- F. Direct Resistance Isolation Test: Testing shall first be performed using the Direct Resistance Test. Attach one pair of the resistance test leads to the pipe and one pair of resistance test leads to the casing then measure the pipe to casing resistance. If the resistance is 10 Ohms or more, the pipe is sufficiently electrically isolated from the casing. If the test reading is less than 10 Ohms, proceed with the Steel Polarization Isolation Test described below.
- G. Steel Polarization Isolation Test:
  - 1. Step 1: Measure the baseline CP potentials of the buried pipeline and of the casing using a stationary location for a copper sulfate reference electrode. Place the reference electrode in soil at an offset distance from the pipeline equal to approximately one half of the length of the casing. If the difference between the readings of the pipe and casing is 500 millivolts DC or more, that indicates sufficient electrical isolation. This test must be done with all nearby sources of cathodic protection electrical current turned off or disconnected, and with all welding equipment turned off. If the difference is less than 500 millivolts DC, record the baseline CP Potentials and proceed to the next step.
  - 2. Step 2: Set up a temporary DC power source such as a truck battery, a minimum 300 Watt, 2 to 4 Ohm, power rheostat, a calibrated electrical shunt, and two minimum #6 AWG test wires. Set up the DC power source with the positive wire connected to the casing and the negative wire connected to the pipe. Initially adjust the rheostat for the largest resistance/smallest current and measure the current flow. Adjust the electrical power to a minimum current of 1 DC Amp, maximum of 10 DC Amps. Allow the DC current to flow for a minimum of 5 minutes then shut off the test current.
  - 3. Step 3: Remeasure CP Potentials of the pipe and casing using the same reference electrode in the same location with the test current off. These are called polarized CP potentials.
  - 4. Step 4: Compare the polarized CP Potentials with the previously measured baseline CP Potentials. If the pipe is electrically isolated from the casing, the test current will polarize the buried pipeline's steel cathodically (i.e. a more negative CP Potential) and

shift the casing anodically (i.e. a more positive CP Potential). If the difference between the polarized potentials of the pipeline and casing is less than 300 millivolts DC there are one or more metallic contacts between the buried pipeline and the casing. If the difference is 300 millivolts DC or greater the steel pipeline is sufficiently electrically isolated from the casing.

- H. If a Contractor wishes to use an alternate test procedure, prepare a written test procedure specifying the methods and equipment that will be used. Submit it to the Engineer for approval a minimum of 30 days before the first concrete placement. **In no case shall an electrical resistance measurement made with a hand-held volt-ohm multimeter be accepted as an accurate isolation test procedure.** In the event of a question regarding the electrical isolation of the pipeline, the Engineer shall make the final determination.
- I. Electrical isolation tests shall be conducted for each pipe running through a steel casing. The electrical isolation tests must be performed by the contractor the same day that the pipe is inserted into the casing. The Engineer will witness the electrical isolation test.
- J. After the pipeline passes the casing isolation test, direct bury the two bare copper ground wires connected to the casing to a flush-to-grade concrete ground box near the end of the casing. Provide a cover for the test box marked "GROUND". Provide a minimum of two (2) feet of extra ground wire inside the rebar ground test box. If there is a nearby cathodic protection test box the rebar ground wires can be run into that box. If the rebar test wires are not long enough to reach the permanent test box, splice additional wire to them using two brass split bolts for each splice. No coating is required for the connections.

### 3.15 CP TEST STATION WIRE INTEGRITY TESTING

- A. Testing of Completed Welds: Exothermically welded wire-to-pipeline connections shall be inspected by the Engineer prior to backfilling the pipeline. At the Engineer's direction, tests to verify the soundness of the welds shall be conducted by the Contractor. Tests for this purpose shall consist of striking the weld nugget with a 2-pound hammer while steadily pulling on the wire. Note that the wire near the weld shall not be unnecessarily cold worked during installation or testing. Remove and re-weld any welds that break loose or show signs of separating, as determined by the Engineer.
- B. Wire Identification: The Engineer shall be given two day's advance notice to verify that buried pipe lead wires and anode lead wires are properly identified with die stamped brass or stainless steel tags prior to backfilling the wires.
- C. CP Test Wire Resistance Tests: After the pipeline is backfilled and the CP test wires are trenched to the CP Test Box or CP Monitoring Station, each pair of CP test wires shall be tested for integrity. The CP Technician shall measure the electrical resistance of one CP test wire to the pipeline and back on the second CP test wire. If more than twice the theoretical resistance of the total wire length installed is measured, the Contractor shall reexcavate the pipeline and replace or reweld the CP test wires to the pipeline. Use the following copper wire unit resistance values to calculate the theoretical resistance of each pair of CP test wires.
  - 1. No. 4 AWG wire 0.258 Ohms / 1000 feet
  - 2. No. 6 AWG wire 0.411 Ohms / 1000 feet
  - 3. No. 8 AWG wire 0.653 Ohms / 1000 feet
  - 4. No. 10 AWG wire 1.038 Ohms / 1000 feet
  - 5. No. 12 AWG wire 1.650 Ohms / 1000 feet

6. No. 14 AWG wire 2.525 Ohms / 1000 feet

### 3.16 ACCEPTANCE CRITERION FOR STEEL PIPE WITH DIELECTRIC COATING

- A. The operation of the cathodic protection system for steel pipelines with a dielectric coating shall be tested to ensure that all portions of the buried pipeline are provided a full level of corrosion protection. The standard used to evaluate the CP potential measurements shall be as follows: 0.85-VOLT CP Instant Off POTENTIAL - A negative voltage of at least 0.85-volt as measured between the buried pipeline and a copper sulfate reference electrode contacting the soil immediately over or adjacent to the pipeline in accordance with NACE SP0169. Determination of this voltage is to be made with the cathodic protection current momentarily interrupted. Voltage drops must be considered for valid interpretation of this voltage measurement.

### 3.17 ACCEPTANCE CRITERIA FOR STEEL PIPE WITHOUT A DIELECTRIC COATING

- A. The operation of the cathodic protection system for pipeline's that do not have a dielectric coating (such as concrete coated steel pipe) shall be tested to ensure that all portions of the buried pipeline are provided a full level of corrosion protection. The standards used to evaluate the CP potential measurements shall be in accordance with either of the two following NACE SP0169 criteria.
  - 1. 0.85-VOLT CP ON POTENTIAL - A negative voltage of at least 0.85-volt as measured between the buried pipeline and a copper sulfate reference electrode contacting the soil immediately over or adjacent to the pipeline. Determination of this voltage is to be made with the cathodic protection current applied. Voltage drops must be considered for valid interpretation of this voltage measurement. To avoid anode gradient voltage drop errors (i.e. IR Drop error), CP On Potential measurements shall only be used at locations greater than 20-feet away from any galvanic anodes and greater than 200-feet away from any impressed current anodes. For locations closer to anode installations, use CP Instant Off Potential measurements by interrupting the CP current(s).
  - 2. 100-mV CP POLARIZATION SHIFT - A minimum polarization shift of 100-millivolts measured between the buried pipeline being protected from corrosion and a copper sulfate reference electrode contacting the soil immediately over or next to the pipeline. This minimum polarization shift shall be determined by interrupting all cathodic protection currents and measuring the polarization formation or decay. At the instant the cathodic protection current is interrupted ("instant off"), an immediate voltage shift will occur. The voltage reading just after the immediate shift shall be used as the base reading from which to calculate the polarization formation or decay.

### 3.18 SYSTEM CHECKOUT

- A. Upon completion of the installation, the CONTRACTOR shall provide testing of the completed system by a qualified Corrosion Technician. The data shall be reviewed by a Corrosion Engineer to ensure conformance with the Contract Documents, NACE SP0169, and NACE SP0286.
- B. The testing described herein shall be in addition to and not substitution for any required testing of individual items at the manufacturer's plant and during installation.
- C. Testing shall be performed at all test leads of all test stations and at the locations of exposed

pipe as soon as possible after installation of the cathodic protection system.

- D. Testing shall include the following and shall be conducted in accordance with NACE TM0497:
1. Measure and record native structure-to-soil potentials and submeter GPS coordinates at all test locations in accordance with this Section.
  2. Verify electrical isolation at all insulating joints, casing insulators, and isolation between pipe and reinforcing steel per NACE SP0286 and this Section.
  3. Confirm electrical continuity of the pipeline or cathodically protected structure in accordance with this Section.
  4. Calibrate pipe span resistance for IR-drop test station.
  5. Measure and record the “On” and “Instant Off” potentials at each location in accordance with this Section.
  6. Measure and record magnitude and direction of IR drops at IR-drop test stations.
  7. Measure and record the current output of the rectifier and each anode in accordance with this Section.
- E. Test results shall be analyzed to determine compliance with NACE SP0169 and this Section.
- F. Test results shall be analyzed to determine if stray current interference is present. Stray current interference is defined as a +/-50 millivolt shift in a pipeline’s pipe-to-soil potential that is caused by a foreign current source. Stray current interference shall be tested on the project pipeline and foreign pipelines that have a reasonable chance of being affected by stray currents.
- G. The CONTRACTOR shall provide a written report, prepared by the Corrosion Engineer, documenting the results of the testing and recommending corrective work, as required to comply with the Contract Documents. Any deficiencies of systems tested shall be repaired and re-tested by the CONTRACTOR at no additional cost to the OWNER.

**\*\* END OF SECTION \*\***

**APPENDIX K**  
**HAZARDOUS WASTE LABEL/FORMS**

# HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL  
IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY  
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY  
OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ 24 HR. PHONE ( ) \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

EPA ID NO. \_\_\_\_\_ MANIFEST DOCUMENT NO. \_\_\_\_\_

EPA WASTE NO. \_\_\_\_\_ CA WASTE NO. \_\_\_\_\_ ACCUMULATION START DATE \_\_\_\_\_ / \_\_\_\_ / \_\_\_\_

CONTENTS, COMPOSITION \_\_\_\_\_

PROPER DOT SHIPPING NAME \_\_\_\_\_

TECHNICAL NAME (S) \_\_\_\_\_

UN/NA NO. WITH PREFIX \_\_\_\_\_

PHYSICAL STATE \_\_\_\_\_ HAZARDOUS PROPERTIES  FLAMMABLE  TOXIC  
 SOLID  LIQUID  CORROSIVE  REACTIVE  OTHER \_\_\_\_\_

**HANDLE WITH CARE!**  
CONTAINS HAZARDOUS OR TOXIC WASTES

# INCIDENT/RELEASE ASSESSMENT FORM <sup>1</sup>

## If you have an emergency, Call 911

Handlers of hazardous materials are required to report releases. The following is a tool to be used for assessing if a release is reportable. Additionally, a non-reportable release incident form is provided to document why a release is not reported (see back).

### Questions for Incident Assessment:

	YES	NO
1. Was anyone killed or injured, or did they require medical care or admitted to a hospital for observation?	<input type="checkbox"/>	<input type="checkbox"/>
2. Did anyone, other than employees in the immediate area of the release, evacuate?	<input type="checkbox"/>	<input type="checkbox"/>
3. Did the release cause off-site damage to public or private property?	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the release greater than or equal to a reportable quantity (RQ)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Was there an uncontrolled or unpermitted release to the air?	<input type="checkbox"/>	<input type="checkbox"/>
6. Did an uncontrolled or unpermitted release escape secondary containment, or extend into any sewers, storm water conveyance systems, utility vaults and conduits, wetlands, waterways, public roads, or off site?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will control, containment, decontamination, and/or clean up require the assistance of federal, state, county, or municipal response elements?	<input type="checkbox"/>	<input type="checkbox"/>
8. Was the release or threatened release involving an unknown material or contains an unknown hazardous constituent?	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the incident a threatened release (a condition creating a substantial probability of harm that requires immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment)?	<input type="checkbox"/>	<input type="checkbox"/>
10. Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger or cause exposure to employees, the general public, or the environment?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer is YES to any of the above questions – report the release to the California Office of Emergency Services at 800-852-7550 and the local CUPA daytime: (619) 338-2284, after hours: (858) 565-5255. Note: other state and federal agencies may require notification depending on the circumstances.

\*Call 911 in an emergency\*

If all answers are NO, complete a Non Reportable Release Incident Form (page 2 of 2) and keep readily available. Documenting why a “no” response was made to each question will serve useful in the event questions are asked in the future, and to justify not reporting to an outside regulatory agency.

If in doubt, report the release.

<sup>1</sup> This document is a guide for accessing when hazardous materials release reporting is required by Chapter 6.95 of the California Health and Safety Code. It does not replace good judgment, Chapter 6.95, or other state or federal release reporting requirements.

# NON REPORTABLE RELEASE INCIDENT FORM

## 1. RELEASE AND RESPONSE DESCRIPTION

Incident # \_\_\_\_\_

Date/Time Discovered	Date/Time Discharge	Discharge Stopped <input type="checkbox"/> Yes <input type="checkbox"/> No
Incident Date / Time:		
Incident Business / Site Name:		
Incident Address:		
Other Locators (Bldg, Room, Oil Field, Lease, Well #, GIS)		
Please describe the incident and indicate specific causes and area affected. Photos Attached?: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Indicate actions to be taken to prevent similar releases from occurring in the future.		

## 2. ADMINISTRATIVE INFORMATION

Supervisor in charge at time of incident:	Phone:
Contact Person:	Phone:

## 3. CHEMICAL INFORMATION

Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT <sup>3</sup>
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT <sup>3</sup>
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT <sup>3</sup>
Clean-Up Procedures & Timeline:	
Completed By:	Phone:
Print Name:	Title:



**EMERGENCY RELEASE FOLLOW - UP NOTICE REPORTING FORM**

<b>A</b>	BUSINESS NAME	FACILITY EMERGENCY CONTACT & PHONE NUMBER ( ) -					
<b>B</b>	INCIDENT DATE	MO	DAY	YR	TIME OES NOTIFIED	(use 24 hr time)	OES CONTROL NO.
<b>C</b>	INCIDENT ADDRESS LOCATION			CITY / COMMUNITY	COUNTY	ZIP	
<b>D</b>	CHEMICAL OR TRADE NAME (print or type)				CAS Number		
<b>D</b>	CHECK IF CHEMICAL IS LISTED IN 40 CFR 355, APPENDIX A <input type="checkbox"/>				CHECK IF RELEASE REQUIRES NOTIFICATION UNDER 42 U.S.C. Section 9603 (a) <input type="checkbox"/>		
<b>D</b>	PHYSICAL STATE CONTAINED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS		PHYSICAL STATE RELEASED <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> GAS		QUANTITY RELEASED		
<b>D</b>	ENVIRONMENTAL CONTAMINATION <input type="checkbox"/> AIR <input type="checkbox"/> WATER <input type="checkbox"/> GROUND <input type="checkbox"/> OTHER			TIME OF RELEASE	DURATION OF RELEASE — DAYS — HOURS — MINUTES		
<b>E</b>	ACTIONS TAKEN						
<b>F</b>	KNOWN OR ANTICIPATED HEALTH EFFECTS (Use the comments section for addition information)						
<input type="checkbox"/> ACUTE OR IMMEDIATE (explain) _____							
<input type="checkbox"/> CHRONIC OR DELAYED (explain) _____							
<input type="checkbox"/> NOTKNOWN (explain) _____							
<b>G</b>	ADVICE REGARDING MEDICAL ATTENTION NECESSARY FOR EXPOSED INDIVIDUALS						
<b>H</b>	COMMENTS (INDICATE SECTION (A - G) AND ITEM WITH COMMENTS OR ADDITIONAL INFORMATION)						
<b>I</b>	CERTIFICATION: I certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the submitted information is true, accurate, and complete.						
REPORTING FACILITY REPRESENTATIVE (print or type) _____							
SIGNATURE OF REPORTING FACILITY REPRESENTATIVE _____ DATE: _____							

## **EMERGENCY RELEASE FOLLOW-UP NOTICE REPORTING FORM INSTRUCTIONS**

### **GENERAL INFORMATION:**

Chapter 6.95 of Division 20 of the California Health and Safety Code requires that written emergency release follow-up notices prepared pursuant to 42 U.S.C. § 11004, be submitted using this reporting form. Non-permitted releases of reportable quantities of Extremely Hazardous Substances (listed in 40 CFR 355, appendix A) or of chemicals that require release reporting under section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. § 9603(a)] must be reported on the form, as soon as practicable, but no later than 30 days, following a release. The written follow-up report is required in addition to the verbal notification.

### **BASIC INSTRUCTIONS:**

- The form, when filled out, reports follow-up information required by 42 U.S.C § 11004. Ensure that all information requested by the form is provided as completely as possible.
- If the incident involves reportable releases of more than one chemical, prepare one report form for each chemical released.
- If the incident involves a series of separate releases of chemical(s) at different times, the releases should be reported on separate reporting forms.

### **SPECIFIC INSTRUCTIONS:**

**Block A:** Enter the name of the business and the name and phone number of a contact person who can provide detailed facility information concerning the release.

**Block B:** Enter the date of the incident and the time that verbal notification was made to OES. The OES control number is provided to the caller by OES at the time verbal notification is made. Enter this control number in the space provided.

**Block C:** Provide information pertaining to the location where the release occurred. Include the street address, the city or community, the county and the zip code.

**Block D:** Provide information concerning the specific chemical that was released. Include the chemical or trade name and the Chemical Abstract Service (CAS) number. Check all categories that apply. Provide best available information on quantity, time and duration of the release.

**Block E:** Indicate all actions taken to respond to and contain the release as specified in 42 U.S.C. § 11004(c).

**Block F:** Check the categories that apply to the health effects that occurred or could result from the release. Provide an explanation or description of the effects in the space provided. Use Block H for additional comments/information if necessary to meet requirements specified in 42 U.S.C. § 11004(c).

**Block G:** Include information on the type of medical attention required for exposure to the chemical released. Indicate when and how this information was made available to individuals exposed and to medical personnel, if appropriate for the incident, as specified in 42 U.S.C. § 11004(c).

**Block H:** List any additional pertinent information.

**Block I:** Print or type the name of the facility representative submitting the report. Include the official signature and the date that the form was prepared.

### **MAIL THE COMPLETED REPORT TO:**

**State Emergency Response Commission (SERC)  
Attn: Section 304 Reports  
Hazardous Materials Unit  
3650 Schriever Avenue  
Mather, CA 95655**

NOTE: Authority cited: Sections 25503, 25503.1 and 25507.1, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507.1, 25518 and 25520, Health and Safety Code.

**APPENDIX L**  
**SAMPLE OF PUBLIC NOTICE**



CONSTRUCTION NOTICE

PROJECT TITLE

Work on your street will begin within one week to replace the existing water mains servicing your community.

The work will consist of:

- Saw-cutting and trench work on Ingulf Street from Morena Boulevard to Galveston Street to install new water mains, water laterals and fire hydrants.
• Streets where trenching takes place will be resurfaced and curb ramps will be upgraded to facilitate access for persons with disabilities where required.
• This work is anticipated to be complete in your community by December 2016.

How your neighborhood may be impacted:

- Water service to some properties during construction will be provided by a two-inch highline pipe that will run along the curb. To report a highline leak call 619-515-3525.
• Temporary water service disruptions are planned. If planned disruptions impact your property, you will receive advance notice.
• Parking restrictions will exist because of the presence of construction equipment and materials.
• "No Parking" signs will be displayed 72 hours in advance of the work.
• Cars parked in violation of signs will be TOWED.

Hours and Days of Operation:

Monday through Friday X:XX AM to X:XX PM.

City of San Diego Contractor:

Company Name, XXX-XXX-XXXX



CONSTRUCTION NOTICE

PROJECT TITLE

Work on your street will begin within one week to replace the existing water mains servicing your community.

The work will consist of:

- Saw-cutting and trench work on Ingulf Street from Morena Boulevard to Galveston Street to install new water mains, water laterals and fire hydrants.
• Streets where trenching takes place will be resurfaced and curb ramps will be upgraded to facilitate access for persons with disabilities where required.
• This work is anticipated to be complete in your community by December 2016.

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• Temporary water service disruptions are planned. If planned disruptions impact your property, you will receive advance notice.
• Parking restrictions will exist because of the presence of construction equipment and materials.
• "No Parking" signs will be displayed 72 hours in advance of the work.
• Cars parked in violation of signs will be TOWED.

Hours and Days of Operation:

Monday through Friday X:XX AM to X:XX PM.

City of San Diego Contractor:

Company Name, XXX-XXX-XXXX

## APPENDIX M

### ADVANCED METERING INFRASTRUCTURE (AMI) DEVICE PROTECTION

## Protecting AMI Devices in Meter Boxes and on Street Lights

The Public Utilities Department (PUD) has begun the installation of the Advanced Metering Infrastructure (AMI) technology as a new tool to enhance water meter reading accuracy and efficiency, customer service and billing, and to be used by individual accounts to better manage the efficient use of water. **All AMI devices shall be protected per Section 5-2, "Protection", of the 2015 Whitebook.**

AMI technology allows water meters to be read electronically rather than through direct visual inspection by PUD field staff. This will assist PUD staff and customers in managing unusual consumption patterns which could indicate leaks or meter tampering on a customer's property.

Three of the main components of an AMI system are the:

- A. Endpoints, see Photo 1:

**Photo 1**



- B. AMI Antenna attached to Endpoint (antenna not always required), see Photo 2:

**Photo 2**



- Network Devices, see Photo 3:

**Photo 3**



AMI endpoints transmit meter information to the AMI system and will soon be on the vast majority of meters in San Diego. These AMI devices provide interval consumption data to the PUD's Customer Support Division. If these devices are damaged or communication is interrupted, this Division will be alerted of the situation. The endpoints are installed in water meter boxes, coffins, and vaults adjacent to the meter. A separate flat round antenna may also be installed through the meter box lid. This antenna is connected to the endpoint via cable. The following proper installation shall be implemented when removing the lid to avoid damaging the antenna, cable, and/or endpoint. Photo 4 below demonstrates a diagram of the connection:

**Photo 4**





The AMI device ERT/Endpoint/Transmitter shall be positioned and installed as discussed in this Appendix. If the ERT/Endpoint/Transmitter is disturbed, it shall be re-installed and returned to its original installation with the end points pointed upwards as shown below in Photo 5.

**The PUD's code compliance staff will issue citations and invoices to you for any damaged AMI devices that are not re-installed as discussed in the Contract Document**

Photo 5 below shows a typical installation of an AMI endpoint on a water meter.

**Photo 5**

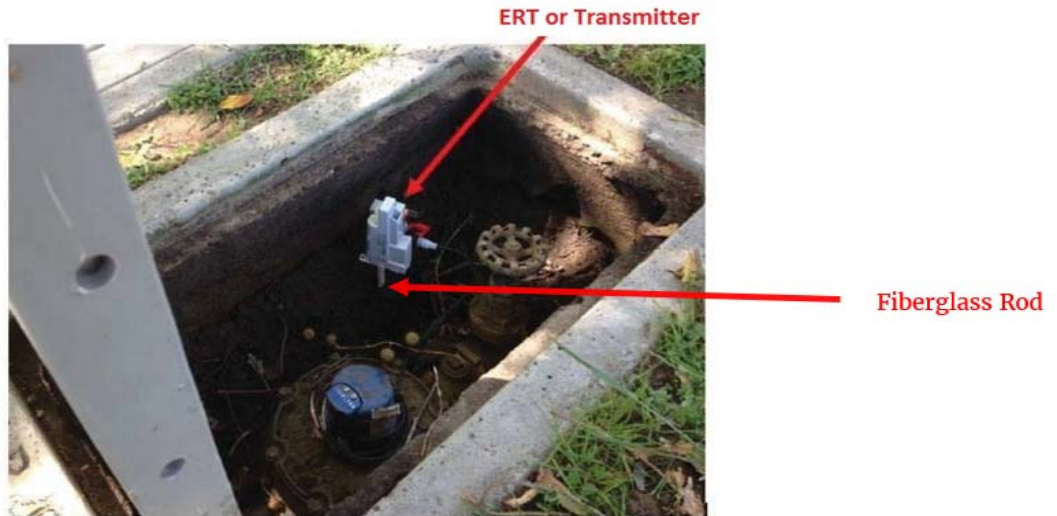


Photo 6 below is an example of disturbance that shall be avoided:

**Photo 6**



**You are responsible when working in and around meter boxes.** If you encounter these endpoints, use proper care and do not disconnect them from the registers on top of the water meter. If the lid has an antenna drilled through, do not change or tamper with the lid and inform the Resident Engineer immediately about the location of that lid. Refer to Photo 7 below:

**Photo 7**



Another component of the AMI system are the Network Devices. The Network Devices are strategically placed units (mainly on street light poles) that collect interval meter reading data from multiple meters for transmission to the Department Control Computer. **If you come across any of these devices on street lights that will be removed or replaced (refer to Photos 8 and 9 below), notify AMI Project Manager Arwa Sayed at (619) 362-0121 immediately.**

Photo 8 shows an installed network device on a street light. On the back of each Network Device is a sticker with contact information. See Photo 9. **Call PUD Water Emergency Repairs at 619-515-3525 if your work will impact these street lights.** These are assets that belong to the City of San Diego and you shall be responsible for any costs of disruption of this network.

**Photo 8**



**Network Device**

**Photo 9**



**If you encounter any bad installations, disconnected/broken/buried endpoints, or inadvertently damage any AMI devices or cables, notify the Resident Engineer immediately. The Resident Engineer will then immediately contact the AMI Project Manager, Arwa Sayed, at (619) 362-0121.**

**ATTACHMENT F**  
**RESERVED**

**ATTACHMENT G**  
**CONTRACT AGREEMENT**

## CONTRACT AGREEMENT

---

### CONSTRUCTION CONTRACT

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and El Cajon Grading and Engineering Co, Inc., herein called "Contractor" for construction of **Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines – West of Highland Ave**; Bid No. **K-20-1833-DBB-3-A**; in the amount of Twenty Million One Hundred Seventy Eight Thousand Nine Hundred One Dollars and Sixty Four Cents (\$20,178,901.64), which is comprised of the Base Bid.

IN CONSIDERATION of the payments to be made hereunder and the mutual undertakings of the parties hereto, City and Contractor agree as follows:

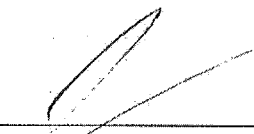
1. The following are incorporated into this contract as though fully set forth herein:
  - (a) The attached Faithful Performance and Payment Bonds.
  - (b) The attached Proposal included in the Bid documents by the Contractor.
  - (c) Reference Standards listed in the Instruction to Bidders and the Supplementary Special Provisions (SSP).
  - (d) Phased Funding Schedule Agreement.
  - (e) That certain documents entitled **Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines – West of Highland Ave**, on file in the office of the City Clerk Department as Document No. **S-12016**, as well as all matters referenced therein.
2. The Contractor shall perform and be bound by all the terms and conditions of this contract and in strict conformity therewith shall perform and complete in a good and workmanlike manner **Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines – West of Highland Ave**, Bid Number **K-20-1833-DBB-3-A**, San Diego, California.
3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and the Contractor shall accept such payment in full satisfaction of all claims incident to such performances.
4. No claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
5. This contract is effective as of the date that the Mayor or designee signs the agreement.

**CONTRACT AGREEMENT (continued)**

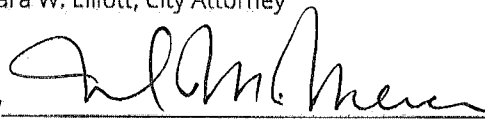
IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to or Municipal Code §22.3102 authorizing such execution.

**THE CITY OF SAN DIEGO**

**APPROVED AS TO FORM**

By  \_\_\_\_\_

Mara W. Elliott, City Attorney

By  \_\_\_\_\_

Print Name: James Nagelvoort  
Director  
Public Works


Print Name: Mark M. Mercer  
Deputy City Attorney

Date: 10/28/19

Date: 11/12/19

**CONTRACTOR**

El Cajon Grading & Engineering Co., Inc.

By  \_\_\_\_\_

Print Name: William R. Young

Title: Vice President

Date: 9-3-19

City of San Diego License No.: B1980062592

State Contractor's License No.: 274857

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000009605

## CERTIFICATIONS AND FORMS

**The Bidder, by submitting its electronic bid, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certifications, forms and affidavits submitted as part of this bid are true and correct.**



## **BIDDER'S GENERAL INFORMATION**

To the City of San Diego:

Pursuant to "Notice Inviting Bids", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

The undersigned bidder(s) further warrants that bidder(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Bidding Documents therefore, and that by submitting said Bidding Documents as its bid proposal, bidder(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Bidding Documents.

**NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID UNDER 23  
UNITED STATES CODE 112 AND PUBLIC CONTRACT CODE 7106**

State of California

County of San Diego

The bidder, being first duly sworn, deposes and says that he or she is authorized by the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

## CONTRACTOR CERTIFICATION

---

### DRUG-FREE WORKPLACE

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in the WHITEBOOK, Section 5-1.3, "Drug-Free Workplace", of the project specifications, and that;

This company has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.

## CONTRACTOR CERTIFICATION

---

### AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the Americans With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 5-1.2, "Americans With Disabilities Act", of the project specifications, and that:

This company has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.

## **CONTRACTOR CERTIFICATION**

---

### **CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE**

I declare under penalty of perjury that I am authorized to make this certification on behalf of the company submitting this bid/proposal, that as Contractor, I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in the WHITEBOOK, Section 5-1.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.

## **CONTRACTOR CERTIFICATION**

---

### **EQUAL BENEFITS ORDINANCE CERTIFICATION**

I declare under penalty of perjury that I am familiar with the requirements of and in compliance with the City of San Diego Municipal Code § 22.4300 regarding Equal Benefits Ordinance.

## **CONTRACTOR CERTIFICATION**

---

### **EQUAL PAY ORDINANCE CERTIFICATION**

Contractor shall comply with the Equal Pay Ordinance (EPO) codified in the San Diego Municipal Code (SDMC) at section 22.4801 through 22.4809, unless compliance is not required based on an exception listed in SDMC section 22.4804.

Contractor shall require all of its subcontractors to certify compliance with the EPO in their written subcontracts.

Contractor must post a notice informing its employees of their rights under the EPO in the workplace or job site.

By signing this Contract with the City of San Diego, Contractor acknowledges the EPO requirements and pledges ongoing compliance with the requirements of SDMC Division 48, section 22.4801 et seq., throughout the duration of this Contract.

**AFFIDAVIT OF DISPOSAL**

(To be submitted upon completion of Construction pursuant to the contracts Certificate of Completion)

**WHEREAS**, on the \_\_\_\_\_ DAY OF \_\_\_\_\_, 2\_\_\_\_ the undersigned entered into and executed a contract with the City of San Diego, a municipal corporation, for:

**Otay 1<sup>st</sup> & 2<sup>nd</sup> Pipelines - West of Highland Ave**

(Project Title)

as particularly described in said contract and identified as Bid No. **K-20-1833-DBB-3-A**; SAP No. (WBS/IO/CC) **S-12016**; and **WHEREAS**, the specification of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and **WHEREAS**, said contract has been completed and all surplus materials disposed of:

**NOW, THEREFORE**, in consideration of the final payment by the City of San Diego to said Contractor under the terms of said contract, the undersigned Contractor, does hereby affirm that all surplus materials as described in said contract have been disposed of at the following location(s)

and that they have been disposed of according to all applicable laws and regulations.

Dated this \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_  
Contractor

**ATTEST:**

State of \_\_\_\_\_ County of \_\_\_\_\_

On this \_\_\_\_\_ DAY OF \_\_\_\_\_, 2\_\_\_\_, before the undersigned, a Notary Public in and for said County and State, duly commissioned and sworn, personally appeared \_\_\_\_\_ known to me to be the \_\_\_\_\_ Contractor named in the foregoing Release, and whose name is subscribed thereto, and acknowledged to me that said Contractor executed the said Release.

Notary Public in and for said County and State



**LIST OF SUBCONTRACTORS**

**\*\*\* PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY \*\*\* TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY \*\*\* SEE INSTRUCTIONS TO BIDDERS, FOR FURTHER INFORMATION**

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the California Public Contract Code (PCC), the Bidder is to list below the name, address and license number of each Subcontractor who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement, in an amount of or in excess of 0.5% of the Contractor's total Bid. Failure to comply with this requirement may result in the Bid being rejected as non-responsive. The Contractor is to list only one Subcontractor for each portion of the Work. The Bidder's attention is directed to the Special Provisions - Section 3-2, "SELF-PERFORMANCE", which stipulates the percentage of the Work to be performed with the Bidder's own forces. The Bidder is to also list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which the Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

- ① As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):
- |   |        |  |         |
|---|--------|--|---------|
| Certified Minority Business Enterprise        | MBE    | Certified Woman Business Enterprise            | WBE     |
| Certified Disadvantaged Business Enterprise   | DBE    | Certified Disabled Veteran Business Enterprise | DVBE    |
| Other Business Enterprise                     | OBE    | Certified Emerging Local Business Enterprise   | ELBE    |
| Certified Small Local Business Enterprise     | SLBE   | Small Disadvantaged Business                   | SDB     |
| Woman-Owned Small Business                    | WoSB   | HUBZone Business                               | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB |  |         |
- ② As appropriate, Bidder shall indicate if Subcontractor is certified by:
- |  |        |  |          |
|--|--------|--|----------|
| City of San Diego                                    | CITY   | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission               | CPUC   |  |          |
| State of California's Department of General Services | CADoGS | City of Los Angeles                              | LA       |
| State of California                                  | CA     | U.S. Small Business Administration               | SBA      |

**The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.**

**NAMED EQUIPMENT/MATERIAL SUPPLIER LIST**

**\*\*\* PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY \*\*\* TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY \*\*\* SEE INSTRUCTIONS TO BIDDERS FOR FURTHER INFORMATION**

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB <sup>①</sup>	WHERE CERTIFIED <sup>②</sup>
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____						

- ① As appropriate, Bidder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):
- |   |        |  |         |
|---|--------|--|---------|
| Certified Minority Business Enterprise        | MBE    | Certified Woman Business Enterprise            | WBE     |
| Certified Disadvantaged Business Enterprise   | DBE    | Certified Disabled Veteran Business Enterprise | DVBE    |
| Other Business Enterprise                     | OBE    | Certified Emerging Local Business Enterprise   | ELBE    |
| Certified Small Local Business Enterprise     | SLBE   | Small Disadvantaged Business                   | SDB     |
| Woman-Owned Small Business                    | WoSB   | HUBZone Business                               | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB |  |         |
- ② As appropriate, Bidder shall indicate if Vendor/Supplier is certified by:
- |  |        |  |          |
|--|--------|--|----------|
| City of San Diego                                    | CITY   | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission               | CPUC   |  |          |
| State of California's Department of General Services | CADoGS | City of Los Angeles                              | LA       |
| State of California                                  | CA     | U.S. Small Business Administration               | SBA      |

**The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.**

**SUBCONTRACTORS ADDITIVE/DEDUCTIVE ALTERNATE (USE ONLY WHEN ADDITIVE ALTERNATES ARE REQUIRED)**

**\*\*\* PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY \*\*\* TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY \*\*\* SEE INSTRUCTIONS TO BIDDERS, FOR FURTHER INFORMATION**

ADDITIVE/ DEDUCTIVE ALTERNATE	NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACT OR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB <sup>①</sup>	WHERE CERTIFIED <sup>②</sup>	CHECK IF JOINT VENTURE PARTNERSHIP
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____							

<sup>①</sup> As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

<sup>②</sup> As appropriate, Bidder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	State of California's Department of General Services	CADoGS
City of Los Angeles	LA	State of California	CA
U.S. Small Business Administration	SBA		

**The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.**

## **ELECTRONICALLY SUBMITTED FORMS**

### **THE FOLLOWING FORMS MUST BE SUBMITTED IN PDF FORMAT WITH BID SUBMISSION**

The following forms are to be completed by the bidder and submitted (uploaded) electronically with the bid in PlanetBids.

- A. BID BOND – See Instructions to Bidders, Bidders Guarantee of Good Faith (Bid Security) for further instructions**
- B. CONTRACTOR’S CERTIFICATION OF PENDING ACTIONS**
- C. MANDATORY DISCLOSURE OF BUSINESS INTERESTS FORM**
- D. SUBCONTRACTOR LISTING (OTHER THAN FIRST TIER)**

**Bids will not be accepted until ALL the above-named forms are submitted as part of the bid submittal**

**BID BOND**

**See Instructions to Bidders, Bidder Guarantee of Good Faith  
(Bid Security)**

KNOW ALL MEN BY THESE PRESENTS,

That EL CAJON GRADING & ENGINEERING CO., INC. as Principal,  
and LIBERTY MUTUAL INSURANCE COMPANY as Surety, are held  
and firmly bound unto The City of San Diego hereinafter called "OWNER," in the sum  
of **10% OF THE TOTAL BID AMOUNT** for the payment of which sum, well and truly to be made, we  
bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally,  
firmly by these presents.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required under  
the bidding schedule(s) of the OWNER's Contract Documents entitled

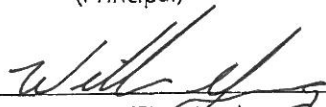
OTAY 1ST & 2ND PIPELINES - WEST OF HIGHLAND AVE

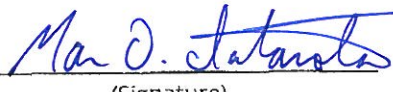
NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and in  
the manner required in the "Notice Inviting Bids" enters into a written Agreement on the form of  
agreement bound with said Contract Documents, furnishes the required certificates of insurance, and  
furnishes the required Performance Bond and Payment Bond, then this obligation shall be null and  
void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by  
said OWNER and OWNER prevails, said Surety shall pay all costs incurred by said OWNER in such suit,  
including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this 12TH day of JULY, 2019

EL CAJON GRADING &  
ENGINEERING CO., INC. (SEAL)  
(Principal)

LIBERTY MUTUAL  
INSURANCE COMPANY (SEAL)  
(Surety)

By:   
(Signature)  
WILLIAM R. YOUNG, VICE PRESIDENT

By:   
(Signature)  
MARK D. IATAROLA, ATTORNEY-IN-FACT

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

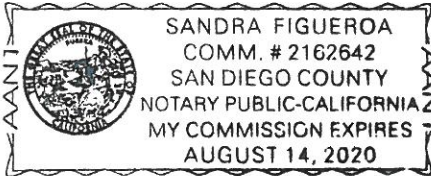
CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of SAN DIEGO

On 7/12/2019 before me, SANDRA FIGUEROA, NOTARY PUBLIC  
*Date Here Insert Name and Title of the Officer*  
personally appeared MARK D. IATAROLA  
*Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal and/or Stamp Above

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature *Sandra Figueroa*  
*Signature of Notary Public*

**OPTIONAL**

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_  
Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_  
Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: MARK D. IATAROLA Signer's Name: \_\_\_\_\_  
 Corporate Officer – Title(s): \_\_\_\_\_  Corporate Officer – Title(s): \_\_\_\_\_  
 Partner –  Limited  General  Partner –  Limited  General  
 Individual  Attorney in Fact  Individual  Attorney in Fact  
 Trustee  Guardian of Conservator  Trustee  Guardian of Conservator  
 Other: \_\_\_\_\_  Other: \_\_\_\_\_  
Signer is Representing: \_\_\_\_\_ Signer is Representing: \_\_\_\_\_



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8196922

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Sandra Figueroa, Mark D. Iatarola, Helen Maloney, John G. Maloney, LeNasa Deshon Scott

all of the city of Escondido state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 27th day of September, 2018.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company
By: David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 27th day of September, 2018 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 12TH day of JULY, 2019.



By: Renee C. Llewellyn, Assistant Secretary

**CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS**

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

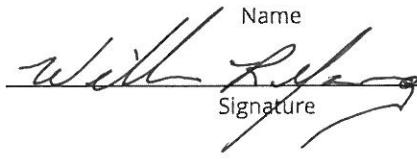
CHECK ONE BOX ONLY.

- The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.
  
- The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN

Contractor Name: El Cajon Grading & Engineering Co., Inc.

Certified By William R. Young Title Vice President

  
 Name  
 Signature

Date 7/22/19

USE ADDITIONAL FORMS AS NECESSARY



Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Legal Name: El Cajon Grading & Engineering Co., Inc. DBA:
Street Address: 13684 Highway 8 Business, City: Lakeside, State: CA, Zip: 92040
Contact Person, Title: William R. Young, Vice President, Phone: 619-561-9840, Fax: 619-561-9908

Provide the name, identity, and precise nature of the interest\* of all persons who are directly or indirectly involved\*\* in this proposed transaction (SDMC § 21.0103).

- \* The precise nature of the interest includes:
- the percentage ownership interest in a party to the transaction,
- the percentage ownership interest in any firm, corporation, or partnership that will receive funds from the transaction,
- the value of any financial interest in the transaction,
- any contingent interest in the transaction and the value of such interest should the contingency be satisfied, and
- any philanthropic, scientific, artistic, or property interest in the transaction.

- \*\* Directly or indirectly involved means pursuing the transaction by:
- communicating or negotiating with City officers or employees,
- submitting or preparing applications, bids, proposals or other documents for purposes of contracting with the City, or
- directing or supervising the actions of persons engaged in the above activity.

Name: William C. Young, Title/Position: President
City and State of Residence: El Cajon, CA, Employer (if different than Bidder/Proposer):
Interest in the transaction:

Directing, Supervising, communicating & negotiating, Submitting or preparing bids & other docs

Name: William R. Young, Title/Position: Vice President
City and State of Residence: Alpine, CA, Employer (if different than Bidder/Proposer):
Interest in the transaction:

Directing, Supervising, communicating & negotiating, Submitting or preparing bids & other docs
\* Use Additional Pages if Necessary \*

Under penalty of perjury under the laws of the State of California, I certify that I am responsible for the completeness and accuracy of the responses contained herein, and that all information provided is true, full and complete to the best of my knowledge and belief.

William R. Young, Vice President, Signature, Date: 7/22/19

Failure to sign and submit this form with the bid/proposal shall make the bid/proposal non-responsive. In the case of an informal solicitation, the contract will not be awarded unless a signed and completed Mandatory Disclosure of Business Interests Form is submitted.

## Mandatory Disclosure of Business Interests Form

### BIDDER/PROPOSER INFORMATION

Legal Name <b>El Cajon Grading &amp; Engineering Co., Inc.</b>	DBA
Street Address <b>13684 Highway 8 Business</b>	City <b>Lakeside</b>
	State <b>CA</b>
	Zip <b>92040</b>
Contact Person, Title <b>William R. Young, Vice President</b>	Phone
	Fax

Provide the name, identity, and precise nature of the interest\* of all persons who are directly or indirectly involved\*\* in this proposed transaction (SDMC § 21.0103).

\* The precise nature of the interest includes:

- the percentage ownership interest in a party to the transaction,
- the percentage ownership interest in any firm, corporation, or partnership that will receive funds from the transaction,
- the value of any financial interest in the transaction,
- any contingent interest in the transaction and the value of such interest should the contingency be satisfied, and
- any philanthropic, scientific, artistic, or property interest in the transaction.

\*\* Directly or indirectly involved means pursuing the transaction by:

- communicating or negotiating with City officers or employees,
- submitting or preparing applications, bids, proposals or other documents for purposes of contracting with the City, or
- directing or supervising the actions of persons engaged in the above activity.

Name <b>Thomas J. Brown</b>		Title/Position <b>Project Manager</b>
City and State of Residence <b>Lakeside, CA</b>	Employer (if different than Bidder/Proposer)	
Interest in the transaction		
<b>Communicating/negotiating, submitting or preparing bids, proposals or ther documents</b>		

Name <b>Linda Linn</b>	Title/Position <b>Secretary/Treasurer</b>
City and State of Residence <b>Lakeside, CA</b>	Employer (if different than Bidder/Proposer)
Interest in the transaction	
<b>Communicating, submitting or preparing documents</b>	

**\* Use Additional Pages if Necessary \***

Under penalty of perjury under the laws of the State of California, I certify that I am responsible for the completeness and accuracy of the responses contained herein, and that all information provided is true, full and complete to the best of my knowledge and belief. I agree to provide written notice to the Mayor or Designee within five (5) business days if, at any time, I learn that any portion of this Mandatory Disclosure of Business Interests Form requires an updated response. Failure to timely provide the Mayor or Designee with written notice is grounds for Contract termination.

<b>William R. Young, Vice President</b>		<b>7/22/19</b>
Print Name, Title	Signature	Date

**Failure to sign and submit this form with the bid/proposal shall make the bid/proposal non-responsive. In the case of an informal solicitation, the contract will not be awarded unless a signed and completed Mandatory Disclosure of Business Interests Form is submitted.**

## Mandatory Disclosure of Business Interests Form

### BIDDER/PROPOSER INFORMATION

Legal Name		DBA	
<u>El Cajon Grading &amp; Engineering Co., Inc.</u>			
Street Address	City	State	Zip
<u>13684 Highway 8 Business</u>	<u>Lakeside</u>	<u>CA</u>	<u>92040</u>
Contact Person, Title	Phone	Fax	
<u>William R. Young, Vice President</u>	<u>619-561-9840</u>	<u>619-561-9908</u>	

Provide the name, identity, and precise nature of the interest\* of all persons who are directly or indirectly involved\*\* in this proposed transaction (SDMC § 21.0103).

\* The precise nature of the interest includes:

- the percentage ownership interest in a party to the transaction,
- the percentage ownership interest in any firm, corporation, or partnership that will receive funds from the transaction,
- the value of any financial interest in the transaction,
- any contingent interest in the transaction and the value of such interest should the contingency be satisfied, and
- any philanthropic, scientific, artistic, or property interest in the transaction.

\*\* Directly or indirectly involved means pursuing the transaction by:

- communicating or negotiating with City officers or employees,
- submitting or preparing applications, bids, proposals or other documents for purposes of contracting with the City, or
- directing or supervising the actions of persons engaged in the above activity.

Name	Title/Position
<u>Mike Tucker</u>	<u>Foreman</u>
City and State of Residence	Employer (if different than Bidder/Proposer)
<u>Santee, CA</u>	
Interest in the transaction	
<u>Directing Actions of Persons, communicating with City</u>	

Name	Title/Position
<u>Brad Hoyt</u>	<u>Foreman</u>
City and State of Residence	Employer (if different than Bidder/Proposer)
<u>Alpine, CA</u>	
Interest in the transaction	
<u>Directing Actions of Persons, communicating with City</u>	

**\* Use Additional Pages if Necessary \***

Under penalty of perjury under the laws of the State of California, I certify that I am responsible for the completeness and accuracy of the responses contained herein, and that all information provided is true, full and complete to the best of my knowledge and belief. I agree to provide written notice to the Mayor or Designee within five (5) business days if, at any time, I learn that any portion of this Mandatory Disclosure of Business Interests Form requires an updated response. Failure to timely provide the Mayor or Designee with written notice is grounds for Contract termination.

<u>William R. Young, Vice President</u>		<u>7/22/19</u>
Print Name, Title	Signature	Date

**Failure to sign and submit this form with the bid/proposal shall make the bid/proposal non-responsive. In the case of an informal solicitation, the contract will not be awarded unless a signed and completed Mandatory Disclosure of Business Interests Form is submitted.**

**SUBCONTRACTOR LISTING**

**(OTHER THAN FIRST TIER)**

Pursuant to California Senate Bill 96 and in accordance with the requirements of Labor Code sections 1771.1 and 1725.5, by submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the California Department of Industrial Relations (DIR). **The Bidder is to list below the name, address, license number, DIR registration number of any (known tiered subcontractor) - who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement pursuant to the contract. If none are known at this time, mark the table below with non-applicable (N/A).**

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK
Name: <u>NONE</u> Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____				

**\*\* USE ADDITIONAL FORMS AS NECESSARY \*\***

## SUBCONTRACTORS ADDITIVE/DEDUCTIVE ALTERNATE

\*\*\* FOR USE WHEN LISTING SUBCONTRACTORS ON ALTERNATES \*\*\*

TO BE SUBMITTED WITH OTHER REQUIRED FORMS

(Use Additional Sheets As Needed)

### ALTERNATE A

SUBCONTRACTOR NAME, LOCATION, PHONE & EMAIL	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB <sup>ⓐ</sup>	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <b>NONE</b> Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								

ⓐ As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

ⓑ As appropriate, Bidder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC		
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

**SUBCONTRACTORS ADDITIVE/DEDUCTIVE ALTERNATE**

\*\*\* FOR USE WHEN LISTING SUBCONTRACTORS ON ALTERNATES \*\*\*

TO BE SUBMITTED WITH OTHER REQUIRED FORMS

(Use Additional Sheets As Needed)

**ALTERNATE B**

SUBCONTRACTOR NAME, LOCATION, PHONE & EMAIL	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>NONE</u> Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								

ⓐ As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- |   |        |  |         |
|---|--------|--|---------|
| Certified Minority Business Enterprise        | MBE    | Certified Woman Business Enterprise            | WBE     |
| Certified Disadvantaged Business Enterprise   | DBE    | Certified Disabled Veteran Business Enterprise | DVBE    |
| Other Business Enterprise                     | OBE    | Certified Emerging Local Business Enterprise   | ELBE    |
| Certified Small Local Business Enterprise     | SLBE   | Small Disadvantaged Business                   | SDB     |
| Woman-Owned Small Business                    | WoSB   | HUBZone Business                               | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB |  |         |

ⓑ As appropriate, Bidder shall indicate if Subcontractor is certified by:

- |  |        |  |          |
|--|--------|--|----------|
| City of San Diego                                    | CITY   | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission               | CPUC   |  |          |
| State of California's Department of General Services | CADoGS | City of Los Angeles                              | LA       |
| State of California                                  | CA     | U.S. Small Business Administration               | SBA      |

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

**SUBCONTRACTORS ADDITIVE/DEDUCTIVE ALTERNATE**  
**\*\*\* FOR USE WHEN LISTING SUBCONTRACTORS ON ALTERNATES \*\*\***  
**TO BE SUBMITTED WITH OTHER REQUIRED FORMS**  
**(Use Additional Sheets As Needed)**

**ALTERNATE C**

SUBCONTRACTOR NAME, LOCATION, PHONE & EMAIL	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB <sup>ⓐ</sup>	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <b>NONE</b> Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								

ⓐ As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

- |   |        |  |         |
|---|--------|--|---------|
| Certified Minority Business Enterprise        | MBE    | Certified Woman Business Enterprise            | WBE     |
| Certified Disadvantaged Business Enterprise   | DBE    | Certified Disabled Veteran Business Enterprise | DVBE    |
| Other Business Enterprise                     | OBE    | Certified Emerging Local Business Enterprise   | ELBE    |
| Certified Small Local Business Enterprise     | SLBE   | Small Disadvantaged Business                   | SDB     |
| Woman-Owned Small Business                    | WoSB   | HUBZone Business                               | HUBZone |
| Service-Disabled Veteran Owned Small Business | SDVOSB |  |         |

ⓑ As appropriate, Bidder shall indicate if Subcontractor is certified by:

- |  |        |  |          |
|--|--------|--|----------|
| City of San Diego                                    | CITY   | State of California Department of Transportation | CALTRANS |
| California Public Utilities Commission               | CPUC   |  |          |
| State of California's Department of General Services | CADoGS | City of Los Angeles                              | LA       |
| State of California                                  | CA     | U.S. Small Business Administration               | SBA      |

**The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.**

# City of San Diego

CITY CONTACT: Ronald McMinn, Jr. Contract Specialist, Email: [RMcMinn@sandiego.gov](mailto:RMcMinn@sandiego.gov)

Phone No. (619) 533-4618

## ADDENDUM A



FOR

## OTAY 1<sup>ST</sup> & 2<sup>ND</sup> PIPELINES – WEST OF HIGHLAND AVE

BID NO.:	K-20-1833-DBB-3-A
SAP NO. (WBS/IO/CC):	S-12016
CLIENT DEPARTMENT:	2000
COUNCIL DISTRICT:	3, 9
PROJECT TYPE:	KA

### **BID DUE DATE:**

**2:00 PM  
JULY 23, 2019**

**CITY OF SAN DIEGO'S ELECTRONIC BIDDING SITE, PLANETBIDS**

<http://www.sandiego.gov/cip/bidopps/index.shtml>



**A. CHANGES TO CONTRACT DOCUMENTS**

The following changes to the Contract Documents are hereby made effective as though originally issued with the bid package. Bidders are reminded that all previous requirements to this solicitation remain in full force and effect.

THE SUBMITTAL DATE FOR THIS PROJECT HAS BEEN **REVISED AS STATED ON THE COVER PAGE.**

James Nagelvoort, Director  
Public Works Department

Dated: *July 9, 2019*  
San Diego, California

JN/RWB/Lad

**Bid Results****Bidder Details**

**Vendor Name** El Cajon Grading & Engineering Co, Inc.  
**Address** PO Box 967  
 Lakeside, CA 92040  
 United States

**Respondee** William R. Young  
**Respondee Title** Vice President  
**Phone** 619-561-9840 Ext.  
**Email** R.Young@ecgrading.com  
**Vendor Type** PQUAL,Local  
**License #** 274857  
**CADIR**

**Bid Detail**

**Bid Format** Electronic  
**Submitted** July 23, 2019 1:54:38 PM (Pacific)  
**Delivery Method**  
**Bid Responsive**  
**Bid Status** Submitted  
**Confirmation #** 185474  
**Ranking** 0

**Respondee Comment****Buyer Comment****Attachments**

File Title	File Name	File Type
Certification of Pending Actions - Otay 1 & 2	Certification of Pending Actions - Otay 1 & 2.pdf	Contractor's Certification of Pending Actions
Disclosure of Business Interests - Otay 1 & 2	Disclosure of Business Interests - Otay 1 & 2.pdf	Mandatory Disclosure of Business Interests Form
Sub Listing & Alternates A, B, C	Sub Listing & Alternates A, B, C.pdf	Subcontractor Listing (Other Than 1st Tier)
Bid Bond _ Otay 1 & 2	Bid Bond _ Otay 1 & 2.pdf	Bid Bond

**Line Items**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
	<b>Main Bid</b>					
1	Bonds (Payment and Performance)					
	524126	LS	1	\$128,181.00	\$128,181.00	
2	Caltrans Encroachment Permit Submittal (EOC Type I)					
	237310	AL	1	\$7,500.00	\$7,500.00	
3	Specialty Inspection Paid For By the Contractor (EOC Type I)					
	237110	AL	1	\$10,000.00	\$10,000.00	
4	Specialty Testing Under the Direction of the Engineer (EOC Type I) - Corrosion					
	237110	AL	1	\$10,000.00	\$10,000.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
5	Preparation of Hazardous Waste Management Plan and Reporting					
	238990	LS	1	\$4,400.00	\$4,400.00	
6	Monitoring of Contaminated Soil					
	541690	HR	80	\$118.00	\$9,440.00	
7	Testing, Sampling, Site Storage, and Handling of Petroleum Contaminated Soil					
	238990	TON	10	\$575.00	\$5,750.00	
8	Loading, Transportation, and Disposal of Petroleum Contaminated Soil					
	238990	TON	10	\$98.00	\$980.00	
9	Cathodic Protection					
	238190	LS	1	\$363,000.00	\$363,000.00	
10	Removal of Existing 536/ 390 Pressure Regulating Station					
	237110	LS	1	\$15,000.00	\$15,000.00	
11	Mobilization					
	237110	LS	1	\$186,259.00	\$186,259.00	
12	Field Orders (EOC Type II)					
		AL	1	\$1,500,000.00	\$1,500,000.00	
13	Crushed Aggregate Base					
	238910	TON	500	\$130.00	\$65,000.00	
14	Pavement Restoration Adjacent to Trench					
	237310	SF	26000	\$12.15	\$315,900.00	
15	Asphalt Concrete Overlay					
	237310	TON	17628	\$95.00	\$1,674,660.00	
16	Pavement Fabric					
	237310	SY	58000	\$3.00	\$174,000.00	
17	Curb Inlet (Type A)					
	237110	EA	2	\$10,650.00	\$21,300.00	
18	Modify Curb Inlet (Type A)					
	237110	EA	1	\$11,150.00	\$11,150.00	
19	Remove and Replace Existing Sidewalk					
	237310	SF	1400	\$17.50	\$24,500.00	
20	Curb and Gutter (6 Inch Curb, Type H)					
	237310	LF	200	\$100.00	\$20,000.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
21	Median Curb and Gutter (Type B-2 )					
	237310	LF	82	\$95.00	\$7,790.00	
22	Cross Gutter					
	237310	SF	12228	\$14.75	\$180,363.00	
23	Alley Apron					
	237310	SF	3600	\$17.25	\$62,100.00	
24	Curb Ramp (Type A) with Detectable Warning Tiles					
	237310	EA	37	\$4,360.00	\$161,320.00	
25	Curb Ramp (Type B) with Detectable Warning Tiles					
	237310	EA	13	\$4,360.00	\$56,680.00	
26	Curb Ramp (Type C1) with Detectable Warning Tiles					
	237310	EA	6	\$4,500.00	\$27,000.00	
27	Curb Ramp (Type D) with Detectable Warning Tiles					
	237310	EA	48	\$4,100.00	\$196,800.00	
28	Curb Ramp (Caltrans Modified Case F) with Detectable Warning Tiles					
	237310	EA	1	\$4,500.00	\$4,500.00	
29	Curb Ramp (Caltrans Case G) with Detectable Warning Tiles					
	237310	EA	1	\$4,580.00	\$4,580.00	
30	Abandon and Fill Existing Water Main Outside of the Trench Limit					
	237110	LF	4967	\$27.00	\$134,109.00	
31	Handling and Disposal of Non-friable Asbestos Material					
	237110	LF	7989	\$9.60	\$76,694.40	
32	Additional Bedding					
	237110	CY	22	\$82.00	\$1,804.00	
33	Water Main (36 Inch) CML & TWC					
	237110	LF	8538	\$624.00	\$5,327,712.00	
34	Water Main (30 Inch) CML & TWC					
	237110	LF	20	\$1,265.00	\$25,300.00	
35	Water Main (24 Inch) CML & TWC					
	237110	LF	4095	\$458.00	\$1,875,510.00	
36	Water Main (16 Inch)					
	237110	LF	6146	\$168.00	\$1,032,528.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
37	Water Main (16 Inch) CML & TWC 237110	LF	485	\$386.00	\$187,210.00	
38	Water Main (12 Inch) 237110	LF	5477	\$187.00	\$1,024,199.00	
39	Water Main (8 Inch) 237110	LF	1535	\$173.00	\$265,555.00	
40	Butterfly Valve (24 Inch, Class 150B) 237110	EA	9	\$9,950.00	\$89,550.00	
41	Butterfly Valve (36 Inch, Class 250B) 237110	EA	10	\$18,000.00	\$180,000.00	
42	Butterfly Valve (16 Inch, Class 250B) 237110	EA	18	\$4,850.00	\$87,300.00	
43	Gate Valve (16 Inch) 237110	EA	3	\$8,800.00	\$26,400.00	
44	Gate Valve (12 Inch) 237110	EA	22	\$3,700.00	\$81,400.00	
45	Gate Valve (8 Inch) 237110	EA	28	\$2,200.00	\$61,600.00	
46	Water Valve Bypass for Straight Mainline 16 Inch and Larger 237110	EA	4	\$8,400.00	\$33,600.00	
47	Fire Hydrant Assembly and Marker (6 Inch) 3 Port 237110	EA	23	\$9,675.00	\$222,525.00	
48	Fire Hydrant Assembly and Marker (6 Inch) 2 Port 237110	EA	1	\$8,275.00	\$8,275.00	
49	Fire Service Connection and Assembly (6 Inch) 237110	EA	1	\$7,750.00	\$7,750.00	
50	Water Service (1 Inch) 237110	EA	137	\$2,900.00	\$397,300.00	
51	Water Service (2 Inch) 237110	EA	10	\$4,350.00	\$43,500.00	
52	Water Service (4 Inch) 237110	EA	1	\$6,200.00	\$6,200.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
53	Water Service (8 Inch)					
	237110	EA	1	\$6,200.00	\$6,200.00	
54	Blow-Off Valve Assembly (2 Inch)					
	237110	EA	3	\$4,960.00	\$14,880.00	
55	Blow-Off Valve Assembly (4 Inch)					
	237110	EA	28	\$11,000.00	\$308,000.00	
56	Air and Vacuum (Air Release) Valve Assembly (1 Inch, Class 250)					
	237110	EA	11	\$5,300.00	\$58,300.00	
57	Air and Vacuum (Air Release) Valve Assembly (2 Inch, Class 250)					
	237110	EA	17	\$6,970.00	\$118,490.00	
58	Temporary Resurfacing					
	237310	TON	2000	\$93.00	\$186,000.00	
59	Thrust Blocks and Anchor Blocks for 16 Inch and Larger Water Mains					
	237110	EA	90	\$1,520.00	\$136,800.00	
60	Imported Trench Backfill					
	237110	TON	2000	\$34.85	\$69,700.00	
61	Modified Manhole SDS-106 (per Sheet C-43)					
	237110	EA	7	\$67,089.00	\$469,623.00	
62	Removal and Replacement of Existing Paint Striping					
	237310	LS	1	\$16,300.00	\$16,300.00	
63	Removal and Replacement of Existing Thermoplastic Striping and Markings					
	237310	LS	1	\$30,500.00	\$30,500.00	
64	Continental Crosswalks					
	237310	SF	940	\$4.00	\$3,760.00	
65	Video Recording of Existing Conditions					
	238990	LS	1	\$3,000.00	\$3,000.00	
66	Removal and Disposal of Railroad Tracks					
	238910	LF	50	\$170.00	\$8,500.00	
67	Adjust Existing Manhole Frame and Cover to Grade					
	237310	EA	65	\$525.00	\$34,125.00	
68	Adjust Existing Survey Monument to Grade					
	237310	EA	4	\$575.00	\$2,300.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
69	Traffic Signal Loop and Appurtenance Replacement (Modified Type E)					
	237310	EA	14	\$450.00	\$6,300.00	
70	Traffic Signal Loop and Appurtenance Replacement (Type E)					
	237310	EA	42	\$450.00	\$18,900.00	
71	Removal of Humps, Lumps, and Pavement Irregularities					
	237310	LF	1250	\$5.25	\$6,562.50	
72	Cold Mill Full Width AC Pavement (3 Inch)					
	237310	SF	952890	\$0.77	\$733,725.30	
73	Cold Mill Full Width AC Pavement (4 Inch)					
	237310	SF	33872	\$0.77	\$26,081.44	
74	Traffic Control					
	237310	LS	1	\$146,000.00	\$146,000.00	
75	Pedestrian Barricade (Type A )					
	237310	EA	12	\$690.00	\$8,280.00	
76	Connections to The Existing System by Contractor (16 Inch PVC)					
	237110	EA	5	\$7,450.00	\$37,250.00	
77	Connections to The Existing System by Contractor (30 Inch SCRW)					
	237110	EA	1	\$37,400.00	\$37,400.00	
78	Connections to The Existing System by Contractor (36 Inch SCRW)					
	237110	EA	3	\$37,400.00	\$112,200.00	
79	Connections to The Existing System by Contractor (36 Inch CICL)					
	237110	EA	1	\$39,000.00	\$39,000.00	
80	Connections to The Existing System by Contractor (48 Inch RCSC)					
	237110	EA	1	\$42,000.00	\$42,000.00	
81	Connections to The Existing System by Contractor (54 Inch RCSC)					
	237110	EA	1	\$45,000.00	\$45,000.00	
82	Connections to The Existing System by Contractor (60 Inch WSP)					
	237110	EA	2	\$43,500.00	\$87,000.00	
83	Cut and Plug by Contractor (16 Inch PVC)					
	237110	EA	5	\$6,300.00	\$31,500.00	
84	Cut and Plug by Contractor (16 Inch AC)					
	237110	EA	1	\$7,000.00	\$7,000.00	

**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
85	Cut and Plug by Contractor (16 Inch CI)					
	237110	EA	5	\$7,000.00	\$35,000.00	
86	Cut and Plug by Contractor (16 Inch CML&TW)					
	237110	EA	1	\$7,700.00	\$7,700.00	
87	Cut and Plug by Contractor (24 Inch CICL)					
	237110	EA	3	\$25,800.00	\$77,400.00	
88	Cut and Plug by Contractor (30 Inch SCRW)					
	237110	EA	2	\$30,800.00	\$61,600.00	
89	Cut and Plug by Contractor (30 Inch CICL)					
	237110	EA	2	\$29,800.00	\$59,600.00	
90	Cut and Plug by Contractor (30 Inch CML&TW)					
	237110	EA	1	\$30,500.00	\$30,500.00	
91	Cut and Plug by Contractor (36 Inch SCRW)					
	237110	EA	3	\$33,500.00	\$100,500.00	
92	Cut and Plug by Contractor (36 Inch CICL)					
	237110	EA	7	\$30,700.00	\$214,900.00	
93	Cut and Plug by Contractor (48 Inch RCSC)					
	237110	EA	1	\$30,000.00	\$30,000.00	
94	Cut and Plug by Contractor (54 Inch RCSC)					
	237110	EA	1	\$33,500.00	\$33,500.00	
95	Cut and Plug by Contractor (60 Inch WSP)					
	237110	EA	2	\$32,500.00	\$65,000.00	
96	Pavement Restoration for Final Connection					
	237110	SF	6500	\$17.00	\$110,500.00	
97	WPCP Development					
	541330	LS	1	\$850.00	\$850.00	
98	WPCP Implementation					
	237110	LS	1	\$57,000.00	\$57,000.00	
				<b>Subtotal</b>	<b>\$20,178,901.64</b>	
	<b>Additive Alternate Items A</b>					
99	High-lining Installation by the Contractor					
	237110	LF	21500	\$6.60	\$141,900.00	



**Bid Results**

Type	Item Code	UOM	Qty	Unit Price	Line Total	Comment
100	High-lining Removed by the Contractor					
	237110	LF	21500	\$3.70	\$79,550.00	
101	Furnished Materials for Contractor High-line Work					
	237110	LF	21500	\$3.10	\$66,650.00	
<b>Subtotal</b>					<b>\$288,100.00</b>	
<b>Additive Alternate Items B</b>						
102	Cut and Plug by Contractor (8 Inch through 12 Inch)					
	237110	EA	37	\$4,600.00	\$170,200.00	
103	Connections to The Existing System by Contractor (8 Inch through 12 Inch)					
	237110	EA	37	\$6,320.00	\$233,840.00	
<b>Subtotal</b>					<b>\$404,040.00</b>	
<b>Additive Alternate Items C</b>						
104	Contractor Furnished Materials for the City Forces High-line Work					
	237110	LF	21500	\$3.00	\$64,500.00	
<b>Subtotal</b>					<b>\$64,500.00</b>	
<b>Total</b>					<b>\$20,935,541.64</b>	

**Subcontractors**

Name & Address	Description	License Num	CADIR	Amount	Type
<b>Payco Specialties, Inc.</b> 120 North Second Ave Chula Vista, CA 91910-1127 United States	Striping	298637	1000003515	\$55,348.80	DBE, WBE
<b>Guzman Grading and Paving Corp.</b> 14030 Rose Ave Fontana, CA 92337 United States	Paving and sidewalk, curb & gutter, cross gutter, alley apron, curb ramps	90453	1000011796	\$3,263,397.26	
<b>Corpro Companies, Inc</b> 10260 Matern Place Santa Fe Springs, CA 90670 United States	Cathodic Protection	764878	1000002963	\$195,255.40	
<b>Southwest Signal Services</b> PO Box 1297 Santee, CA 92071 United States	Traffic Loops	451115	1000004265	\$23,772.00	
<b>Cell-Crete Corporation</b> 135 E Railroad Ave Monrovia, CA 91016 United States	Abandonment Grouting	243404	1000000262	\$37,955.54	
<b>Rick Post Welding &amp; Wet Tapping</b> 3863 Sumac Summit Fallbrook, CA 92028 United States	Welding	687814	1000041564	\$250,000.00	CADIR

Line Totals (Unit Price * Quantity)								
Item Num	Section	Item Code	Description	Reference	Unit of Measure	Quantity	El Cajon Grading & Engineering Co, Inc. - Unit Price	El Cajon Grading & Engineering Co, Inc. - Line Total
1	Main Bid	524126	Bonds (Payment and Performance)	1-7.2.1	LS	1	\$128,181.00	\$128,181.00
2	Main Bid	237310	Caltrans Encroachment Permit Submittal (EOC Type I)	2-2.3	AL	1	\$7,500.00	\$7,500.00
3	Main Bid	237110	Specialty Inspection Paid For By the Contractor (EOC Type I)	4-3.4.1	AL	1	\$10,000.00	\$10,000.00
4	Main Bid	237110	Specialty Testing Under the Direction of the Engineer (EOC Type I) - Corrosion	4-3.4.1	AL	1	\$10,000.00	\$10,000.00
5	Main Bid	238990	Preparation of Hazardous Waste Management Plan and Reporting	5-15.17	LS	1	\$4,400.00	\$4,400.00
6	Main Bid	541690	Monitoring of Contaminated Soil	5-15.17	HR	80	\$118.00	\$9,440.00
7	Main Bid	238990	Testing, Sampling, Site Storage, and Handling of Petroleum Contaminated Soil	5-15.17	TON	10	\$575.00	\$5,750.00
8	Main Bid	238990	Loading, Transportation, and Disposal of Petroleum Contaminated Soil	5-15.17	TON	10	\$98.00	\$980.00
9	Main Bid	238190	Cathodic Protection	7-3.1	LS	1	\$363,000.00	\$363,000.00
10	Main Bid	237110	Removal of Existing 536/ 390 Pressure Regulating Station	7-3.1	LS	1	\$15,000.00	\$15,000.00
11	Main Bid	237110	Mobilization	7-3.4.1	LS	1	\$186,259.00	\$186,259.00
12	Main Bid		Field Orders (EOC Type II)	7-3.9	AL	1	\$1,500,000.00	\$1,500,000.00
13	Main Bid	238910	Crushed Aggregate Base	301-2.4	TON	500	\$130.00	\$65,000.00
14	Main Bid	237310	Pavement Restoration Adjacent to Trench	302-5.2.1	SF	26000	\$12.15	\$315,900.00
15	Main Bid	237310	Asphalt Concrete Overlay	302-5.9	TON	17628	\$95.00	\$1,674,660.00
16	Main Bid	237310	Pavement Fabric	302-7.4	SY	58000	\$3.00	\$174,000.00
17	Main Bid	237110	Curb Inlet (Type A)	303-1.12	EA	2	\$10,650.00	\$21,300.00
18	Main Bid	237110	Modify Curb Inlet (Type A)	303-1.12	EA	1	\$11,150.00	\$11,150.00
19	Main Bid	237310	Remove and Replace Existing Sidewalk	303-5.9	SF	1400	\$17.50	\$24,500.00
20	Main Bid	237310	Curb and Gutter (6 Inch Curb, Type H)	303-5.9	LF	200	\$100.00	\$20,000.00
21	Main Bid	237310	Median Curb and Gutter (Type B-2 )	303-5.9	LF	82	\$95.00	\$7,790.00
22	Main Bid	237310	Cross Gutter	303-5.9	SF	12228	\$14.75	\$180,363.00
23	Main Bid	237310	Alley Apron	303-5.9	SF	3600	\$17.25	\$62,100.00
24	Main Bid	237310	Curb Ramp (Type A) with Detectable Warning Tiles	303-5.10.2	EA	37	\$4,360.00	\$161,320.00
25	Main Bid	237310	Curb Ramp (Type B) with Detectable Warning Tiles	303-5.10.2	EA	13	\$4,360.00	\$56,680.00
26	Main Bid	237310	Curb Ramp (Type C1) with Detectable Warning Tiles	303-5.10.2	EA	6	\$4,500.00	\$27,000.00
27	Main Bid	237310	Curb Ramp (Type D) with Detectable Warning Tiles	303-5.10.2	EA	48	\$4,100.00	\$196,800.00
28	Main Bid	237310	Curb Ramp (Caltrans Modified Case F) with Detectable Warning Tiles	303-5.10.2	EA	1	\$4,500.00	\$4,500.00
29	Main Bid	237310	Curb Ramp (Caltrans Case G) with Detectable Warning Tiles	303-5.10.2	EA	1	\$4,580.00	\$4,580.00
30	Main Bid	237110	Abandon and Fill Existing Water Main Outside of the Trench Limit	306-3.3.4	LF	4967	\$27.00	\$134,109.00
31	Main Bid	237110	Handling and Disposal of Non-friable Asbestos Material	306-3.3.5.5	LF	7989	\$9.60	\$76,694.40
32	Main Bid	237110	Additional Bedding	306-15.1	CY	22	\$82.00	\$1,804.00
33	Main Bid	237110	Water Main (36 Inch) CML & TWC	306-15.1	LF	8538	\$624.00	\$5,327,712.00
34	Main Bid	237110	Water Main (30 Inch) CML & TWC	306-15.1	LF	20	\$1,265.00	\$25,300.00
35	Main Bid	237110	Water Main (24 Inch) CML & TWC	306-15.1	LF	4095	\$458.00	\$1,875,510.00
36	Main Bid	237110	Water Main (16 Inch)	306-15.1	LF	6146	\$168.00	\$1,032,528.00
37	Main Bid	237110	Water Main (16 Inch) CML & TWC	306-15.1	LF	485	\$386.00	\$187,210.00
38	Main Bid	237110	Water Main (12 Inch)	306-15.1	LF	5477	\$187.00	\$1,024,199.00
39	Main Bid	237110	Water Main (8 Inch)	306-15.1	LF	1535	\$173.00	\$265,555.00
40	Main Bid	237110	Butterfly Valve (24 Inch, Class 150B)	306-15.5	EA	9	\$9,950.00	\$89,550.00
41	Main Bid	237110	Butterfly Valve (36 Inch, Class 250B)	306-15.5	EA	10	\$18,000.00	\$180,000.00
42	Main Bid	237110	Butterfly Valve (16 Inch, Class 250B)	306-15.5	EA	18	\$4,850.00	\$87,300.00
43	Main Bid	237110	Gate Valve (16 Inch)	306-15.5	EA	3	\$8,800.00	\$26,400.00
44	Main Bid	237110	Gate Valve (12 Inch)	306-15.5	EA	22	\$3,700.00	\$81,400.00
45	Main Bid	237110	Gate Valve (8 Inch)	306-15.5	EA	28	\$2,200.00	\$61,600.00
46	Main Bid	237110	Water Valve Bypass for Straight Mainline 16 Inch and Larger	306-15.5	EA	4	\$8,400.00	\$33,600.00
47	Main Bid	237110	Fire Hydrant Assembly and Marker (6 Inch) 3 Port	306-15.6	EA	23	\$9,675.00	\$222,525.00
48	Main Bid	237110	Fire Hydrant Assembly and Marker (6 Inch) 2 Port	306-15.6	EA	1	\$8,275.00	\$8,275.00
49	Main Bid	237110	Fire Service Connection and Assembly (6 Inch)	306-15.6	EA	1	\$7,750.00	\$7,750.00
50	Main Bid	237110	Water Service (1 Inch)	306-15.8	EA	137	\$2,900.00	\$397,300.00
51	Main Bid	237110	Water Service (2 Inch)	306-15.8	EA	10	\$4,350.00	\$43,500.00
52	Main Bid	237110	Water Service (4 Inch)	306-15.8	EA	1	\$6,200.00	\$6,200.00
53	Main Bid	237110	Water Service (8 Inch)	306-15.8	EA	1	\$6,200.00	\$6,200.00
54	Main Bid	237110	Blow-Off Valve Assembly (2 Inch)	306-15.8	EA	3	\$4,960.00	\$14,880.00
55	Main Bid	237110	Blow-Off Valve Assembly (4 Inch)	306-15.8	EA	28	\$11,000.00	\$308,000.00
56	Main Bid	237110	Air and Vacuum (Air Release) Valve Assembly (1 Inch, Class 250)	306-15.8	EA	11	\$5,300.00	\$58,300.00
57	Main Bid	237110	Air and Vacuum (Air Release) Valve Assembly (2 Inch, Class 250)	306-15.8	EA	17	\$6,970.00	\$118,490.00
58	Main Bid	237310	Temporary Resurfacing	306-15.9	TON	2000	\$93.00	\$186,000.00
59	Main Bid	237110	Thrust Blocks and Anchor Blocks for 16 Inch and Larger Water Mains	306-15.10	EA	90	\$1,520.00	\$136,800.00
60	Main Bid	237110	Imported Trench Backfill	306-15.11	TON	2000	\$34.85	\$69,700.00
61	Main Bid	237110	Modified Manhole SDS-106 (per Sheet C-43)	306-16.6	EA	7	\$67,089.00	\$469,623.00
62	Main Bid	237310	Removal and Replacement of Existing Paint Striping	314-4.3.7	LS	1	\$16,300.00	\$16,300.00
63	Main Bid	237310	Removal and Replacement of Existing Thermoplastic Striping and Markings	314-4.4.6	LS	1	\$30,500.00	\$30,500.00
64	Main Bid	237310	Continental Crosswalks	314-4.4.6	SF	940	\$4.00	\$3,760.00
65	Main Bid	238990	Video Recording of Existing Conditions	400-1.1.1	LS	1	\$3,000.00	\$3,000.00

66	Main Bid	238910	Removal and Disposal of Railroad Tracks	401-7	LF	50	\$170.00	\$8,500.00
67	Main Bid	237310	Adjust Existing Manhole Frame and Cover to Grade	403-5	EA	65	\$525.00	\$34,125.00
68	Main Bid	237310	Adjust Existing Survey Monument to Grade	403-5	EA	4	\$575.00	\$2,300.00
69	Main Bid	237310	Traffic Signal Loop and Appurtenance Replacement (Modified Type E)	404-12	EA	14	\$450.00	\$6,300.00
70	Main Bid	237310	Traffic Signal Loop and Appurtenance Replacement (Type E)	404-12	EA	42	\$450.00	\$18,900.00
71	Main Bid	237310	Removal of Humps, Lumps, and Pavement Irregularities	404-12	LF	1250	\$5.25	\$6,562.50
72	Main Bid	237310	Cold Mill Full Width AC Pavement (3 Inch)	404-12	SF	952890	\$0.77	\$733,725.30
73	Main Bid	237310	Cold Mill Full Width AC Pavement (4 Inch)	404-12	SF	33872	\$0.77	\$26,081.44
74	Main Bid	237310	Traffic Control	601-7	LS	1	\$146,000.00	\$146,000.00
75	Main Bid	237310	Pedestrian Barricade (Type A )	701-2	EA	12	\$690.00	\$8,280.00
76	Main Bid	237110	Connections to The Existing System by Contractor (16 Inch PVC)	901-2.5	EA	5	\$7,450.00	\$37,250.00
77	Main Bid	237110	Connections to The Existing System by Contractor (30 Inch SCRW)	901-2.5	EA	1	\$37,400.00	\$37,400.00
78	Main Bid	237110	Connections to The Existing System by Contractor (36 Inch SCRW)	901-2.5	EA	3	\$37,400.00	\$112,200.00
79	Main Bid	237110	Connections to The Existing System by Contractor (36 Inch CICL)	901-2.5	EA	1	\$39,000.00	\$39,000.00
80	Main Bid	237110	Connections to The Existing System by Contractor (48 Inch RCSC)	901-2.5	EA	1	\$42,000.00	\$42,000.00
81	Main Bid	237110	Connections to The Existing System by Contractor (54 Inch RCSC)	901-2.5	EA	1	\$45,000.00	\$45,000.00
82	Main Bid	237110	Connections to The Existing System by Contractor (60 Inch WSP)	901-2.5	EA	2	\$43,500.00	\$87,000.00
83	Main Bid	237110	Cut and Plug by Contractor (16 Inch PVC)	901-2.5	EA	5	\$6,300.00	\$31,500.00
84	Main Bid	237110	Cut and Plug by Contractor (16 Inch AC)	901-2.5	EA	1	\$7,000.00	\$7,000.00
85	Main Bid	237110	Cut and Plug by Contractor (16 Inch CI)	901-2.5	EA	5	\$7,000.00	\$35,000.00
86	Main Bid	237110	Cut and Plug by Contractor (16 Inch CML&TW)	901-2.6	EA	1	\$7,700.00	\$7,700.00
87	Main Bid	237110	Cut and Plug by Contractor (24 Inch CICL)	901-2.5	EA	3	\$25,800.00	\$77,400.00
88	Main Bid	237110	Cut and Plug by Contractor (30 Inch SCRW)	901-2.5	EA	2	\$30,800.00	\$61,600.00
89	Main Bid	237110	Cut and Plug by Contractor (30 Inch CICL)	901-2.5	EA	2	\$29,800.00	\$59,600.00
90	Main Bid	237110	Cut and Plug by Contractor (30 Inch CML&TW)	901-2.6	EA	1	\$30,500.00	\$30,500.00
91	Main Bid	237110	Cut and Plug by Contractor (36 Inch SCRW)	901-2.5	EA	3	\$33,500.00	\$100,500.00
92	Main Bid	237110	Cut and Plug by Contractor (36 Inch CICL)	901-2.5	EA	7	\$30,700.00	\$214,900.00
93	Main Bid	237110	Cut and Plug by Contractor (48 Inch RCSC)	901-2.5	EA	1	\$30,000.00	\$30,000.00
94	Main Bid	237110	Cut and Plug by Contractor (54 Inch RCSC)	901-2.5	EA	1	\$33,500.00	\$33,500.00
95	Main Bid	237110	Cut and Plug by Contractor (60 Inch WSP)	901-2.5	EA	2	\$32,500.00	\$65,000.00
96	Main Bid	237110	Pavement Restoration for Final Connection	901-2.5	SF	6500	\$17.00	\$110,500.00
97	Main Bid	541330	WPCP Development	1001-4.2	LS	1	\$850.00	\$850.00
98	Main Bid	237110	WPCP Implementation	1001-4.2	LS	1	\$57,000.00	\$57,000.00
							Subtotal	\$20,178,901.64
99	Additive Alternate Items A	237110	High-lining Installation by the Contractor	901-1.3	LF	21500	\$6.60	\$141,900.00
100	Additive Alternate Items A	237110	High-lining Removed by the Contractor	901-1.3	LF	21500	\$3.70	\$79,550.00
101	Additive Alternate Items A	237110	Furnished Materials for Contractor High-line Work	900-1.9	LF	21500	\$3.10	\$66,650.00
							Subtotal	\$288,100.00
102	Additive Alternate Items B	237110	Cut and Plug by Contractor (8 Inch through 12 Inch)	901-2.5	EA	37	\$4,600.00	\$170,200.00
103	Additive Alternate Items B	237110	Connections to The Existing System by Contractor (8 Inch through 12 Inch)	901-2.5	EA	37	\$6,320.00	\$233,840.00
							Subtotal	\$404,040.00
104	Additive Alternate Items C	237110	Contractor Furnished Materials for the City Forces High-line Work	900-1.9	LF	21500	\$3.00	\$64,500.00
							Subtotal	\$64,500.00
							<b>Total</b>	<b>\$20,935,541.64</b>