

City of San Diego

CONTRACTOR'S NAME: Sukut Construction, LLC
ADDRESS: 4010 W. Chandler Avenue, Santa Ana, California 92704
TELEPHONE NO.: _____ **FAX NO.:** _____
CITY CONTACT: Stephen Samara, Principal Contract Specialist, Email: SSamara@sandiego.gov
Phone No. (619) 533-3619
J. E. Bermudo / A. Jaro / M. L. Wenceslao

BIDDING DOCUMENTS

FINAL

e - Bidding



FOR

PURE WATER PROGRAM (PWP)

**MORENA CONVEYANCE SOUTH & MIDDLE AND
MORENA CONVEYANCE BIKE LANES (BL)**

BID NO.: K-22-1797-DBB-3-A
SAP NO. (WBS/IO/CC): B-15141
CLIENT DEPARTMENT: 2000
COUNCIL DISTRICT: 2, 6, 7,
PROJECT TYPE: JA, KA

THIS CONTRACT WILL BE SUBJECT TO THE FOLLOWING:

- PROJECT LABOR AGREEMENT (PLA)
- PHASED-FUNDING
- FEDERAL EQUAL OPPORTUNITY CONTRACTING REQUIREMENTS.
- ELIGIBLE FOR JOINT VENTURE PREQUALIFICATION STATUS (see Instructions to Bidders)
- PREVAILING WAGE RATES: STATE FEDERAL
- SKILLED AND TRAINED WORKFORCE
- THIS IS A CALIFORNIA STATE REVOLVING FUND (CASRF) AND ENVIRONMENTAL PROTECTION AGENCY (EPA) FUNDED CONTRACT THROUGH THE STATE OF CALIFORNIA AND UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDER THE FEDERAL WATER INFRASTRUCTURE FINANCE AND INNOVATION ACT (WIFIA), PROP 68 AND BUREAU OF RECLAMATION (BOR).

BID DUE DATE:

**2:00 PM
FEBRUARY 23, 2022**

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:

- | | | |
|---|--|--|
| <p>Shapiro,
Alan
<small>Digitally signed by Shapiro, Alan
DN: cn=Shapiro, Alan, ou=USSDGI,
email=Alan.Shapiro@aeom.com
Reason: I have reviewed this
document
Date: 2021.12.16 09:10:15 -0800</small></p> <hr/> <p>1) Registered Engineer</p> | <p>12/16/2021</p> <hr/> <p>Date</p> | <p>Seal: </p> |
| <p>Brian Genovese
<small>Digitally signed by Brian
Genovese
Date: 2021.12.16 14:33:10
-0800</small></p> <hr/> <p>2) For City Engineer</p> | <p>12-16-2021</p> <hr/> <p>Date</p> | <p>Seal: </p> |
| <p>
<hr/><p>3) For City Engineer</p></p> | <p>12/16/2021</p> <hr/> <p>Date</p> | <p>Seal: </p> |

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REQUIRED DOCUMENTS SCHEDULE DURING BIDDING AND AWARDING

The Bidder's attention is directed to the City's Municipal Code §22.0807(e), (3)-(5) for important information regarding grounds for debarment for failure to submit required documentation.

The specified Equal Opportunity Contracting Program (EOCP) forms are available for download from the City's web site at:

<http://www.sandiego.gov/eoc/forms/index.shtml>

FEDERAL DOCUMENTS SUBMITTAL REQUIREMENTS

ITEM	DOCUMENT TO BE SUBMITTED	WHEN DUE	FROM
1.	Bid Bond (PDF via PlanetBids)	At Time of Bid	ALL BIDDERS
2.	Contractors Certification of Pending Actions	At Time of Bid	ALL BIDDERS
3.	Mandatory Disclosure of Business Interests	At Time of Bid	ALL BIDDERS
4.	Disclosure of Lobbying Activities	At Time of Bid	ALL BIDDERS
5.	Form 4500-3: DBE Subcontractor Performance Form	At Time of Bid	ALL BIDDERS
6.	Form 4500 -4: DBE Subcontractor Utilization Form	At Time of Bid	ALL BIDDERS
7.	Commitment to Comply with Skilled and Trained Workforce Certification Form	At Time of Bid	ALL BIDDERS
8.	Debarment and Suspension Certification for Prime Contractors	At Time of Bid	ALL BIDDERS
9.	Debarment and Suspension Certification for Subcontractors, Suppliers & Mfgs	At Time of Bid	ALL BIDDERS
10.	Bid Bond (Original)	By 5PM, 3 working days After Bid Opening	ALL BIDDERS
11.	Federal Good Faith Documentation	By 5PM, 4 working days After Bid Opening	ALL BIDDERS
12.	Form AA61 – List of Work Made Available	By 5PM, 4 working days After Bid Opening	ALL BIDDERS
13.	Form AA62 – Summary of Bids Received	By 5PM, 4 working days After Bid Opening	ALL BIDDERS
14.	Form AA63 – Good Faith Effort List of Subcontractors Solicited	By 5PM, 4 working days After Bid Opening	ALL BIDDERS
15.	Escrow Bid Document, See Attachment H	By 5PM, 4 working days After Bid Opening	ALL BIDDERS

ITEM	DOCUMENT TO BE SUBMITTED	WHEN DUE	FROM
16.	If the Contractor is a Joint Venture: <ul style="list-style-type: none"> • Joint Venture Agreement • Joint Venture License 	Within 10 Working Days of receipt By bidder of contract forms	AWARDED BIDDER
17.	Phased Funding Schedule Agreement	Within 10 working days of receipt by the bidder of the Notice of Intent to Award	AWARDED BIDDER
18.	Payment & Performance Bond; Certificates of Insurance and Endorsements	Within 10 working days of receipt by bidder of contract forms and NOI	AWARDED BIDDER
19.	Signed Contract Agreement Page	Within 3 working days of receipt by bidder of Contract Agreement	AWARDED BIDDER
20.	PLA Forms, See Attachment I	Within 10 working days of NOI	AWARDED BIDDER
21.	OCIP Credit Worksheet. See Notice Inviting Bids, Section 17.	Within 10 working days of Notice of Intent to Award.	AWARDED BIDDER
22.	OCIP Enrollment Forms	Within 15 working days of NOI	AWARDED BIDDER
23.	Form UR-334: California State Revolving Funds (CASRF)	Annually. See Attachment D requirements.	AWARDED BIDDER
24.	Form 4500 -2: DBE Subcontractor Participation Form	See Attachment D requirements.	AWARDED BIDDER
25.	Skilled and Trained Workforce Certification Forms	Monthly. See NIB Section 8	AWARDED BIDDER

NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)**. 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 **\$116,300,000**.
4. **BID DUE DATE AND TIME ARE: February 23, 2022 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 classification: **A**
7. **ESCROW BID DOCUMENT APPLY TO THIS CONTRACT: Refer to Attachment H**
8. **SKILLED AND TRAINED WORKFORCE LABOR REQUIREMENTS:**
 - 8.1. The Contractor and its subcontractors at every tier shall use a skilled and trained workforce to perform all work on the project or contract that falls within an apprenticeable occupation in the building and construction trades, as set forth in California Public Contract Code section 2601, including the exceptions in sections 2601(d)(5) and 2601 (d)(6). Contractor shall provide to the City a report demonstrating compliance with this section on a monthly basis, to be included with monthly pay requests. The City may withhold progress payments or retention in accordance with California Public Contract Code section 2602(b) if the Contractor fails to provide the monthly report required by this section, provides a report that is incomplete, or provides a report that does not demonstrate compliance with this section. Payment may be withheld until the Contractor provides a plan to achieve substantial compliance with this section prior to completion of the contract that is acceptable to the City, with respect to the relevant apprenticeable occupation.

This section references provisions of the California Public Contract Code for convenience only. The City is not electing to incorporate other provisions of Chapter 2.9 of the California Public Contract Code not referenced herein, including but not limited to provisions for State enforcement. Instead, failure to comply with this section is considered a material breach of this contract which could affect the Contractor's ability to perform future work for the City pursuant to Chapter 2, Article 2, Division 8 of the San Diego Municipal Code regarding debarment.

8.2. Submittal Requirements

Contracts must submit proof of a Commitment to Comply with Skilled and Trained Workforce Requirements at bid due date. Contractor and its subcontractors at every tier will use a skilled and trained workforce to perform all work on the project or a contract that falls within an apprenticeship occupation in the building and construction trades in accordance with Chapter 2.9 (commencing with Section 2600) of Part 1 of Division 2 of the Public Contract Code. City will monitor Contractor's compliance with these requirements and Contractor, on behalf of itself and its subcontractors at every tier, shall provide on a monthly basis a Skilled and Trained Workforce Certification Form and Skilled and Trained Workforce Monthly Compliance Report demonstrating compliance. If the monthly Skilled and Trained Workforce Certification Form and Monthly Compliance Report are not provided within 30 days or if Contractor provides a report that is incomplete, City shall withhold further payments until a complete report is provided. If the Skilled and Trained Workforce Certification form does not establish compliance with Section 132354.7, City shall withhold further payments until Contractor provides a plan to achieve substantial compliance with the skilled and trained workforce requirements, with respect to the relevant apprenticeable occupation, prior to the completion of the project. Any withholding will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory compliance of the requirements for which the retention was made are submitted.

9. VETERANS OUTREACH:

Military veterans bring unique skills to City projects due to their mission-oriented training and experience, and dedication to the job. The City desires to facilitate the entry into the building and construction trades for veterans interested in careers in the industry. Within (30) days after notice that it is the apparent low bidder. Contractor shall contact "Helmets to Hardhats" or "UA Veterans in Piping" on behalf of itself and its subcontractors, for potential job referrals and employment of veterans on the project. Contractor may contact other veterans programs in its discretion, but if neither of the above referenced programs are contacted, the Contractor must receive prior written approval from the City that it is an equivalent veterans program. Contacting multiple veterans programs is highly encouraged, but not required. Within ninety (90) days after issuance of a Notice to Proceed for construction of the project. Contractor shall provide the City with a written report detailing the veterans programs contacted, opportunities offered by the Contractor and its subcontractors, applications received and for what construction trades, and how many veterans were hired through the programs. Hiring veterans to work on the project is not mandatory, but information received from the Contractor may be used by the City in the future to develop a veteran's outreach program for City contracting.

10. BUSINESS COOPERATION TAX PROGRAM:

You must exercise your right to obtain a California State of Board of Equalization (BOE) sub-permit for the jobsite and allocate all eligible Bradley-Burns Uniform Local Sales and Use Tax (Use Tax) to the City.

The Contractor and Subcontractors who meet the minimum California Department of Tax and Fee Administration (CDTFA) contract threshold (currently \$5M) and who are purchasing materials and/or fixtures over \$100,000 in value, must apply for a jobsite sub-permit (job-site specific sellers permit), prior to NTP. In addition, you will ensure that all eligible subcontractors

will exercise their right to obtain this BOE sub-submit and allocate all eligible Use Tax to the City. The City will not issue a notice to proceed unless you and your eligible subcontractors have obtained this sub-permit from the BOE. If there is added work at a later date that meets this criteria the same process shall apply prior to purchasing material and/or fixtures for added work. And it will also be part of the close-out process (permit closeout). More information on obtaining this permit can be found by contacting the local BOE office.

11. PROJECT LABOR AGREEMENT. As a condition of final contract award, the Awarded Bidder must sign and execute a Letter of Assent to the Project Labor Agreement that the City has negotiated which is listed as Attachment A to the Project Labor Agreement. A copy of the Project Labor Agreement (PLA) is attached as Attachment I of this Contract Document. See also Attachment E SSP, Section 5-3.6, "Project Labor Agreement".

12. SUBCONTRACTING PARTICIPATION PERCENTAGES:

12.1. The City affirms that in any contract entered into pursuant to this advertisement, DBE firms will be afforded full opportunity to submit Bids in response to this invitation.

12.2. This Federally assisted project includes subcontracting participation percentages for DBE participation. DBE goal commitments and Good Faith Efforts (GFE) shall be made prior to bidding. DBE commitments and GFE made after the Bid opening will not be considered for the Award of Contract.

12.3. This project is subject to the federal equal opportunity regulations and the following requirements. The City reserves the right to audit the Contractor's compliance with the federal requirements set forth below.

12.4. Following are federally subcontracting participation percentages for this contract. For the purpose of achieving the subcontractor participation percentage, Additive or Deductive, and Type II Allowance Bid Items will not be included in the calculation.

12.5. Environmental Protection Agency (EPA) - In accordance with EPA's Program for Utilization of Small, Minority Disadvantaged and Women Business Enterprises in procurement under Federal assistance programs, the Contractor agrees to the applicable "fair share" objectives negotiated with EPA as follows:

12.6. California State Water Resources Control Board - Clean Water State Revolving Fund (CWSRF):

		MBE*	WBE*
1.	Construction	2%	1%
2.	Supplies	1%	1%
3.	Services	1%	1%
4.	Equipment (combined in above)	1%	1%

Note: MBEs and WBEs must be certified by EPA, SBA, DOT or by state, local, Tribal, or private entities whose certification criteria match EPAs in order to be counted toward MBE/WBE accomplishments. MBEs and WBEs are a part of the larger universe of DBEs.

12.7. If the Bidder fails any of the following conditions, the Bid **SHALL be declared non-responsive:**

1. Submission of GFE documentation, as specified in Attachment D.
 - a) Submit Good Faith Effort (GFE) documentation, saved in searchable Portable Document Format (PDF), demonstrating the Bidder made a good faith effort to conduct outreach to and include DBE Subcontractors as required in this solicitation by 5 PM 4 Working Days after the Bid opening.

All submittals in searchable PDF shall be submitted electronically within the prescribed time identified in the contract documents via PlanetBids by invitation to the point of contact named in the bid provided by the Contract Specialist to all bidders.

2. Attending the Pre-bid Meeting.

13. MANDATORY ONLINE PRE-BID MEETING VIA GOTOMEETING:

Bidders are required to attend the Pre-Bid Meeting.

The Meeting will be held on: **Thursday, January 6, 2022 at 1:00 PM (Pacific)** at GoToMeeting.

Please join the pre-bid meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/841983725>

You can also dial in using your phone.

United States: +1 (872) 240-3212

Access Code: 841-983-725

Please Note: You will need to join the meeting with a computer, tablet or smartphone with the GoToMeetings App in place in order to sign in via the Chat feature as attendance at the meeting will be evidenced by the Chat sign-in. The Chat feature will also be used for attendees to ask any questions.

The purpose of the meeting is to discuss the scope of the project, submittal requirements, the pre-qualification process, the Project Labor Agreement requirements, OCIP requirements, and Equal Opportunity Contracting Program requirements and reporting procedures. Failure to attend the Mandatory Pre-Bid Meeting may result in the Bid being deemed non-responsive.

Upon entering the meeting, all attendees must use the chat feature to sign in with the following information: Name of firm, Attendee's name, Phone number, and Email address.

The GoToMeeting will open thirty minutes prior to the start times listed above to allow the attendees the opportunity to sign in by the deadline.

Bidders may not be admitted after the specified start time of the mandatory Pre-Bid Meeting.

14. AWARD PROCESS:

- 14.1.** 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.
- 14.2.** 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.
- 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 by the City Attorney's Office.
- 14.4.** The low Bid will be determined by the Base Bid.
- 14.5.** Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base bid alone.

15. SUBMISSION OF QUESTIONS:

- 15.1.** The Director (or Designee) of the Purchasing & Contracting 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:

SSamara@sandiego.gov

- 15.2.** Questions received less than 14 days prior to the date for opening of Bids may not be considered.
- 15.3.** 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.
- 15.4.** 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.

16. **PHASED FUNDING:** For Phased Funding Conditions, see Attachment B.
17. **OWNER CONTROLLED INSURANCE PROGRAM (OCIP):** The City has implemented an Owner Controlled Insurance Program (OCIP) for its Pure Water Projects. In this OCIP, the City furnishes Workers' Compensation, General, Excess, Pollution Liability and Builder's Risk insurance associated with construction of the Work, as detailed in Attachment E, Section 5 - LEGAL RELATIONS AND RESPONSIBILITIES. Bidders, as well as all of their subcontractors, with a subcontract amount of greater than one half of one percent of the Contractors bid amount shall complete OCIP credit worksheets. Bidders shall submit these OCIP credit worksheets, including OCIP credit worksheets obtained from all their subcontractors, within 10 Working Days of receipt by bidder of contract forms and Notice of Intent to Award. **Compliance with OCIP credit worksheet requirements shall be a condition for award.**

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, EOCB 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 Purchasing & Contracting Department, Public Works Division 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") http://www.greenbookspecs.org/	2018	PWPI010119-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")* https://www.sandiego.gov/ecp/edocref/greenbook	2018	PWPI010119-02
City of San Diego Standard Drawings* https://www.sandiego.gov/ecp/edocref/standarddraw	2018	PWPI010119-03
Citywide Computer Aided Design and Drafting (CADD) Standards https://www.sandiego.gov/ecp/edocref/drawings	2018	PWPI010119-04
California Department of Transportation (CALTRANS) Standard Specifications https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications	2018	PWPI030119-05
CALTRANS Standard Plans https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications	2018	PWPI030119-06
California Manual on Uniform Traffic Control Devices Revision 6 (CA MUTCD Rev 6) https://dot.ca.gov/programs/safety-programs/camutcd/camutcd-files	2014	PWPI060121-10
NOTE: *Available online under Engineering Documents and References at: https://www.sandiego.gov/ecp/edocref/		
*Electronic updates to the Standard Drawings may also be found in the link above		

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 **PORZION** 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 Purchasing & Contracting Department, Public Works Division.
- 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. By 5PM, 3 working days after the bid opening date, all 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 by 5PM, 3 working days after the bid opening date shall cause the bid to be rejected and deemed **non-responsive**.

Due to circumstances related to Covid-19, until further notice, all original bid bond submittals must be received by 5 PM, 3 working days after bid opening.

Upon circumstances returning to normal business as usual, the original bid bond shall once again be due by 5 PM the day after bid opening.

Original Bid Bond shall be submitted to:
Purchasing & Contracting Department, Public Works Division
525 B Street, Suite 750 (7th Floor)
San Diego, California, 92101
To the Attention of the Contract Specialist on the Front Page of this solicitation.

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 herein and in the Notice of Intent to 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

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

_____, a corporation, as principal, and
_____, 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 _____
_____ for the faithful performance of the
annexed contract, and in the sum of _____ 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.

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

The Surety expressly agrees that the City of San Diego may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal.

The Surety shall not utilize the Principal in completing the improvements and work specified in the Agreement in the event the City terminates the Principal for default.

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

THE CITY OF SAN DIEGO

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By: _____

By: _____

Print Name: _____
Mayor or designee

Print Name: _____
Deputy City Attorney

Date: _____

Date: _____

CONTRACTOR

SURETY

By: _____

By: _____
Attorney-In-Fact

Print Name: _____

Print Name: _____

Date: _____

Date: _____

Local Address of Surety

Local Phone Number of Surety

Premium

Bond Number

ATTACHMENTS

ATTACHMENT A
SCOPE OF WORK

SCOPE OF WORK

1. SCOPE OF WORK:

Morena Conveyance South: The Morena Conveyance South project includes the installation of 48" wastewater forcemain pipeline (approx. 17,404 LF) and 30-inch Welded Steel Pipe brine concentrate/conveyance pipeline (approx. 17,840 LF) from the Morena Pump Station located at the corner of Sherman and Custer Streets east along Sherman Street, north along Morena Boulevard, east on Milton Street, North on Chicago Street, east on Jellett Street, north on Denver Street and east on Clairemont Drive until Iroquois Avenue, and associated appurtenances.

Morena Conveyance Middle: The Morena Conveyance Middle project includes the installation of 48" wastewater forcemain pipeline (approx. 18,300 LF) and 30-inch Welded Steel Pipe brine concentrate/conveyance pipeline (approx. 18,330 LF) from the connection with Morena Conveyance South near Iroquois Avenue north along Clairemont Drive, east on Clairemont Mesa Boulevard, north on Genessee Avenue until near Appleton Road, and associated appurtenances.

Morena Conveyance Bike Lanes (BL): This project will install Class II (bike lanes) with buffer, bicycle loops, Sharrows and signage as per plan on the following roadway:

Clairemont Dr between Iroquois Avenue and Denver Street and Morena Blvd between Balboa Avenue and Napa Street.

1.1. The Work shall be performed in accordance with:

1.1.1. The Notice Inviting Bids and Plans numbered 40067-01-D through 40067-32D, 40067-83-D through 40067-106-D, 40067-171-D through 40067-176-D, 40067-182-D through 40067-184-D, 40067-186-D through 40067-198-D, 40067-202-D through 40067-204-D, 0067-206-D through 40067-208-D, 40067210-D through 40067-229-D, 40067-243-D through 40067-251-D, 40067-271-D through 40067-279-D, 40067-298-D through 40067-300-D, 40067-304-D, 40067-321-D through 40067-326-D, Inclusive (Morena Conveyance South).

1.1.2. Plans numbered 40067-1-D through 9, 40067-24 through 46, 40067-107 through 40067-129-D, 40067-173-D, 40067-175-D, 40067-176-D, 40067-178-D, 40067-179-D, 40067-181-D through 40067-190-D, 40067-193-D, 40067-194-D, 40067-195-D, 40067-197-D, 40067-216-D, 40067-217-D, 40067-218-D, 40067-230-D through 40067-234-D, 40067-252-D through 40067-260-D, 40067-280-D through 40067-288-D, 40067-305-D through 40067-312-D, 40067-322-D through 40067-325-D, 40067-T1-D through 40067-T151-D, inclusive (Morena Conveyance Middle).

1.1.3. Plans numbered 42335-45 through 42335-88 D, inclusive (Morena Conveyance Bike Lanes (BL)).

https://drive.google.com/drive/folders/1Te03G8_LKqPIWR4x4VryiCzKh6ERkn6H?usp=sharing

1.1.4. General Requirements as detailed in DIV 01 of CSI shall support equivalent sections as defined in the Whitebook.

2. **LOCATION OF WORK:** The location of the Work is as follows:

See **Appendix E – Location Map**

3. **CONTRACT TIME:** The Contract Time for completion of the Work, including overall Pure Water Phase 1 commissioning shall be **680 Working Days**.

4. **The project has specific milestones, constraints, testing periods, and completion requirements, which include the following:**

Activity	Working days from Start of Contract
Notice to Proceed	0 Days
Intermediate Substantial Completion (Morena Conveyance Southern and Middle)	560 Days
Substantial Completion	640 Days
Final Completion	680 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: _____

CONTRACT OR TASK TITLE: _____

CONTRACTOR: _____

Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1				\$
2				\$
3				\$
Contract Total				\$

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

CONTRACTOR

PRINT NAME: _____

PRINT NAME: _____

Construction Senior Engineer

Signature: _____

Title: _____

Date: _____

Signature: _____

Date: _____

PRINT NAME: _____

Design Senior Engineer

Signature: _____

Date: _____

ATTACHMENT C

RESERVED

ATTACHMENT D

FUNDING AGENCY PROVISIONS

**CALIFORNIA STATE REVOLVING FUND (CASRF), METROPOLITAN WATER DISTRICT 2014
LOCAL RESOURCES PROGRAM, AND ENVIRONMENTAL PROTECTION AGENCY (EPA)
REQUIREMENTS**

CLEAN WATER STATE REVOLVING FUND (CWSRF)

DRINKING WATER STATE REVOLVING FUND (DWSRF)

BUREAU OF RECLAMATION (BOR)

PROPOSITION 68

IN THE EVENT THAT THESE REQUIREMENTS CONFLICT WITH THE CITY'S GENERAL EOC REQUIREMENTS, THE FUNDING AGENCY'S REQUIREMENTS WILL CONTROL.

1. WATER INFRASTRUCTURE FINANCE AND INNOVATION ACT (WIFIA) PROGRAM, 2014 LOCAL RESOURCES PROGRAM, AND CALIFORNIA STATE REVOLVING FUND (CASRF) REQUIREMENTS.

The City anticipates receiving financial assistance from the Federal Government, the Metropolitan Water District of Southern California, and the State of California for this project. The following requirements are conditions of the receipt of financial assistance from the United States Environmental Protection Agency under the Federal **Water Infrastructure Finance and Innovation Act (WIFIA)**, the **Metropolitan Water District** under the **2014 Local Resources Program**, and the State Water Resources Control Board under the **California Water State Revolving Fund (CASRF)** and **Proposition 68** programs. The firm contracting with the City (Contractor) shall comply with all of the following requirements. If there are other provisions in the Contract Documents that address the same subjects as this exhibit, Contractor shall comply with both provisions, with the more stringent requirements controlling. If there is a direct conflict between the Agreement and this exhibit, the requirements of this Exhibit shall control in order to preserve the City's eligibility to receive financial assistance.

1.1. RECORDS. The Contractor must maintain separate books, records and other material relative to the Project. The Recipient must also retain such books, records, and other material for itself and for each contractor or subcontractor who performed or performs work on this project for a minimum of thirty-six (36) years after Completion of Construction. The Recipient must require that such books, records, and other material are subject at all reasonable times (at a minimum during normal business hours) to inspection, copying, and audit by the State Water Board, the California State Auditor, the Bureau of State Audits, the United States Environmental Protection Agency (USEPA), the Office of Inspector General, the Internal Revenue Service, the Governor, or any authorized representatives of the aforementioned. The Recipient must allow and must require its contractors to allow interviews during normal business hours of any employees who might reasonably have information related to such records. The Recipient agrees to include a similar duty regarding audit, interviews, and records retention in any contract or subcontract related to the performance of this Agreement. The provisions of this section survive the term of this Agreement. (CWSRF Agmt. § 2.17(b); DWSRF Agmt. Ex. C § C.3.2(d)).

1.2. BONDS. Where contractors are used, the Recipient must not authorize construction to begin until each contractor has furnished a performance bond in favor of the Recipient in the following amounts: faithful performance (100%) of contract value; labor and materials (100%) of contract value. This requirement shall not apply to any contract for less than \$25,000.00. (CWSRF Agmt. § 4.3; DWSRF Agmt. Ex. C § C.3.6).

1.3. COMPLIANCE WITH APPLICABLE LAWS, RULES, AND REQUIREMENTS. The Recipient must, at all times, comply with and require its contractors and subcontractors to comply with all applicable federal and state laws, rules, guidelines, regulations, and requirements. Without limitation of the foregoing, to the extent applicable, the Recipient must:

(a) Comply with the provisions of the adopted environmental mitigation plan, if any, for the term of this Agreement;

(b) Comply with the Policy ; and

(c) Comply with and require compliance with the state and federal requirements set forth elsewhere in this Agreement. (CWSRF Agmt. § 4.5; DWSRF Agmt. Ex. C § C.3.8).

1.4. INDEMNIFICATION.

1.4.1. Contractor shall defend, indemnify and hold harmless the State Water Quality Control Board, the California Infrastructure and Economic Development Bank (Bank), and any trustee, and their officers, employees, and agents for the Bonds issued by the Bank, if any, to the same extent Contractor is obligated to defend, indemnify, and hold harmless the City under the Agreement. Contractor shall require its subcontractors to similarly defend, indemnify, and hold harmless the State Water Quality Control Board, the Bank, and any trustee, and their officers, employees, and agents for the Bonds issued by the Bank, if any, to the same extent its subcontractors are obligated to defend, indemnify, and hold harmless the Contractor. CWSRF Agmt. § 4.11; DWSRF Agmt. Ex. C § C.3.17).

1.5. NO DISCRIMINATION.

(a) The Contractor must comply with Government Code section 11135 and the implementing regulations (Cal. Code Regs, tit. 2, § 11140 et seq.), including, but not limited to, ensuring that no person is unlawfully denied full and equal access to the benefits of, or unlawfully subjected to discrimination in the operation of, the Project or System on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation as such terms are defined under California law, for as long as the Contractor retains ownership or possession of the Project.

(b) If Project Funds are used to acquire or improve real property, the Contractor must include a covenant of nondiscrimination running with the land in the instrument effecting or recording the transfer of such real property.

(c) The Contractor must comply with the federal American with Disabilities Act of 1990 and implementing regulations as required by Government Code section 11135(b).

- (d) The Contractor's obligations under this section shall survive the term of this Agreement.
- (e) During the performance of this Agreement, Recipient and its contractors and subcontractors must not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, sexual orientation, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, denial of family care leave, or genetic information, gender, gender identity, gender expression, or military and veteran status.
- (f) The Recipient, its contractors, and subcontractors must ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment.
- (g) The Recipient, its contractors, and subcontractors must comply with the provisions of the Fair Employment and Housing Act and the applicable regulations promulgated thereunder. (Gov. Code, §12990, subds. (a)-(f) et seq.; Cal. Code Regs., tit. 2, § 7285 et seq.) Such regulations are incorporated into this Agreement by reference and made a part hereof as if set forth in full.
- (h) The Recipient, its contractors, and subcontractors must comply with all applicable federal civil rights regulations, including statutory and national policy requirements. (2 CFR § 200.300). This includes, to the greatest extent practicable and to the extent permitted by law, the requirement to respect and protect the freedom of persons and organizations to engage in political and religious speech. (Executive Order 13798).
- (i) The Recipient, its contractors, and subcontractors must give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.
- (j) The Recipient must comply with and include the following nondiscrimination and compliance provision in all subcontracts under this Agreement:

During the performance of this contract, the contractor agrees as follows:
 "(a) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(b) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

"(c) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(d) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

"(e) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(f) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

"(g) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

1.6. INSURANCE. For any policy of insurance concerning or covering the construction of the Project, it will cause, and will require its contractors and subcontractors to cause,

a certificate of insurance to be issued showing, the State, the State Water Board, its officers, agents, employees, and servants as additional insured; and must provide the Division with a copy of all such certificates prior to the commencement of construction of the Project. (CWSRF Agmt. § 4.17; DWSRF Agmt. Ex. C § C.3.25).

- 1.7. EXCLUDED PARTIES.** Contractor shall not contract with any party who is debarred or suspended or otherwise excluded from or ineligible for participation in any work overseen, directed, funded, or administered by the State Water Board program for which this funding is authorized. For any work related to this Agreement, Contractor shall not contract with any individual or organization on the State Water Board's List of Disqualified Businesses and Persons that is identified as debarred or suspended or otherwise excluded from or ineligible for participation in any work overseen, directed, funded, or administered by the State Water Board program for which funding under this Agreement is authorized. The State Water Board's List of Disqualified Businesses and Persons is located at:

http://www.waterboards.ca.gov/water_issues/programs/enforcement/fwa/dbp.shtm
(CWSRF Agmt. § 4.18; DWSRF Agmt. Ex. C § C.3.26).

- 1.8. PREVAILING WAGES.** The Contractor agrees to be bound by all applicable provisions of State Labor Code regarding prevailing wages. The Contractor must monitor all agreements subject to reimbursement from this Agreement to ensure that the prevailing wage provisions of the State Labor Code are being met. In addition, the Contractor agrees to comply with the Davis-Bacon provisions incorporated by reference in Section 3 of this Agreement. (CWSRF Agmt. § 4.19; DWSRF Agmt. Ex. C § C.3.28).

- 1.9. SIGNAGE.** The Contractor shall place a sign at least four feet tall by eight feet wide made of ¾ inch thick exterior grade plywood or other approved material in a prominent location on the Project site and shall maintain the sign in good condition for the duration of the construction period. The sign must include the following disclosure statement and color logos (available from the Division):

- a)    
- b) "Funding for this project has been provided in full or in part by the Clean Water State Revolving Fund through an agreement with the State Water Resources Control Board. California's Clean Water State Revolving Fund is capitalized through a variety of funding sources, including grants from the United States Environmental Protection Agency and state bond proceeds."

The Project sign may include another agency's required promotional information so long as the above logos and disclosure statement are equally prominent on the sign.

The sign shall be prepared in a professional manner. (CWSRF Agmt. Ex. A § 9; DWSRF Agmt. Ex. A § A.2.3).

See **Attachment E – Supplementary Special Provisions, Section 3-11.2, “Project Identification Sign”** for more information.

- 1.10. DISCLAIMER.** Funding for this project has been provided in full or in part through an agreement with the State Water Resources Control Board. California’s Clean Water State Revolving Fund is capitalized through a variety of funding sources, including grants from the United States Environmental Protection Agency and state bond proceeds. The contents of this document do not necessarily reflect the views and policies of the foregoing, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.” (DWSRF Agmt. Ex. A § A.2.1).
- 1.11. FEDERAL AWARD CONDITIONS.** Contractor must comply with the following federal conditions:
- 1.12. American Iron and Steel.** Unless the City has obtained a waiver from USEPA on file with the State Water Board or unless this Project is not a project for the construction, alteration, maintenance or repair of a public water system or treatment work, Contractor shall not purchase “iron and steel products” produced outside of the United States on this Project. Unless the City has obtained a waiver from USEPA on file with the State Water Board or unless this Project is not a project for the construction, alteration, maintenance or repair of a public water system or treatment work, Contractor shall ensure that all “iron and steel products” used in the Project were or will be produced in the United States. For purposes of this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials. “Steel” means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. CWSRF Agmt. Ex. E § A(1); DWSRF Agmt. Ex. C § C.4.3.i; WIFIA Agmt. §§ 12(j), 14(l))
- 1.13. Wage Rate Requirements (Davis-Bacon).** Contractor must include in its subcontracts the full language provided in Attachment D, Section 10, regarding federal prevailing wages. CWSRF Agmt. Ex. E § A(2); DWSRF Agmt. Ex. C § C.4.3.ii; WIFIA Agmt. §§ 12(j), 14(l)).
- 1.14. Reserved.**
- 1.15. Copyright and Patent.** USEPA and the State Water Board have the right to reproduce, publish, use and authorize others to reproduce, publish and use copyrighted works or other data developed pursuant to this Agreement. Where an invention is made with Project Funds, USEPA and the State Water Board retain the right to a worldwide, nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention owned by Contractor. Contractor must utilize the Interagency Edison extramural invention reporting system at <http://iEdison.gov> and shall notify the State Water Board when an invention report, patent report, or utilization report is filed. (CWSRF Agmt. Ex. E § A(5)(e); DWSRF Agmt. Ex. C § C.4.3.i)

- 1.16. Credit.** Contractor agrees that any reports, documents, publications or other materials developed for public distribution supported by this Agreement shall contain the following statement (CWSRF Agmt. Ex. E § A(5)(f)):

"This project has been funded wholly or in part by the United States Environmental Protection Agency and the State Water Resources Control Board. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency or the State Water Resources Control Board, nor does the EPA or the Board endorse trade names or recommend the use of commercial products mentioned in this document."

- 1.17. Trafficking in Persons.** The Recipient, its employees, contractors and subcontractors and their employees warrants that it will not engage in severe forms of trafficking in persons, procure a commercial sex act during the term of this Agreement, or use forced labor in the performance of this Agreement. The Recipient must include this provision in its contracts and subcontracts under this Agreement. The Recipient must inform the State Water Board immediately of any information regarding a violation of the foregoing. The Recipient understands that failure to comply with this provision may subject the State Water Board to loss of federal funds. The Recipient agrees to compensate the State Water Board for any such funds lost due to its failure to comply with this condition, or the failure of its contractors or subcontractors to comply with this condition. The State Water Board may unilaterally terminate this Agreement if the Recipient that is a private entity is determined to have violated the foregoing. (CWSRF Agmt. Ex. E § A(5)(h); DWSRF Agmt. Ex. C § C.4.3.xiii).

- 1.18. Influencing.** The Contractor certifies to the best of its knowledge and belief that:

- a. No federal appropriated funds have been paid or will be paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
- b. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with this Agreement, the Contractor shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions, and notify the State Water Board.

The Contractor shall require this certification from all parties to any contract or agreement that the Recipient enters into and under which the Recipient incurs costs for which it seeks disbursements under this Agreement.

1.19. CIVIL RIGHTS OBLIGATIONS. Contractor shall comply with the following federal non-discrimination requirements CWSRF Agmt. Ex. E § B; DWSRF Agmt. Ex. C § C.4.3.xv; WIFIA Agmt. Ex. E):

- a) Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including limited English proficiency (LEP).
- b) Section 504 of the Rehabilitation Act, 29 USC 794, supplemented by EO 11914, 41 FR 17871, April 29, 1976 and 11250, 30 FR 13003, October 13, 1965, which prohibits discrimination against persons with disabilities.
- c) The Age Discrimination Act of 1975, which prohibits age discrimination.
- d) Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex.
- e) 40 CFR Part 7, as it relates to the foregoing.
- f) If the Project relates to construction of a publicly owned treatment works, where the Recipient contracts for program management, construction management, feasibility studies, preliminary engineering, design, engineering, surveying, mapping, or architectural related services, the Recipient shall ensure that any such contract is negotiated in the same manner as a contract for architectural and engineering services is negotiated under chapter 11 of title 40, United States Code, or an equivalent State qualifications-based requirement as determined by the State Water Board.
- g) If the Project relates to construction of a publicly owned treatment works, the Recipient certifies that it has developed and is implementing a fiscal sustainability plan for the Project that includes an inventory of critical assets that are a part of the Project, an evaluation of the condition and performance of inventoried assets or asset groupings, a certification that the Recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan, and a plan for maintaining, repairing, and, as necessary, replacing the Project and a plan for funding such activities.
- h) Executive Order No. 11246. Contractor shall include in its subcontracts related to the Project the following provisions (41 CFR § 60-1.4(b)):

"During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places,

available to employees and applicants for employment, notices to be provided by the City setting forth the provisions of this nondiscrimination clause.

- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the City advising the labor union or workers' representatives of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules,

regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

i) **Disadvantaged Business Enterprises (40 CFR Part 33).** Contractor agrees to comply with the requirements of USEPA's Program for Utilization of Small, Minority and Women's Business Enterprises. The DBE rule can be accessed at www.epa.gov/osbp. Contractor shall comply with 40 CFR Section 33.301, and retain all records documenting compliance with the six good faith efforts. The Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies. (CWSRF Agmt. Ex. E § D(2); DWSRF Agmt. Ex. A § A.2.2.5; WIFIA Agmt. Ex. E, 40 CFR 33.302(i))

1.20. PROCUREMENT PROHIBITIONS UNDER SECTION 306 OF THE CLEAN AIR ACT AND SECTION 508 OF THE CLEAN WATER ACT, INCLUDING EXECUTIVE ORDER 11738, ADMINISTRATION OF THE CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT WITH RESPECT TO FEDERAL CONTRACTS, GRANTS, OR LOANS; 42 USC § 7606; 33 USC § 1368. Except where the purpose of this Agreement is to remedy the cause of the violation, Contractor may not procure goods, services, or materials from suppliers excluded under the federal System for Award Management: <http://www.sam.gov/>.

- 1.21. SECURE CONNECTION.** Contractor agrees that if its network or information system is connected to USEPA networks to transfer data using systems other than the Environmental Information Exchange Network or USEPA’s Central Data Exchange, it will ensure that any connections are secure. (CWSRF Agmt. Ex. E § D(5); DWSRF Agmt. Ex. C § C.4.3.xxii).
- 1.22. GEOSPATIAL DATA STANDARDS.** All geospatial data created pursuant to this Agreement that is submitted to the State Water Board for use by USEPA or that is submitted directly to USEPA must be consistent with Federal Geographic Data Committee endorsed standards. Information on these standards may be found at www.fgdc.gov. (CWSRF Agmt. Ex. E § E; DWSRF Agmt. Ex. C § C.4.3.xxiii)
- 1.23. TELECOMMUNICATIONS.** The Contractor certifies that no Project Funds will be used on:
 - a. Video surveillance or telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities), telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);
 - b. Telecommunications or video surveillance services produced by such entities;
 - c. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country; or
 - d. Other telecommunications or video surveillance services or equipment in violation of [2 CFR 200.216](#).

2. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246) located at 41 CFR § 60-4.2.

2.1. The goal and timetables for minority and female participation, expressed in percentage terms for the Contractor’s aggregate workforce in each trade on all construction work in the covered area, as follows:

	<u>Goal</u>
1. Minority Participation:	16.9%
2. Female Participation:	6.9%

2.2. These goals are applicable to all the Contractor’s construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs Work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the Work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both federally involved and non-federally involved Work.

- 2.3. The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals.
- 2.4. The hours of minority and female employment and training shall be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.
- 2.5. The Contractor shall provide written notification to the Director the Office of Federal Contract Compliance Programs within 10 Working Days of award of any Subcontract in excess of \$10,000 at any tier for Work under the Contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the Subcontract; estimated starting and completion dates of the Subcontract; and the geographical area in which the subcontract is to be performed. The "covered area" is the City of San Diego.

3. EQUAL OPPORTUNITY CLAUSES:

- 3.1. The following equal opportunity clauses are incorporated by reference herein:
 1. The equal opportunity clause located 41 CFR 60.1.4(a), which specifies the obligations imposed under Executive Order 11246.
 2. The equal opportunity clause located at 41 CFR 60-741.5, which contains the obligations imposed by Section 503 of the Rehabilitation Act of 1973.
 3. The "Equal Opportunity Clause" (Resolution No. 765092) filed on December 4, 1978, in the Office of the City Clerk, San Diego, California and incorporated in the "Standard Federal Employment Opportunity Construction Contract Specifications (Executive Order 11246 - Document No. 769023, filed September 11, 1984, in the Office of the City Clerk, San Diego, California) is applicable to all non-exempt City construction contracts and subcontracts of \$2,000 or more.
 4. Age Discrimination Act of 1975, Pub. L. 94-135.
 5. Title VI of the Civil Rights Act of 1964, Pub. L. 88-352.
 6. Section 13 of the Federal Water Pollution Control Acts Amendments of 1972, Pub. L. 92-5200 (the Clean Water Act).
 7. Section 504 of the Rehabilitation Act of 1973, Pub. L. 93-112 (Executive Orders 11914 and 11250).

8. Women's Minority Business Enterprises, Executive Orders 11625, 12138 and 12432.
9. Section 129 of the Small Business Administration Reauthorization and Amendment Act of 1988, Pub. L. 100-590.

4. STANDARD FEDERAL EQUAL EMPLOYMENT SPECIFICATIONS:

4.1. The Contractor is required to comply with the 15 "Standard Federal Equal Employment Specifications" in section 4.2 below and also located in 41 CFR 60-4.3 for federal and federally-assisted construction contracts in excess of \$10,000.

4.2. Standard Federal Equal Employment Specifications.

1. As used in these specifications:
 - a) Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d) Minority" includes:
 - i. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - iv. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to [41 CFR 60-4.5](#)) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in item 7, paragraphs "a" through "p", of this section below. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, [Executive Order 11246](#), or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results

from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

- a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities
- b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel

and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
- k) Validate all tests and other selection requirements where there is an obligation to do so under [41 CFR part 60-3](#).
- l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

- n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (item 7, paragraphs "a" through "p", of this section). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under item 7, paragraphs "a" through "p", of this section that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to [Executive Order 11246](#).
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be

imposed or ordered pursuant to [Executive Order 11246](#), as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and [Executive Order 11246](#), as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in item 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
 15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the [Public Works Employment Act of 1977](#) and the Community Development Block Grant Program).
- 4.3.** Segregated Facilities (41 CFR 60-1.8). The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensuring that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. This obligation extends to all contracts containing the equal opportunity clause regardless of the amount of the contract. The term "facilities," as used in this section, means waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, wash rooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees; Provided, That separate or single-user restrooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

5. VIOLATION OR BREACH OF REQUIREMENTS:

5.1. If at any time during the course of the Contract there is a violation of the Affirmative Action or Equal Employment Opportunity requirements by the Contractor, or the Subcontractors, the City will notify the Contractor of the breach. The City may withhold any further progress payments to the Contractor until the City is satisfied that the Contractor and Subcontractors are in full compliance with these requirements.

6. MONTHLY EMPLOYMENT UTILIZATION REPORTS:

6.1. Refer to GENERAL EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS, CONSTRUCTION CONTRACTOR REQUIREMENTS in The WHITEBOOK and the following:

1. Federal and Non-Federal Work in San Diego County. Submit an updated list only if work is complete or new contracts have been awarded during the span of this project.

7. RECORDS OF PAYMENTS TO DBEs:

7.1. The Contractor shall maintain records and documents of payments to DBEs for 5 years following the NOC. These records shall be made available for inspection upon request by any authorized representative of the City, funding agency, or both. The reporting requirement shall be extended to any certified DBE Subcontractor.

8. FEDERAL WAGE REQUIREMENTS FOR FEDERALLY FUNDED PROJECTS:

8.1. The successful Bidder's work shall be required to comply with Executive Order 11246, entitled "Equal Employment Opportunity," as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR chapter 60).

8.2. This Executive Order pertains to Equal Employment Opportunity regulations and contains significant changes to the regulations including new goals and timetables for women in construction and revised goals and time-tables for minorities in construction.

8.3. Minimum wage rates for this project have been predetermined by the Secretary of Labor and are set forth in the Decision of the Secretary and bound into the specifications book. Should there be any difference between the state or federal wage rates, including health and welfare funds for any given craft, mechanic, or similar classifications needed to execute the Work, it shall be mandatory upon the Contractor or subcontractor to pay the higher of the two rates.

8.4. The minimum wage rate to be paid by the Contractor and the Subcontractors shall be in accordance with the Federal Labor Standards Provisions (see below) and Federal Wage Rates (see Wage Rates below) and General Prevailing Wage Determination made by the State of California, Director of Industrial Relations pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1, whichever is higher.

- 8.5. A Contractor having 50 or more employees and its Subcontractors having 50 or more employees and who may be awarded a contract of \$50,000 or more will be required to maintain an affirmative action program, the standards for which are contained in the specifications.
- 8.6. To be eligible for award, each Bidder shall comply with the affirmative action requirements which are contained in the specifications
- 8.7. Women will be afforded equal opportunity in all areas of employment. However, the employment of women shall not diminish the standards of requirements for the employment of minorities.
9. **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.
- 9.1. **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.
- 9.1.1. 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.
- 9.1.2. 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.

- 9.2. 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.
- 9.3. 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.
- 9.3.1.** Contractor 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.
- 9.4. 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.
- 9.5. 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.
- 9.6. 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.
- 9.7. 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."

- 9.8. 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.
- 9.9. 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.
- 9.9.1.** 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.
- 9.9.2.** 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.
- 9.10. 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.
- 9.11. List of all Subcontractors.** The City may ask Contractor for the most current list of subcontractors (regardless of tier), along with their DIR registration numbers, utilized on this Agreement at any time during performance of this contract, and Contractor shall provide the list within ten (10) working days of the City's request. Additionally, Contractor shall provide the City with a complete list of all subcontractors utilized on

this contract (regardless of tier), within ten working days of the completion of the contract, along with their DIR registration numbers. The City shall withhold final payment to Contractor until at least 30 days after this information is provided to the City.

9.12. 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:

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

9.12.2. 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).

9.12.3. 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 9.11. above. (Labor code section 1773.3).

10. DAVIS-BACON WAGE RATES AND PROVISIONS:

10.1. WAGE RATES This contract shall be subject to the following Davis-Bacon Wage Decisions:

General Decision Number: CA20210001 10/29/2021

Superseded General Decision Number: CA20200001

State: California

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

County: San Diego County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	01/08/2021
2	03/05/2021
3	03/19/2021
4	04/09/2021
5	04/23/2021

6	06/04/2021
7	06/11/2021
8	06/25/2021
9	07/23/2021
10	07/30/2021
11	08/06/2021
12	08/27/2021
13	09/03/2021
14	09/17/2021
15	10/01/2021
16	10/08/2021
17	10/15/2021
18	10/29/2021

* ASBE0005-002 09/01/2021

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 47.25	24.45
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 32.09	19.66

* ASBE0005-004 07/05/2021

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	\$ 22.40	13.07

BOIL0092-003 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 46.03	38.81

BRCA0004-008 11/01/2019

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 39.60	18.05

BRCA0018-004 06/01/2019

	Rates	Fringes
MARBLE FINISHER.....	\$ 33.43	14.11
TILE FINISHER.....	\$ 28.23	12.65
TILE LAYER.....	\$ 40.07	18.36

BRCA0018-010 09/01/2020

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 33.66	14.20
TERRAZZO WORKER/SETTER.....	\$ 41.60	14.73

 CARP0213-003 07/01/2021

	Rates	Fringes
Drywall		
(1) Work on wood framed construction of single family residences, apartments or condominiums under four stories		
Drywall Installer/Lather....	\$ 32.14	16.28
Drywall Stocker/Scrapper....	\$ 22.16	8.62

 CARP0619-002 07/01/2021

	Rates	Fringes
Drywall		
(2) All other work		
Drywall Installer/Lather....	\$ 42.80	16.28
Drywall Stocker/Scrapper....	\$ 23.07	8.62

 CARP0619-003 07/01/2021

	Rates	Fringes
CARPENTER		
(1) Bridge.....	\$ 51.53	16.28
(2) Commercial Building....	\$ 46.30	16.28
(3) Heavy & Highway.....	\$ 51.40	16.28
(4) Residential Carpenter..	\$ 38.47	16.28
(5) Residential Insulation Installer.....	\$ 24.16	15.76
PILEDRIVERMAN.....	\$ 51.53	16.28

 CARP0619-004 07/01/2021

	Rates	Fringes
Diver		
(1) Wet.....	\$ 831.20	16.28
(2) Standby.....	\$ 444.24	16.28
(3) Tender.....	\$ 436.24	16.28
(4) Assistant Tender.....	\$ 412.24	16.28

Amounts in "'Rates' column are per day

 CARP0721-001 07/01/2021

	Rates	Fringes
Modular Furniture Installer.....	\$ 21.85	7.15

CARP1607-004 07/01/2021		

	Rates	Fringes
MILLWRIGHT.....	\$ 51.90	16.48

ELEC0569-001 06/01/2021		

	Rates	Fringes
Electricians (Tunnel Work)		
Cable Splicer.....	\$ 54.36	3%+14.88
Electrician.....	\$ 53.61	3%+14.88
Electricians: (All Other Work, Including 4 Stories Residential)		
Cable Splicer.....	\$ 48.40	3%+14.88
Electrician.....	\$ 47.65	3%+14.88

ELEC0569-004 06/01/2021		

	Rates	Fringes
ELECTRICIAN (Sound & Communications Sound Technician).....	\$ 35.20	13.84
<p>SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, frequency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.</p>		

ELEC0569-005 06/01/2021		

	Rates	Fringes
Sound & Communications Sound Technician.....	\$ 35.20	13.84
<p>SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on</p>		

private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, frequency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.

SOUND TECHNICIAN: Terminating, operating and performing final check-out

ELEC0569-006 02/22/2021

Work on street lighting; traffic signals; and underground systems and/or established easements outside of buildings

	Rates	Fringes
Traffic signal, street light and underground work		
Utility Technician #1.....	\$ 35.17	9.01
Utility Technician #2.....	\$ 28.60	8.80

STREET LIGHT & TRAFFIC SIGNAL WORK:

UTILITY TECHNICIAN #1: Installation of street lights and traffic signals, including electrical circuitry, programmable controller, pedestal-mounted electrical meter enclosures and laying of pre-assembled cable in ducts. The layout of electrical systems and communication installation including proper position of trench depths, and radius at duct banks, location for manholes, street lights and traffic signals.

UTILITY TECHNICIAN #2: Distribution of material at jobsite, installation of underground ducts for electrical, telephone, cable TV land communication systems. The setting, leveling, grounding and racking of precast manholes, handholes and transformer pads.

ELEC0569-008 08/30/2021

	Rates	Fringes
ELECTRICIAN (Residential, 1-3 Stories).....	\$ 37.28	7.98

 ELEC1245-001 06/01/2021

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 60.19	21.94
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 48.08	20.73
(3) Groundman.....	\$ 36.76	20.33
(4) Powderman.....	\$ 51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,
 Independence Day, Labor Day, Veterans Day, Thanksgiving Day
 and day after Thanksgiving, Christmas Day

 ELEV0018-001 01/01/2021

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 59.32	35.825+a+b

FOOTNOTE:

- a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
- b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

 ENGI0012-003 07/01/2020

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....	\$ 48.25	27.20
GROUP 2.....	\$ 49.03	27.20
GROUP 3.....	\$ 49.32	27.20
GROUP 4.....	\$ 50.81	27.20
GROUP 5.....	\$ 48.96	25.25
GROUP 6.....	\$ 51.03	27.20
GROUP 8.....	\$ 51.14	27.20
GROUP 9.....	\$ 49.29	25.25
GROUP 10.....	\$ 51.26	27.20

	Rates	Fringes
GROUP 11.....	\$ 49.41	25.25
GROUP 12.....	\$ 51.43	27.20
GROUP 13.....	\$ 51.53	27.20
GROUP 14.....	\$ 51.56	27.20
GROUP 15.....	\$ 51.64	27.20
GROUP 16.....	\$ 51.76	27.20
GROUP 17.....	\$ 51.93	27.20
GROUP 18.....	\$ 52.03	27.20
GROUP 19.....	\$ 52.14	27.20
GROUP 20.....	\$ 52.26	27.20
GROUP 21.....	\$ 52.43	27.20
GROUP 22.....	\$ 52.53	27.20
GROUP 23.....	\$ 52.64	27.20
GROUP 24.....	\$ 52.76	27.20
GROUP 25.....	\$ 52.93	27.20

OPERATOR: Power Equipment
(Cranes, Piledriving &
Hoisting)

GROUP 1.....	\$ 49.60	27.20
GROUP 2.....	\$ 50.38	27.20
GROUP 3.....	\$ 50.67	27.20
GROUP 4.....	\$ 50.81	27.20
GROUP 5.....	\$ 51.03	27.20
GROUP 6.....	\$ 51.14	27.20
GROUP 7.....	\$ 51.26	27.20
GROUP 8.....	\$ 51.43	27.20
GROUP 9.....	\$ 51.60	27.20
GROUP 10.....	\$ 52.60	27.20
GROUP 11.....	\$ 53.60	27.20
GROUP 12.....	\$ 54.60	27.20
GROUP 13.....	\$ 55.60	27.20

OPERATOR: Power Equipment
(Tunnel Work)

GROUP 1.....	\$ 50.10	27.20
GROUP 2.....	\$ 50.88	27.20
GROUP 3.....	\$ 51.17	27.20
GROUP 4.....	\$ 51.31	27.20
	Rates	Fringes
GROUP 5.....	\$ 51.53	27.20
GROUP 6.....	\$ 51.64	27.20
GROUP 7.....	\$ 51.76	27.20

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full

slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (guniting work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner

attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less than 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote-control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50

yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired

earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane

operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N,m R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1s, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW

corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34. T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a thin strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

 ENGI0012-004 08/01/2020

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 56.40	30.00
(2) Dredge dozer.....	\$ 50.43	30.00
(3) Deckmate.....	\$ 50.32	30.00
(4) Winch operator (stern winch on dredge).....	\$ 49.77	30.00
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 49.23	30.00
(6) Barge Mate.....	\$ 49.84	30.00

 IRON0229-001 07/01/2021

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 38.08	24.91
Ornamental, Reinforcing and Structural.....	\$ 43.00	33.55

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

 LABO0089-001 07/01/2020

	Rates	Fringes
LABORER (BUILDING and all other Residential Construction)		
Group 1.....	\$ 34.18	20.48
Group 2.....	\$ 34.86	20.48
Group 3.....	\$ 35.57	20.48
Group 4.....	\$ 36.37	20.48
Group 5.....	\$ 38.30	20.48
LABORER (RESIDENTIAL CONSTRUCTION - See definition below)		
(1) Laborer.....	\$ 30.82	18.80
(2) Cleanup, Landscape, Fencing (Chain Link & Wood).....	\$ 29.53	18.80

RESIDENTIAL DEFINITION: Wood or metal frame construction of single family residences, apartments and condominiums - excluding (a) projects that exceed three stories over a garage level, (b) any utility work such as telephone, gas, water, sewer and other utilities and (c) any fine grading work, utility work or paving work in the future street and public right-of-way; but including all rough grading work at the job site behind the existing right of way

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete Screeding for Rought Strike-off; Concrete, water curing; Demolition laborer; Flagman; Gas, oil and/or water pipeline laborer; General Laborer; General clean-up laborer; Landscape laborer; Jetting laborer; Temporary water and air lines laborer; Material hoseman (walls, slabs, floors and decks); Plugging, filling of Shee-bolt holes; Dry packing of concrete; Railroad maintenance, Repair Trackman and road beds, Streetcar and railroad construction trac laborers; Slip form raisers; Slurry seal crews (mixer operator, applicator operator, squeegee man, Shuttle man, top man), filling of cracks by any method on any surface; Tarman and mortar man; Tool crib or tool house laborer; Window cleaner; Wire Mesh puling-all concrete pouring operations

GROUP 2: Asphalt Shoveler; Cement Dumper (on 1 yard or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute man, pouring concrete, the handling of the cute from ready mix trucks, such as walls, slabs, decks, floors, foundations, footings, curbs, gutters and sidewalks; Concrete curer-impervious membrane and form oiler; Cutting torch operator (demoliton); Guinea chaser; Headboard man-asphlt; Laborer, packing rod steel and pans; membrane vapor barrier installer; Power broom sweepers (small); Riiprap, stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Tank sealer and cleaner; Tree climber, faller, chain saw operator, Pittsburgh Chipper and similar type brush shredders; Underground laborers, including caisson bellower

GROUP 3: Buggymobile; Concrete cutting torch; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2 1/2 feet drill steel or longer; Dri Pak-it machine; High sealer (including drilling of same); Hydro seeder and similar type; Impact wrench, multi-plate; Kettlemen, potmen and men applying asphalt, lay-kold, creosote, lime caustic and similar type materials (applying means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operators of pneumatic, gas, electric tools, vibrating machines, pavement breakers, air blasting, come-along, and similar mechanical tools not separately classified herein; Pipelayers back up man coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rotary Scarifier or multiple head concrete chipping scarifier; Steel header board man and guideline setter; Tampers, Barko, Wacker and similar type; Trenching machine, handpropelled

GROUP 4: Asphalt raker, luterman, ironer, asphalt dumpman and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), Grinder or sander; Concrete saw man; cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Laser beam in connection with laborer's work; Oversize concrete vibrator operator 70 pounds and over; Pipelayer performing all services in the laying, installation and all forms of connection of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit, and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid, gas, air or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzleman), Porta shot-blast, water blasting

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller-all power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power.

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	Rates	Fringes
LABORER (MASON TENDER).....	\$ 33.00	19.23

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HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
Laborers:		
Group 1.....	\$ 35.30	20.48
Group 2.....	\$ 35.76	20.48
Group 3.....	\$ 36.17	20.48
Group 4.....	\$ 37.01	20.48
Group 5.....	\$ 40.28	20.48

LABORER CLASSIFICATIONS

GROUP 1: Laborer: General or Construction Laborer, Landscape Laborer. Asphalt Rubber Material Loader. Boring Machine Tender (outside), Carpenter Laborer (cleaning, handling, oiling & blowing of panel forms and lumber), Concrete Laborer, Concrete Screeding for rough strike-off, Concrete water curing. Concrete Curb & Gutter laborer, Certified Confined Space Laborer, Demolition laborer & Cleaning of Brick and lumber, Expansion Joint Caulking; Environmental Remediation, Monitoring Well, Toxic waste and Geotechnical Drill tender, Fine Grader, Fire Watcher, Limbers, Brush Loader, Pilers and Debris Handlers. flagman. Gas Oil and Water Pipeline Laborer. Material Hoseman (slabs, walls, floors, decks); Plugging, filling of shee bolt holes; Dry packing of concrete and patching; Post Holer Digger (manual); Railroad maintenance, repair trackman, road beds; Rigging & signaling; Scaler, Slip-Form Raisers, Filling cracks on any surface, tool Crib or Tool House Laborer, Traffic control (signs, barriers, barricades, delineator, cones etc.), Window Cleaner

GROUP 2: Asphalt abatement; Buggymobile; Cement dumper (on 1 yd. or larger mixers and handling bulk cement); Concrete curer, impervious membrane and form oiler; Chute man, pouring concrete; Concrete cutting torch; Concrete pile cutter; driller/Jackhammer, with drill steel 2 1/'2 feet or longer; Dry pak-it machine; Fence erector; Pipeline wrapper, gas, oil, water, pot tender & form man; Grout man; Installation of all asphalt overlay fabric and materials used for reinforcing asphalt; Irrigation laborer; Kettleman-Potman hot mop, includes applying asphalt, lay-klold, creosote, lime caustic and similar tyhpes of materials (dipping, brushing, handling) and waterproofing; Membrane vapor barrier installer; Pipelayer backup man (coating, grouting, making of joints, sealing caulkiing, diapering including rubber basket joints, pointing); Rotary scarifier, multiple head concrete chipper; Rock slinger; Roto scraper & tiller; Sandblaster pot tender; Septic tank digger/installer; Tamper/wacker operator; Tank

scaler & cleaner; Tar man & mortar man; Tree climber/faller, chainb saw operator, Pittsburgh chipper & similar type brush shredders.

GROUP 3: Asphalt, installation of all frabrics; Buggy Mobile Man, Bushing hammer; Compactor (all types), Concrete Curer - Impervious membrane, Form Oiler, Concrete Cutting Torch, Concrete Pile Cutter, Driller/Jackhammer with drill steel 2 1/2 ft or longer, Dry Pak-it machine, Fence erector including manual post hole digging, Gas oil or water Pipeline Wrapper - 6 ft pipe and over, Guradrail erector, Hydro seeder, Impact Wrench man (multi plate), kettleman-Potman Hot Mop includes applying Asphalt, Lay-Kold, Creosote, lime caustic and similar types of materials (dipping, brushing or handling) and waterproofing. Laser Beam in connection with Laborer work. High Scaler, Operators of Pneumatic Gas or Electric Tools, Vibrating Machines, Pavement Breakers, Air Blasting, Come-Alongs and similar mechanical tools, Remote-Controlled Robotic Tools in connection with Laborers work. Pipelayer Backup Man (Coating, grouting, m makeing of joints, sealing, caulking, diapering including rubber gasket joints, pointing and other services). Power Post Hole Digger, Rotary Scarifier (multiple head concrete chipper scarifier), Rock Slinger, Shot Blast equipment (8 to 48 inches), Steel Headerboard Man and Guideline Setter, Tamper/Wacker operator and similar types, Trenching Machine hand propelled.

GROUP 4: Any worker exposed to raw sewage. Asphalt Raker, Luteman, Asphalt Dumpman, Asphalt Spreader Boxes, Concrete Core Cutter, Concrete Saw Man, Cribber, Shorer, Head Rock Slinger. Installation of subsurface instrumentation, monitoring wells or points, remediation system installer; Laborer, asphalt-rubber distributor bootman; Oversize concrete vibrator operators, 70 pounds or over. Pipelayer, Prfefabricated Manhole Installer, Sandblast Nozzleman (Water Balsting-Porta Shot Blast), Traffic Lane Closure.

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Horizontal directional driller, Boring system, Electronic traking, Driller: all power drills excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and all other types of mechanical drills without regard to form of motive power. Environmental remediation, Monitoring well, Toxic waste and Geotechnical driller, Toxic waste removal. Welding in connection with Laborer's work.

LAB00300-005 03/01/2021

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 37.49	21.88

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO0345-001 07/01/2021

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	\$ 46.50	20.42
GROUP 2.....	\$ 45.55	20.42
GROUP 3.....	\$ 42.01	20.42

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0"" above base level and which work must be performed in whole or in part more than 75'-0"" above base level, that work performed above the 75'-0"" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LABO1184-001 07/01/2021

	Rates	Fringes
Laborers: (HORIZONTAL		
DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 38.89	17.10
(2) Vehicle Operator/Hauler.	\$ 39.06	17.10
(3) Horizontal Directional		
Drill Operator.....	\$ 40.91	17.10
(4) Electronic Tracking		

	Rates	Fringes
Locator.....	\$ 42.91	17.10
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	\$ 40.10	20.12
GROUP 2.....	\$ 41.40	20.12
GROUP 3.....	\$ 43.41	20.12
GROUP 4.....	\$ 45.15	20.12

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

LAB01414-003 08/05/2020

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER....	\$ 36.03	21.01
PLASTER TENDER.....	\$ 38.58	21.01

Work on a swing stage scaffold: \$1.00 per hour additional.

Work at Military Bases - \$3.00 additional per hour:
Coronado Naval Amphibious Base, Fort Irwin, Marine Corps Air

Station-29 Palms, Imperial Beach Naval Air Station, Marine Corps Logistics Supply Base, Marine Corps Pickle Meadows, Mountain Warfare Training Center, Naval Air Facility-Seeley, North Island Naval Air Station, Vandenberg AFB.

PAIN0036-001 07/01/2020

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 29.59	17.12
(2) All Other Work.....	\$ 33.12	17.24

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-010 10/01/2021

	Rates	Fringes
DRYWALL FINISHER/TAPER		
(1) Building & Heavy Construction.....	\$ 37.14	20.90
(2) Residential Construction (Wood frame apartments, single family homes and multi-duplexes up to and including four stories).....	\$ 32.27	14.70

PAIN0036-012 10/01/2020

	Rates	Fringes
GLAZIER.....	\$ 45.55	18.06

PAIN0036-019 01/01/2021

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 33.52	17.59

PLAS0200-005 08/04/2021

	Rates	Fringes
PLASTERER.....	\$ 45.77	18.39

NORTH ISLAND NAVAL AIR STATION, COLORADO NAVAL AMPHIBIOUS
 BASE, IMPERIAL BEACH NAVAL AIR STATION: \$3.00 additional
 per hour.

PLAS0500-001 07/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
GROUP 1.....	\$ 26.34	19.77
GROUP 2.....	\$ 27.99	19.77
GROUP 3.....	\$ 30.07	21.12

CEMENT MASONS - work inside the building line, meeting the following criteria:

GROUP 1: Residential wood frame project of any size; work classified as Type III, IV or Type V construction; interior tenant improvement work regardless the size of the project; any wood frame project of four stories or less.

GROUP 2: Work classified as type I and II construction

GROUP 3: All other work

PLUM0016-006 09/01/2021

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER		
Camp Pendleton; Vandenberg Air Force Base.....	\$ 58.33	25.36
Work ONLY on new additions and remodeling of commercial buildings, bars, restaurants, and stores not to exceed 5,000 sq. ft. of floor space.....	\$ 52.20	24.38
Work ONLY on strip malls, light commercial, tenant improvement and remodel work.....	\$ 39.91	22.71
All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel work.....	\$ 53.83	25.36

PLUM0016-011 09/01/2021		
	Rates	Fringes
PLUMBER/PIPEFITTER		
Residential.....	\$ 42.74	21.28

PLUM0345-001 09/01/2021		
	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter..	\$ 36.85	24.75
Sewer & Storm Drain Work....	\$ 40.94	22.13

ROOF0045-001 07/01/2021		
	Rates	Fringes
ROOFER.....	\$ 37.75	10.24

SFCA0669-001 04/01/2021		
	Rates	Fringes
SPRINKLER FITTER.....	\$ 43.01	24.62

SHEE0206-001 07/01/2020		
	Rates	Fringes
SHEET METAL WORKER		
Camp Pendleton.....	\$ 42.62	29.55
Except Camp Pendleton.....	\$ 40.62	29.55
Sheet Metal Technician.....	\$ 30.51	9.49
SHEET METAL TECHNICIAN - SCOPE:		
a. Existing residential buildings, both single and multi-family, where each unit is heated and/or cooled by a separate system b. New single family residential buildings including tracts. c. New multi-family residential buildings, not exceeding five stories of living space in height, provided each unit is heated or cooled by a separate system. Hotels and motels are excluded. d. LIGHT COMMERCIAL WORK: Any sheet metal, heating and air conditioning work performed on a project where the total construction cost, excluding land, is under \$1,000,000 e. TENANT IMPROVEMENT WORK: Any work necessary to finish interior spaces to conform to the occupants of commercial buildings, after completion of the building shell		

TEAM0166-001 09/01/2019		

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 18.90	34.69
GROUP 2.....	\$ 26.49	34.69
GROUP 3.....	\$ 26.69	34.69
	Rates	Fringes
GROUP 4.....	\$ 26.89	34.69
GROUP 5.....	\$ 27.09	34.69
GROUP 6.....	\$ 27.59	34.69
GROUP 7.....	\$ 29.09	34.69

FOOTNOTE: HAZMAT PAY: Work on a hazmat job, where hazmat certification is required, shall be paid, in addition to the classification working in, as follows: Levels A, B and C - +\$1.00 per hour. Workers shall be paid hazmat pay in increments of four (4) and eight (8) hours.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Fuel Man, Swamper

GROUP 2: 2-axle Dump Truck, 2-axle Flat Bed, Concrete Pumping Truck, Industrial Lift Truck, Motorized Traffic Control, Pickup Truck on Jobsite

GROUP 3: 2-axle Water Truck, 3-axle Dump Truck, 3-axle Flat Bed, Erosion Control Nozzleman, Dump Crete Truck under 6.5 yd, Forklift 15,000 lbs and over, Prell Truck, Pipeline Work Truck Driver, Road Oil Spreader, Cement Distributor or Slurry Driver, Bootman, Ross Carrier

GROUP 4: Off-road Dump Truck under 35 tons 4-axles but less than 7-axles, Low-Bed Truck & Trailer, Transit Mix Trucks under 8 yd, 3-axle Water Truck, Erosion Control Driver, Grout Mixer Truck, Dump Crete 6.5yd and over, Dumpster Trucks, DW 10, DW 20 and over, Fuel Truck and Dynamite, Truck Greaser, Truck Mounted Mobile Sweeper 2-axle Winch Truck

GROUP 5: Off-road Dump Truck 35 tons and over, 7-axles or more, Transit Mix Trucks 8 yd and over, A-Frame Truck, Swedish Cranes

GROUP 6: Off-Road Special Equipment (including but not limited to Water Pull Tankers, Athey Wagons, DJB, B70 Wuclids or like Equipment)

GROUP 7: Repairman

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

10.2. CWSRF DAVIS BACON PROVISIONS. Contractor shall include the following language in this section in all of its subcontracts for the Project. Contractor and all subcontractors working on the Project shall comply with any provisions herein applicable to contractors and subcontractors, respectively:

(1) Minimum wages.

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4).

Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Sub recipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov.

- (ii) (A) The sub recipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The

State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sub recipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the sub recipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards

Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30- day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the sub recipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
 - (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- (2) Withholding. The sub recipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- (3) Payrolls and basic records.
 - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially

responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (ii) (A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the sub recipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the sub recipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/whd/forms/index.htm> or its successor site.

The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the sub recipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sub recipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

1. That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

2. That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C)The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D)The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

- (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees

- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to

journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or sub contractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding

journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.
- (5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between

the contractor (or any of its subcontractors) and sub recipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

- (10) Certification of eligibility.
- (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
 - (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001

10.3. Contract Provision for Contracts in Excess of \$100,000.

- (a) Contract Work Hours and Safety Standards Act. The sub recipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.
- (i) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
 - (ii) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$25 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty

hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

- (iii) Withholding for unpaid wages and liquidated damages. The sub recipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
- (iv) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

- (b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Sub recipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid.

Further, the Sub recipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

10.4. Compliance Verification

- (a) The sub recipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(3), all interviews must be conducted in confidence. The sub recipient must use Standard Form 1445 (SF 1445) or equivalent

documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

- (b) The sub recipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Sub recipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB.

Sub recipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

- (c) The sub recipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The sub recipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the sub recipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Sub recipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the sub recipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.
- (d) The sub recipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
- (e) Sub recipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/whd/america2.htm>

11. AGENCY SPECIFIC PROVISIONS:

Note: Failure to comply with these specifications e.g., taking the specified steps prior to Bid opening and submitting the forms with the Bid, will lead to the Bid being declared **non-responsive** and, therefore, shall be rejected.

11.1. EPA Requirements:

1. Federal Disadvantaged Business Enterprise (DBE) regulations apply to this project. (Reference 40 Code of Federal Regulations Part 33 - Participation by Disadvantaged Business Enterprises in U.S. Environmental Protection Agency Programs).

2. The responsive Bid shall conform to GFE to increase DBE awareness of procurement opportunities through race and gender-neutral efforts. Race and gender-neutral efforts are ones which increase awareness of contracting opportunities in general, including outreach, recruitment and technical assistance.
3. Bidder agrees that it will cooperate with and assist the City in fulfilling the DBE Good Faith Effort Requirement achieving "fair share objectives" and will exercise GFE to achieve such minimum participation of small, minority and women owned businesses. In particular, in submitting a bid, the Bidder shall, in the selection of Subcontractors, and Suppliers for the procurement of equipment, supplies, construction, and services related to the project, at a minimum, undertake the affirmative GFE steps.
4. In accordance with EPA's Program for Utilization of Small, Minority Disadvantaged and Women Business Enterprises in procurement under Federal assistance programs, the Contractor agrees to the applicable "fair share objectives" as specified in **Attachment D**.
5. The provisions in the Contract Documents have been incorporated to prevent unfair practices that adversely affect DBEs.
6. If a DBE Subcontractor fails to complete the Work under the subcontract for any reason, the Contractor shall employ the 6 GFE if soliciting a replacement Subcontractor. The Contractor shall employ the 6 GFE described below even if the Contractor has achieved its fair share objectives.
7. Good Faith Efforts:
 - a. The Contractor shall demonstrate that efforts were made to attract DBEs on this contract. The "Good Faith" effort requires the Contractor and any Subcontractors to take the steps listed in these specifications to assure that DBEs are used whenever possible as sources of supplies, construction, equipment, or services even if the Contractor has achieved its fair share objectives.
 - b. If the Contractor awards subcontracts, it shall require the Subcontractors to take the steps in these specifications.
 - c. For the EPA defined GFE, see the steps below:
 - i. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 - ii. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery

schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes posting solicitations for bids or proposals for a minimum of 30 Calendar Days (refer to 33 CFR 33.301) before the bid or proposal closing date.

- iii. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process. Include with the GFE documentation a completed copy of the form AA61, "List of Work Made Available".
- iv. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- v. Use the services and assistance of the U.S. Small Business Administration (SBA) and the Minority Business Development Agency (MBDA) of the Department of Commerce (DOC). See "DBE Potential Resources Centers" Section in a later part these specifications.
- vi. If the Contractor awards Subcontracts, the Contractor shall take the steps in the paragraphs above.

11.2. California State Revolving Fund (CASRF) Requirements:

11.2.1. Refer to Subsection 11.1, "EPA Requirements" above and the following:

11.2.2. The Bidder shall take affirmative steps prior to Bid opening to assure that MBE's and WBE's are used whenever possible as sources of supplies, construction and services.

11.2.3. The affirmative steps are defined for contracts funded by the California State Water Resources Control Board as follows:

- 1. Utilization of US Small Business Administration and Minority Business Development Agency (MBDA) resources is required at no cost. These agencies offer several services, including Internet access to databases of DBEs.
- 2. For additional assistance, the Contractor can telephone the local offices of both agencies in their area (SBA Minority Enterprise Development Offices and DOC MBDA Regional Centers). The Internet web sites also include names, addresses, and phone or fax numbers of local SBA and MBDA centers. There are contact phone numbers listed in Step 3 that will assist you in reaching the 2 offices if the Internet is unavailable. Do not write to these sources.

3. The Contractor shall provide documentation that the local SBA/MBDA offices or web sites were notified of the contracting bid opportunity at least 30 Calendar Days prior to Bid opening and solicitation to DBE Subcontractors at least 15 Calendar Days prior to Bid opening. Documentation shall not only include the efforts to contact the information sources and list the Contract opportunity, but also the solicitation and response to the bid request.
4. Include qualified DBEs on solicitation lists and record the information. Solicitation shall be as broad as possible.
5. If DBE sources are not located, explain why and describe the efforts made.
6. The Contractor shall send invitations to at least 10 (or all, if less than 10) DBE vendors for each item of the Work referred by sources contacted. The invitations shall adequately specify the items for which bids are requested. The record of GFE shall indicate a real desire for a positive response, such as a certified mail receipt or a documented telephone conversation.
7. A regular letter or an unanswered telephone call is not an adequate "good faith" effort. A list of all Subcontractors, including the bidders not selected and non DBE Subcontractors, and bid amount for each item of the Work shall be submitted on Form AA62. If a low bid was not accepted, an explanation shall be provided.

11.2.4. See "DBE Potential Resources Centers" Section in a later part these specifications.

11.2.5. Annual DBE Utilization Reporting:

The Contractor shall report to the City on an annual basis, their utilization of Minority Business Enterprise and Women's Business Enterprise Subcontractors and Suppliers using California State Revolving Funds (CASRF) Form UR-334.

12. DBE POTENTIAL RESOURCES CENTERS:

- 12.1.** Utilization of US Small Business Administration and Minority Business Development Agency (MBDA) resources is required at no cost. These agencies offer several services, including Internet access to databases of DBEs.
- 12.2.** For additional assistance, the recipient or contractor can telephone the local offices of both agencies in their area (SBA Minority Enterprise Development Offices and DOC MBDA Regional Centers). The Internet web sites also include names, addresses, and phone or fax numbers of local SBA and MBDA centers. Do not write to these sources

- 12.3.** The Contractor shall provide documentation that the local SBA/MBDA offices or web sites were notified of the contracting bid opportunity at least 30 Calendar Days prior to Bid opening and solicitation to DBE subcontractors at least 15 Calendar Days prior to Bid opening. Documentation shall not only include the efforts to contact the information sources and list the Contract opportunity, but also the solicitation and response to the bid request.
- 12.4.** Include qualified DBEs on solicitation lists and record the information on Form AA63. Solicitation shall be as broad as possible.
- 12.5.** If DBE sources are not located, explain why and describe the efforts made.
- 12.6.** The Contractor shall send invitations to at least 10 (or all, if less than 10) DBE vendors for each item of work referred by sources contacted. The invitations shall adequately specify the items for which bids are requested. The record of “good faith” efforts shall indicate a real desire for a positive response, such as a certified mail receipt or a documented telephone conversation.
- 12.7.** A regular letter or an unanswered telephone call is not an adequate “good faith” effort. A list of all sub-bidders, including the bidders not selected and non-DBE Subcontractors, and bid amount for each item of the Work shall be submitted on Form AA62. If a low bid was not accepted, an explanation shall be provided.
- 12.8.** Federal Agencies (must be contacted and solicitations posted on their websites):

Name and Address	Telephone and Web Site
U.S. Small Business Administration	(415) 744-6820 Extension 0
455 Market Street, Suite 600	Dynamic Small Business Search: https://web.sba.gov/pro-net/search/dsp_dsbs.cfm ¹
San Francisco, CA 94105	Bid Notification: https://catalog.data.gov/dataset/subcontracting-network-subnet-system ²
U.S. Department of Commerce	213-989-3153 or 213-353-9400
Minority Business Development Agency	
1055 Wilshire Blvd Suite 900 Los Angeles, CA 91107	https://www.mbda.gov/business-center/los-angeles-mbda-business-center RE: Business Development Centers

12.9. State Agencies (must be contacted):

Name and Address	Telephone and Web Site
California Department of Transportation	Mailing Address: PO Box 942874
(CALTRANS) Business Enterprise Program ⁴	Sacramento, CA 94274-0015
1820 Alhambra Blvd.	(916) 227-9599
Sacramento, CA 95816	<u>DBE Database:</u> https://dot.ca.gov/programs/civil-rights/dbe
CA Public Utilities Commission (CPUC)⁵	
505 Van Ness Avenue	<u>Directory:</u> https://sch.thesupplierclearinghouse.com/FrontEnd/SearchCertifiedDirectory.asp
San Francisco, CA 94102-3298	

Notes:

1. The Contractor shall use the SBA's Dynamic Business Search database to search for potential subcontractors, suppliers, and/or manufacturers. Bidder **must** provide a copy of all search records for items of work made available with GFE documentation.
2. Contractor shall use SUB-Net to post subcontracting opportunities. Contractor shall post Subcontractor opportunities at least 15 Working Days prior to bid opening. Small businesses can review this web site to identify opportunities in their areas of expertise. The web site is designed primarily as a place for large businesses to post solicitations and notices. Bidder **must** provide copy of the Display Solicitation Record identifying the date solicitation notice was posted with GFE documentation.
3. Contractor may use MBDA web portal to post subcontracting opportunities. If utilized, the Contractor shall post subcontractor opportunities at least 30 Calendar Days prior to Bid opening. Small businesses can review this web site to identify opportunities in their areas of expertise. The web site is designed primarily as a place for large businesses to post solicitations and notices. Provide copy of the Offer Overview with the GFE documentation.
4. Based on the federal DBE program, CALTRANS maintains a database and provides directories of minority and woman-owned firms. Bidder **must** provide a copy of all search records for items of work made available with GFE documentation.
5. CPUC maintains a database of DBE-owned business enterprises and serves to inform the public. Bidder **must** provide a copy of all search records for items of work made available with GFE documentation.

13. GOOD FAITH EFFORT DOCUMENTATION SUBMITTALS:

- 13.1. The affirmative GFE steps documentation shall be submitted **By 5 PM, 4 Working Days after the Bid Opening**. If this documentation is not submitted when due, the City will declare the Bid **non-responsive** and reject it.

13.2. The required documentation shall be submitted and logged in at the following address:

CITY OF SAN DIEGO
PURCHASING & CONTRACTING DEPARTMENT, PUBLIC WORKS DIVISION
525 B STREET, SUITE 750
SAN DIEGO, CA 92101
SUBJECT: AFFIRMATIVE GOOD FAITH EFFORT DOCUMENTATION
BID NO. **K-22-1797-DBB-3-A**

13.3. The Contractor shall maintain the records documenting compliance with requirements including documentation of its GFE and data relied upon in formulating its fair share objectives.

14. FORMS:

14.1. The Contractor shall demonstrate that efforts were made to attract DBEs on this contract. The Contractor and Subcontractors shall take the steps listed in these specifications to assure that DBEs are used whenever possible as sources of supplies, construction, equipment, or services. In addition to the specified GFE documentation, the Bidder shall submit the following forms.

14.1.1. The following forms shall be submitted **with the Bid submittal**. Failure to include any of the forms shall cause the Bid to be deemed **non-responsive**.

1. Form 4500-3: DBE Subcontractor Performance Form
2. Form 4500-4: DBE Subcontractor Utilization Form

14.1.2. The following forms shall be completed and submitted within **4 Working Days after the Bid opening by 5 PM**. Failure to include any of the forms shall cause the Bid to be deemed **non-responsive**.

1. Form AA61: List of Work Made Available
2. Form AA62: Summary of Bids Received
3. Form AA63: Good Faith Effort List of Subcontractors Solicited

14.1.3. The following additional forms shall be submitted annually in accordance with Section 11, "AGENCY SPECIFIC PROVISIONS".

1. Form UR-334: California State Revolving Funds (CASRF)

14.1.4. Bidder is to provide the following form to all DBE subcontractors participating on this contract. Submittal of form is dependent on DBE subcontractor and is

to be forwarded to the DBE coordinator at any time during the project period of performance.

1. Form 4500-2: DBE Subcontractor Participation Form.

FUNDING AGENCY PROVISIONS

FORMS



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name		Project Name	
Bid / Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity	

Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____		Meets/exceeds EPA certification standards? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.
² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractor's² and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid / Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity			

I have identified potential DBE certified subcontractors. ___ YES ___ NO If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address / Phone / Email	Estimated Dollar Amount	Currently DBE Certified?

--Continue on back if needed--

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency’s need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-4 (DBE Subcontractor Utilization Form)

LIST OF WORK MADE AVAILABLE

List items of the Work the Bidder made available to DBE firms. Identify those items of the Work the Bidder might otherwise perform with its own forces and those items that have been broken down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar amount and percentage of the Base Bid. The Bidder must demonstrate that enough work to meet the goal was made available to DBE firms.

SCOPE OF WORK MADE AVAILABLE	NAICS CODE	BIDDER NORMALLY PERFORMS ITEM (Y/N)	ITEM BROKEN DOWN TO FACILITATE PARTICIPATION (Y/N)	AMOUNT	PERCENTAGE OF BASE BID

SUMMARY OF BIDS RECEIVED

Company Name	NAICS CODES	Scope of Work	Selected (Y/N)	Bid Amount	DBE	Non-DBE	Explanation for not Selecting

USE ADDITIONAL FORMS AS NECESSARY

DISADVANTAGE BUSINESS ENTERPRISE (DBE)

GOOD FAITH EFFORT LIST OF SUBCONTRACTORS SOLICITED

Contractor Name	Contractor Address	How Located	Date of Contact	Contact Method	Scope of Work	Bidding (Yes/No)

USE ADDITIONAL FORMS AS NECESSARY



**STATE WATER RESOURCES CONTROL BOARD – DIVISION OF FINANCIAL ASSISTANCE
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION
CALIFORNIA STATE REVOLVING FUNDS (CASRF)
FORM UR-334**

1. Grant/Finance Agreement Number:		2. Annual Reporting Period 10/1/___ through 09/30/___		3. Purchase Period of Financing Agreement:	
4. Total Payments Paid to Prime Contractor or Sub-Contractors During Current Reporting Period: \$					
5. Recipient's Name and Address:			6. Recipient's Contact Person and Phone Number:		
7. List All DBE Payments Paid by Recipient or Prime Contractor During Current Reporting Period:					
Payment or Purchase Paid by Recipient or Prime Contractor	Amount Paid to Any DBE Contractor or Sub-Contractor For Service Provided to Recipient		Date of Payment (MM/DD/YY)	Procurement Type Code** (see below)	Name and Address of DBE Contractor of Sub-Contractor or Vendor
	MBE	WBE			
8. Initial here if no DBE contractors or sub-contractors paid during current reporting period:					
9. Initial here if all procurements for this contract are completed:					
10. Comments:					
11. Signature and Title of Recipient's Authorized Representative			12. Date		

Email Form UR-334 to:

DrinkingWaterSRF@waterboards.ca.gov OR CleanWaterSRF@waterboards.ca.gov

Questions may be directed to:

Barbara August, SWRCB
Barbara.August@waterboards.ca.gov
 Phone: (916) 341-6952
 Fax: (916) 327-7469

****Procurement Type:**

1. Construction
2. Supplies
3. Services (includes business services; professional services; repair services and personnel services)
4. Equipment

**STATE WATER RESOURCES CONTROL BOARD - DIVISION OF FINANCIAL ASSISTANCE
DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION
CALIFORNIA STATE REVOLVING FUNDS**

INSTRUCTIONS FOR COMPLETING FORM UR-334

- Box 1** Grant or Financing Agreement Number.
- Box 2** Annual reporting period.
- Box 3** Enter the dates between which you made procurements under this financing agreement or grant.
- Box 4** Enter the total amount of payments paid to the contractor or sub-contractors during this reporting period.
- Box 5** Enter Recipient's Name and Address.
- Box 6** Enter Recipient's Contact Name and Phone Number.
- Box 7** Enter details for the **DBE purchases only** and be sure to limit them to the current period. 1) Use either an "R" or a "C" to represent "Recipient" or "Contractor." 2) Enter a dollar total for DBE and total the two columns at the bottom of the section. 3) Provide the payment date. 4) Enter a product type choice from those at the bottom of the page. 5) List the vendor name and address in the right-hand column
- Box 8** Initial here if no DBE contractors or sub-contractors were paid during this reporting period.
- Box 9** Initial this box only if all purchases under this financing agreement or grant have been completed during this reporting period or a previous period. If you initial this box, we will no longer send you a survey.
- Box 10** This box is for explanatory information or questions.
- Box 11** Provide an authorized representative signature.
- Box 12** Enter the date form completed.



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

A Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE¹ subcontractor² the opportunity to describe work received and/or report any concerns regarding the funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid / Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

Please use the space below to report any concerns regarding the above funded project:

Subcontractor Signature	Print Name
Title	Date

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

Send completed Form 4500-2 to:

Mr. Joe Ochab, DBE Coordinator
US EPA, Region 9
75 Hawthorne Street
San Francisco, CA 94105

FORM 4500-2 (DBE Subcontractor Participation Form)

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.

PART 0 – EQUAL OPPORTUNITY CONTRACTING PROGRAM (EOCP) SECTION A – GENERAL REQUIREMENTS

0-12 CONTRACT RECORDS AND REPORTS. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall maintain records of all subcontracts and invoices from your Subcontractors and Suppliers for work on this project. Records shall show name, telephone number including area code, and business address of each Subcontractor, Supplier, and joint venture partner, and the total amount actually paid to each firm. Project relevant records, regardless of tier, may be periodically reviewed by the City.
2. You shall retain all records, books, papers, and documents pertinent to the Contract for a period of not less than 5 years after Notice of Completion and allow access to said records by the City's authorized representatives.
3. You shall submit the following reports using the web-based contract compliance software, LCP Tracker Online Payroll Reporting:
 - a) **Monthly Payment.** You and your Subcontractors and Suppliers shall submit Monthly Payment Reporting by the 5th day of the subsequent month. Incomplete and/or delinquent reporting may cause payment delays, non-payment of invoices, or both.
 - b) You shall submit a signed and executed LCP Tracker Software Contract 3rd Party User Agreement prior to the PLA Pre-job conference as defined in Article 16 of the PLA. See **Appendix N – LCP Tracker Third Party User Agreement.**
4. The records maintained under item 1, described above, shall be consolidated into a Final Summary Report, certified as correct by an authorized representative of the Contractor. The Final Summary Report shall include all subcontracting activities and be sent to the EOCP Program Manager prior to Acceptance. Failure to comply may result in assessment of liquidated damages or withholding of retention. The City will review and verify 100% of subcontract participation reported in the Final Summary Report prior to approval and release of final retention to you. In the event your Subcontractors are owed money for completed Work, the City may authorize payment to subcontractor

via a joint check from the withheld retention.

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

1-2 TERMS AND DEFINITIONS. To the “WHITEBOOK”, items 43, 56, 69, and 102, DELETE in their 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. The unused portion of the Field Order shall revert to the City upon Acceptance.
56. **Notice of Completion (NOC)** - A document recorded with the County of San Diego to signify that the Contract Work has been completed and accepted by the City.
69. **Punchlist** - A list of items of Work or corrections generated after a Walk-through that is conducted when you consider that the Work and Services are complete, and as verified by the Owner. The Punchlist may be completed in phases if defined in the Contract.
102. **Walk-through** - An inspection the City uses to verify the completion of the Project or phase of the Project and to generate a Punchlist prior to Acceptance.

To the “WHITEBOOK”, item 54, “Normal Working Hours”, ADD the following:

The Contractor shall be required to have a minimum of one day and one night crew. The **Normal Working Hours for the Day Crew** are **7:30 AM to 4:30 PM** along the following Streets*Chicago Street*Jellett Street*Denver Street between Jellett Street and Ingulf Street* Clairemont Drive between Denver Street and Burgerner Street* Clairemont Drive between Iroquois Street and Dakota Drive*Clairemont Drive between Chippewa Court and Merrimac Avenue, excluding the crossing at Clairemont Mesa Blvd.

The Normal Working Hours for the Night Crew are 9:00 PM to 5:00 AM along the following Streets*Sherman Street*Morena Blvd.*Milton Street* Denver, between Ingulf Street and Clairemont Dive*Clairemont Drive, between Burgerner Street and Iroquois Street*Clairemont Drive, between Dakota Drive and Chippewa Court*Clairemont Drive, crossing Clairemont Mesa Blvd.* Clairemont Drive, between Merrimac Avenue and Clairemont Mesa Blvd.*Clairemont Mesa Blvd.*Genesse Avenue Construction activities outside of the normal working hours may occur with prior approval by the Resident Engineer, at no additional cost to the City.

To the “WHITEBOOK”, ADD the following:

108. **Acceptance** – When all of the Contract Work, including all Punchlist items, is deemed officially complete by the City Asset Owning Department or Deputy City Engineer.

109. **Beneficial Use** - The time at which the Work for a specific area or unit process has progressed to the point where, in the opinion of Owner and Construction Manager, the Work for the specific area or unit process is sufficiently complete, in accordance with the Contract Documents, so that the specific area or unit process can be utilized for the purposes for which it is intended.
110. **Construction Manager** - The authorized representative of the Owner, also referred to as the Owner's Representative, who may be assigned to the site or any part thereof. All communication from the Contractor shall be through the Construction Manager. The responsibilities, authority, and limitations of the Construction Manager shall be as shown in the Contract Documents.
111. **Final Completion** - Once Substantial Completion has been achieved, the following items are to be completed prior to the Final Completion by the Contractor:
- a) The Contractor shall complete punch list fix-up as approved by the Construction Manager prior to being provided with Final Completion.
 - b) All Work required under Section 01 77 00, Closeout Procedures shall have been completed.

Following Final Completion, the Owner shall provide acceptance of the facilities and take over operation of the facilities.

112. **Intermediate Substantial Completion** - The time at which the Project's operating facilities or systems are sufficiently complete to provide the Owner with uninterrupted operations and maintenance of the overall facility as required to perform flow ramp up and integrated startup with other facilities within the Program. These facilities include the Morena Pump Station and Conveyance, North City Water Reclamation Plant Expansion, North City Pure Water Facility, North City Pure Water Pump Station, and North City Pure Water Pipeline and Dechlorination Facility. The CONTRACTOR shall support all activities within the Integration Period as described in Section 01 91 14 Testing, Integration, and Startup.
113. **Substantial Completion** -
- a) The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Owner and Construction Manager, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed", as applied to all or part of the Work, shall refer to Substantial Completion thereof.
 - b) The time at which the Project's operating facilities or systems is sufficient to provide Owner the full time, uninterrupted, and continuous beneficial operation of the Work; and when all required functional, performance, and acceptance or startup testing, and commissioning has been successfully demonstrated for all

components, devices, equipment, and instrumentation and control to the satisfaction of the Owner and Construction Manager in accordance with the requirements of the Specifications.

1-7.1.3 Requests for Information (RFI). To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Should You discover a conflict, omission, errors in the Contract Documents, differences with existing field conditions, or have any questions concerning interpretation or clarification of Contract Documents, or when you propose deviations to the standards or design, you shall submit a Request for Information (RFI) to the City regarding your question or clarification within **1 Working Day**.
2. Your RFI shall meet the following requirements:
 - a) All RFIs, whether by You or your Subcontractor or supplier at any tier, shall be submitted by You to the City.
 - b) RFIs shall be numbered sequentially.
 - c) You shall clearly and concisely set forth the single issue for which interpretation or clarification is sought, indicate Specification Section numbers, Contract Drawing numbers, and details, or other items involved, and state why a response is required from the City.
 - d) RFIs shall be submitted within **1 Working Day** in order that they may be adequately researched and answered before the response affects any critical activity of the Work.
 - e) Should You believe that a response to an RFI causes a change to the requirements of the Contract, you shall, before proceeding, give written notice to the City, indicating that You believe that City response to the RFI to be a Change Order. Failure to give such written notice within **5 Working Days** of receipt of the City's response to the RFI shall waive Your right to seek additional time or cost.
3. The City will respond to RFIs within **5 Working Days** unless the City notifies You in writing that a response will take longer. The **5 Working Days** shall begin when the RFI is received and dated by the City. Responses from the City will not change any requirement of the Contract unless so noted by the City in the response to the RFI. The City will not issue a Change Order for Extra Work or additional time when the issue raised in the RFI was due to your fault, neglect, or any unauthorized deviations from the project design or specifications.
4. If You proceed in resolving a conflict, omission, or any error in the Contract Documents without sending the City an RFI in accordance with the

requirements stated above, the City may require You to remove such work at Your cost or back charge You the cost to remove this work.

1-7.2

Contract Bonds. To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. Before execution of the Contract, file payment and performance bonds with the City to be approved by the Board in the amounts and for the purposes noted. Bonds shall be executed by a responsible surety as follows:
 - a) If the Work is being funded with state or local money, consistent with California Code of Civil Procedure §995.670, the Surety shall be an "admitted surety" authorized by the State of California Department of Insurance to transact surety insurance in the State.
 - b) If the Work is being funded with federal money, the Surety shall be listed in the U.S. Treasury Department Circular 570 and shall be in conformance with the specified Underwriting Limitations.

To the "WHITEBOOK", item 2, subsection "a", subsection "i", DELETE in its entirety and SUBSTITUTE with the following:

- i. A "Payment Bond" (Materials and Labor Bond) is optional. If no bond is submitted, no payment shall be made until 35 Calendar Days after Acceptance and any lien requirements have been fulfilled. If a bond is submitted, progress payments shall be made in accordance with these Specifications.

To the "WHITEBOOK", item 2, subsection "d", DELETE in its entirety and SUBSTITUTE with the following:

- d) For Contracts over \$100,000:
 - i. A "Payment Bond" (Materials and Labor Bond) for 100% of the Contract Price to satisfy claims of material Suppliers and of mechanics and laborers employed on the Work. You shall maintain the bond in full force and effect until Acceptance and until all claims for materials and labor are paid and shall otherwise comply with the Government Code.
 - ii. A "Faithful Performance Bond" for 100% of the Contract Price to guarantee faithful performance of Work, within the time prescribed and in a manner satisfactory to the City, that materials and workmanship shall be free from original or developed defects.

To the "WHITEBOOK", item 7, DELETE in its entirety and SUBSTITUTE with the following:

7. You shall require the Surety to mail its standard "Bond Status" form to the Engineer at the following address:

Deputy Director
Construction Management and Field Engineering Division
9573 Chesapeake Drive San Diego, CA 92123

SECTION 2 - SCOPE OF THE WORK

2-10.1.4 City's Final Determination. To the "WHITEBOOK", item 2, DELETE in its entirety and SUBSTITUTE with the following

2. If you disagree with the City's Final Determination, notify the Engineer in writing of your objection within 15 Working Days after receipt of the written determination in accordance with 2-10.2.1.4, "DRB Traditional Dispute Meeting".

2-10.2 Dispute Resolution Process. To the "WHITEBOOK", DELETE all sections and subsections in their entirety and SUBSTITUTE with the following:

2-10.2 Dispute Resolution Process

1. A mandatory Dispute Resolution Board process shall be established in accordance with 2-10.2.1, "Dispute Resolution Board (DRB)" prior to the mandatory mediation as described in 2-10.2.2, "Mandatory Non-binding Mediation".

2-10.2.1 Dispute Resolution Board (DRB).

1. The DRB is a 3-member board that you and the City establish prior to beginning work.

2-10.2.1.1 DRB Member Selection. Within 45 Working Days of Contract approval, you and the City shall select DRB members and establish the DRB using the following procedure:

You and the City will each nominate one DRB member candidate to participate on the DRB. The City has approved the use of the Caltrans DRB members list for this Project. Before being nominated to the project DRB, the prospective candidates will be contacted and provided with all available project details by the City. The candidate will then need to confirm intent to participate in the DRB prior to nomination for the project board.

You can find Caltrans' approved DRB member's list at Caltrans' website:

<https://dot.ca.gov/programs/construction/drb-information-and-candidate-list/drb-candidates-list>

1. If you or the City nominates someone who is not on the Caltrans DRB list, the candidate shall:
 - a) Be knowledgeable in the type of construction and contract documents anticipated by the Contract.
 - b) Have completed training by the Dispute Resolution Board Foundation.
 - c) Have no prior direct involvement on this Contract.
 - d) Have no financial interest in the Contract or with the parties, subcontractors, suppliers, consultants, or associated legal or business services within 6 months before award and during the Contract, except for payments for City DRA or DRB services, or payments for retirement

or pensions from either party not tied to, dependent on, or affected by the net worth of the party.

2. You and the City shall request a disclosure statement from each nominated DRB member candidate and must each furnish it to the other party. The statement shall include:
 - a) Resume of the candidate's experience.
 - b) Declaration statement that describes past, present, anticipated, and planned professional or personal relationships with each of the following:
 - i. Parties involved in the Contract
 - ii. Parties' principals
 - iii. Parties' counsel
 - iv. Associated subcontractors and suppliers
3. You and the City are allowed:
 - a) One-time objection to the other's candidate without stating a reason.
 - b) Objection to any of the other's subsequent candidates based on a specific breach of the candidate's responsibilities or qualifications under items 1 and 3 of this section.
4. If you or the City objects to the other's candidate, the party whose candidate was objected to must nominate another DRB candidate within 15 Working Days.
5. The 1st candidate from a party that receives no objection becomes that party's DRB member.
6. You and the City each provide written notification to your selected DRB member.
7. Within 15 Working Days of their notifications, the selected DRB members recommend to you and the City the 3rd DRB member candidate and provide that candidate's disclosure statement.
8. Within 15 Working Days of the recommendation, you and the City must each notify the first 2 DRB members whether you approve or disapprove of the recommended 3rd DRB member candidate.
9. If the 2 DRB members cannot agree on the 3rd DRB candidate, they will submit a list of candidates to you and the City for final selection and approval.
10. If the 2 DRB members do not recommend a 3rd DRB candidate within 15 Working Days of notification of their selections, or if you and the City do not agree on the 3rd DRB member candidate within 15 Working Days of the recommendation, or if you and the City do not agree on any of the candidates on the list provided by the first 2 selected DRB members, you and the City each must select 3 candidates from the current list of arbitrators certified by the Public Works Contract Arbitration Committee established by Pub Cont Code §

10245 et seq. who will be willing to serve as a DRB member. The first 2 selected DRB members must select the 3rd member in a blind draw of these 6 candidates.

11. The 3 DRB members then decide which of the three will act as the DRB chairman. If you and the City do not agree with the selected chairman, the 3rd member will act as the DRB chairman.

2-10.2.1.2 DRB Member Replacement.

1. The service of a DRB member may end at any time with a notice of at least 15 Working Days if any of the following occurs:
 - a) A member resigns
 - b) The City replaces its selected member
 - c) You replace your selected member
 - d) The City's and your selected members replace the 3rd member
2. Either you or the City replace any member for failing to comply with the required employment or financial disclosure conditions of DRB membership as described in the Contract and in the Dispute Resolution Board Agreement form.
3. Replacing any DRB member shall be accomplished by written notification to the DRB and the other party with substantiation for replacing the member.
4. A replacement DRB member is selected the same way as the original DRB member. Selecting a replacement must start upon determination of the need for a replacement and must be completed within 15 Working Days. The Dispute Resolution Board Agreement form shall be amended to reflect the change to the DRB.

2-10.2.1.3 DRB Progress Meetings.

1. You and the City shall periodically meet with the DRB and visit the job site so the DRB members can keep abreast of construction activities and develop familiarity with the work in progress.
2. The progress meetings shall occur at the start of the project and at least once every 4 months after that.
3. Both parties shall attend each progress meeting.
4. You and the City may agree to waive scheduled progress meetings when the only work remaining is plant establishment.

2-10.2.1.4 DRB Traditional Dispute Meeting.

1. If you disagree with the City's Final Determination, notify the Engineer and DRB in writing of your objection within 15 Working Days after receipt of the determination.
2. A DRB dispute meeting shall be held no sooner than 30 Calendar Days and no later than 60 Calendar Days after the DRB receives your written notice unless you and the City otherwise agree.

3. At least 15 Calendar Days before the scheduled dispute meeting, each party shall furnish the DRB documentation that supports its position and any additional information requested by the DRB.
4. If the DRB requests additional information within 10 Calendar Days after the dispute meeting, the party receiving the request shall furnish this information within 10 Calendar Days of receiving the request.
5. The DRB shall provide a written recommendation report within 30 Calendar Days of the dispute meeting unless you and the City agree to allow more time.
6. Within 10 Calendar Days of receiving the DRB's recommendation report, either you or the City may request clarification of any part of the report. Only one request for clarification from each party is allowed per dispute.
7. Within 30 Calendar Days after receiving the DRB's recommendation, each party shall furnish a written response to the DRB indicating acceptance or rejection of the recommendation. If a party rejects the recommendation and has new information that supports its position, the party may request reconsideration. The reconsideration request shall be made within 30 Calendar Days after receiving the DRB's recommendation. Only one request for reconsideration from each party is allowed per dispute.
8. If both you and the City accept the DRB's recommendation but cannot agree on the time or payment adjustment within 60 Calendar Days of accepting the recommendation, either party may request that the DRB recommend an adjustment.
9. If you reject the DRB's recommendation, notify the Resident Engineer and DRB in writing of your objection within 15 Working Days after receipt of the DRB's recommendation and file a "Request for Mediation" in accordance with 2-10.2.2, "Mandatory Non-binding Mediation".

2-10.2.2 Mandatory Non-binding Mediation.

1. If a dispute arises out of or relates to the Contract, or the breach thereof, and if said dispute cannot be settled through contract provisions provided for the Dispute Resolution Board process, claim settlement, or negotiations, the parties agree to first endeavor to settle the dispute in an amicable manner, using mandatory mediation under the Construction Industry Mediation Rules of the American Arbitration Association or any other neutral organization agreed upon before having recourse in a court of law.

2-10.2.2.1 Mandatory Mediation Costs.

1. The expenses of witnesses for either side shall be paid by the party producing such witnesses. All other expenses of the mediation, including required traveling and other expenses of the mediator and the cost of any proofs or expert advice produced at the direct request of the mediator, shall be borne equally by the parties, unless they agree otherwise.

2-10.2.2.2 Selection of Mediator. To the “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

1. A single mediator, knowledgeable in construction aspects and acceptable to both parties, shall be used to mediate the dispute.
2. To initiate mediation, the initiating party shall serve a Request for Mediation at the American Arbitration Association (AAA) on the opposing party.
3. If AAA is used, the initiating party shall concurrently file with AAA a “Request for Mediation” along with the appropriate fees, a copy of requested mediators marked in preference order, and a preference for available dates.
4. If AAA is selected to coordinate the mediation (Administrator), within 10 Working Days from the receipt of the initiating party’s Request for Mediation, the opposing party shall file the following:
 - a) A copy of the list of the preferred mediators listed in preference order after striking any mediators to which they have any objection.
 - b) A preference for available dates.
 - c) Appropriate fees.
5. If the parties cannot agree on a mediator, then each party shall select a mediator and those mediators shall select the neutral third party to mediate the matter.

2-10.2.2.3 Conduct of Mediation Sessions.

1. Mediation hearings shall be conducted in an informal manner and discovery shall not be allowed.
2. Discussions, statements, and/or admissions shall be confidential to the proceedings and shall not be used for any other purpose as it relates to the party’s legal position. The parties may agree to exchange any information they deem necessary.
3. Both parties shall have an authorized representative attend the mediation. Each representative shall have the authority to recommend entering into a settlement. Either party may have attorney(s), witnesses, or expert(s) present. Either party may request a list of witnesses and notifications of whether attorney(s) shall be present.
4. Any resulting agreements from mediation shall be documented in writing. Mediation results and documentation, by themselves, shall be “non-binding” and inadmissible for any purpose in any legal proceeding, unless such admission is otherwise agreed upon in writing by both parties. Mediators shall not be subject to any subpoena or liability and their actions shall not be subject to discovery.

2-10.2.3

Payment.

1. Pay each DRB member \$2,000 per day for DRB's participation at each on-site meeting
 - a) If a DRB member serves on more than one DRB, the \$2,000 shall be divided evenly among the contracts.
2. On-site meetings include:
 - a) Initial project meeting
 - b) Scheduled progress meetings for a project with a DRB
 - c) Dispute meetings
3. This payment includes full compensation for on-site time, travel expenses, transportation, lodging, travel time, and incidentals for each day or portion thereof that the DRB member is at a DRB meeting.
4. Before a DRB member spends any time reviewing plans and specifications, evaluating positions, preparing recommendations, or performs any other off-site DRB-related tasks, you and the City shall agree to pay for the tasks. Pay the DRB member \$200 per hour for these tasks. This payment includes full compensation for incidentals such as expenses for telephone, fax, and computer services.
5. The City shall reimburse you for 1/2 of the invoiced costs to the DRB and 1/2 of the costs of any technical services agreed to. Submit a change order bill and associated invoices with the original supporting documents in the form of a canceled check or bank statement to receive reimbursement. Do not add mark-ups to the change order bill.
6. The City will not pay for any DRB-related work performed after Contract acceptance.
7. The City will not pay your cost of preparing for and attending a dispute resolution meeting.

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.

3-3

SUBCONTRACTORS. To the "WHITEBOOK", ADD the following:

6. When a Subcontractor fails to prosecute a portion of the Work in a manner satisfactory to the City, you shall remove such Subcontractor immediately upon written request of the City and shall request approval of a replacement Subcontractor to perform the Work in accordance with California Public Contract Code (PCC), Subletting and Subcontracting, Section 4107, at no added cost to the City.

- 3-7.3.1 General.** To the “WHITEBOOK”, ADD the following:
6. For additional requirements related to Red-lines and Record Documents, refer to Technical Specifications, Section 01 77 00 “Closeout Procedures”, Part 3 “Execution” Subsection 3.01 “Maintenance of Record Documents”.
- 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 – Contractor’s Daily Quality Control Inspection Report** .
- 3-8.7.1 QCP Submittal.** To the “WHITEBOOK”, item 2, DELETE in its entirety and SUBSTITUTE with the following:
2. The QCP shall be organized to address, at a minimum, the following items:
 - a) Quality Control Administrator
 - b) Surface preparation and paving schedule
 - c) Inspection and documentation requirements (Daily Quality Control Inspection Report)
 - d) Material quality control testing plan
 - e) Documentation of quality control activities
 - f) Procedures for corrective action when quality control and/or acceptance criteria are not met
 - g) If paving Work will be in areas prone to shade, provide curing time of product
- 3-8.7.4 Documentation.** To the “WHITEBOOK”, item 3, section “a”, subsection “viii”, DELETE in its entirety and SUBSTITUTE with the following:
- viii. Documentation that the following have been verified to be in compliance:
 - Proper storage of materials and equipment.
 - Proper operation of all equipment.
 - Adherence to plans and technical specifications.
 - Review of quality control tests.
 - Safety inspection.
 - Mixing properties of products against the approved submittal limits.
- 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, Cut and Cover Pipeline Portion, Dated January 5, 2018

- b) Final Pothole Report X170266 (13) Dated Dec 15, 2017
- c) Final Pothole Report X170266 (23) Dated Feb 24, 2018
- d) Final Pothole Report X170266 (8) Dated July 27, 2017
- e) Final Pothole Report X200180 Dated May 21, 2020

6. The reports listed above are available for review at the following link:

<https://drive.google.com/drive/folders/1ay8LaIMK3pFqbL0AvBSVK-oK5dcycdHk?usp=sharing>

3-10 SURVEYING. To the “GREENBOOK” and “WHITEBOOK”, DELETE in its entirety and SUBSTITUTE with the following:

3-10 SURVEYING (DESIGN-BID-BUILD).

3-10.1 General.

- 1. You shall provide all required site layout and general grade checking work not specified in 3-10.2, “Survey Services Provided by City”.
- 2. Notify the City, in writing, at least 2 Working Days prior to requesting survey services provided by the City.

3-10.2 Survey Services Provided by City (via City Consultant Surveyor).

- 1. Monument Perpetuation, including mark-outs. You are responsible for requesting the coordination of these services.
 - a) If at any time a monument will be destroyed or covered, such monument shall be perpetuated in accordance with state law. Inform the City Engineering Support & Technical Services Division’s Land Survey Section (LSS), via project Resident Engineer, if any monument will be destroyed or covered during any construction activity.
- 2. The following surveying services (including construction staking), as defined in California Business & Professions Code §8726, shall be provided by the City:
 - a) Locating or establishing alignment or elevations of all features or structures shown on project Plans.
 - b) Locating or establishing geodetic control points for all site feature or structure locations.
 - c) Produce topographic as-built data.
 - d) Locating, establishing, or re-establishing monuments, property lines, right-of-way lines, or easement lines.
 - e) Verifying structure finish grade elevations.
 - f) QA/QC surveys on project settlement monitoring survey reports.
- 3. All construction survey stakes, control points, and other survey related marks provided by the City shall be preserved for the duration of the Project. If any construction survey stakes, control points, or other survey related marks are

lost or disturbed and need to be replaced, such replacement shall be performed at your expense.

3-10.3.1 Payment.

1. The payment for site layout and general grade checking Work, coordination, and preservation of all survey related marks shall be included in the Contract Price.

3-11. 2 Project Identification Signs. To the "WHITEBOOK", ADD the following:

4. The State Revolving Fund requires that the Contractor place (2) temporary signs at least four (4) feet tall by eight (8) feet wide made of three-fourths (3/4) inch thick exterior grade plywood or other approved material in a prominent locations approved by the Engineer. The Contractor shall fabricate, properly mount and maintain both signs. The image cast on the sign should be resistant and protected from weathering. The signs should be mounted firmly and securely at the two sites with proper footing and post, as approved by the Resident Engineer. The Contractor is responsible for maintaining the signs in a manner approved by the Resident Engineer and will remove and dispose of upon completion. The sign shall include the full colored image that will be provided on a CD, at the pre-construction meeting.

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 I - Monthly Drinking Water Discharge Monitoring Form.**

3-12.8.7 Hazardous Waste Operations and Emergency Response (HAZWOPER) Certificate. To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

If flammable liquids or other hazardous wastes are encountered during dewatering activities, construction staff shall be required to have a HAZWOPER certificate in accordance with 5-15.1, "General" and in compliance with CCR Title 8, Section 5192 and 29 CFR, Part 1910.

3-12.8.8 Payment. To the "WHITEBOOK", item 3, ADD the following:

- a) Submit supporting invoices and a Schedule of Values for the Lump Sum Bid item for "Dewatering Hazardous Contaminated Water" in accordance with 7-2.1, "Schedule of Values (SOV)". The SOV shall itemize the Work to show the following:
 - i. All costs associated with handling contaminated groundwater specified in 3-12.8.6, "Dewatering System", and 3-12.8.7, "Hazardous Waste Operations and Emergency Response (HAZWOPER) Certificate".
 - ii. All costs associated with equipment used for dewatering hazardous contaminated groundwater, including costs for mobilization and demobilization.
 - iii. All rental and operating costs for equipment used for dewatering contaminated groundwater.

ADD the following:

6. The payment for Hazardous Waste Operations and Emergency Response (HAZWOPER) certification and training for construction staff shall be paid in accordance with 5-15.17, "Payment".

3-13.1 Completion. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall submit a written assertion that the Work has been completed and is ready for Owner Acceptance. If, in the Engineer's judgment, the Work has been completed in accordance with the Contract Documents, the Engineer will set forth in writing the date the Work was completed. This will be the date that you are relieved from responsibility to protect and maintain the Work and to which liquidated damages will be computed.
2. For additional requirements related to Closeout items, refer to Technical Specifications, Section 01 77 00 "Closeout Procedures"

3-13.1.1 Requirements Before Requesting a Walk-through. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

3-13.1.1 Requirements Before Requesting Substantial Completion.

1. The following items are required prior to requesting a Substantial Completion:
 - a) Remove temporary facilities from the Site.
 - b) Thoroughly cleaning the Site and removing all mark outs and construction staking.
 - c) Provide completed and signed Red-lines in accordance with 3-7.3 "Redlines and Record Documents".
 - d) Provide all material and equipment maintenance and operation instructions and/or manuals.

- e) Provide all tools which are permanent parts of the equipment installed in the Project.
- f) Provide and properly identify all keys for construction and all keys for permanent Work.
- g) Provide all final Special Inspection reports required by the applicable building Code.
- h) Provide all items specified to be supplied as extra stock. Wrap, seal, or place in a container all items as necessary to allow for storage by the City for future use. Verify the specified quantities.
- i) Ensure that all specified EOCP and certified wage rate documentations covering the Contract Time have been submitted.
- j) If the Work includes installing an irrigation system, provide the spare parts for the proposed irrigation system as specified in the Special Provisions.
- k) If the Work includes sewer and storm drain installations, the inspection shall include televising in accordance with 306-18, "VIDEO INSPECTION".
- l) If the Work includes a Plant Establishment Period, Work in accordance with 801-6, "MAINTENANCE AND PLANT ESTABLISHMENT" shall be completed prior to requesting Substantial Completion, unless approved otherwise by the Owner.
- m) Notify the Engineer to arrange a final inspection of any permanent BMPs installed.

3-13.1.2 Walk-through and Punchlist Procedure. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall notify the Engineer 15 Working Days in advance of date of anticipated Substantial Completion to allow time for Engineer to schedule a Walk-through.
2. After you complete the requirements in 3-13.1.1, "Requirements Before Requesting Substantial Completion" and when you consider that the Work is Substantially Complete, you will notify the Engineer in writing that the Project is Substantially Complete and request a Walk-through. The Engineer will review your request and determine if the Project is ready for a Walk-through, by verifying whether you have completed all items as required by 3-13.1.1, "Requirements Before Requesting Substantial Completion". Within 7 Working Days, the City will either reject your request for a Walk-through in writing or schedule and conduct a Walk-through inspection. The Engineer shall facilitate the Walk-through.
3. The following documents shall be provided at the time of your Walk-through request: As-Built markup, Plans, specifications, technical data such as submittals and equipment manuals, draft final payment, warranties, material

certifications, bonds, guarantees, maintenance service agreements, and maintenance and operating manuals.

4. Written warranties, except manufacturer's standard printed warranties, shall be on a letterhead addressed to you. Warranties shall be submitted in the format described in this section, modified as approved by the City, to suit the conditions pertaining to the warranty. Lack of submitting these items will delay start of Walk-through.
5. The Engineer will provide you with the Punchlist within 15 Working Days after the date of the Walk-through. The City shall not provide a preliminary Punchlist.
6. If the Engineer finds that the Project is not Substantially Complete as defined herein, the Engineer will terminate the Walk-through and notify you in writing.
7. If, at any time during the Engineer's evaluation of the corrective Work required by the Punchlist, the Engineer discovers that additional corrective Work is required, the Engineer may include that corrective Work in the Punchlist.
8. You shall remain solely responsible for the Project Site until the Project is completely operational, all Punchlist items have been corrected, all operation and maintenance manuals have been approved, all necessary warranty letters have been received, and the work is formally accepted by the City.
9. The Engineer shall meet with you within 5 Working Days of notification that all Punchlist items are corrected. You shall complete the Punchlist within 30 Working Days, and Working Days will continue to be counted until Acceptance of the Project.

3-13.2 Acceptance. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. You shall provide the completed, signed, and stamped DS-563 to the Engineer prior to Acceptance.
2. You shall deliver the final As-builts and final billing prior to Acceptance.
3. You shall assemble and deliver to the Engineer a Final Summary Report and Affidavit of Disposal prior to Acceptance.
4. Acceptance shall occur after all of the requirements contained in the Contract Documents have been fulfilled. If, in the Engineer's judgment, you have fully performed the Contract, the Engineer will recommend to the City Engineer that your performance of the Contract be accepted. You shall receive notification of Acceptance in writing from the Owner and counting of working days shall cease and Warranty begins.
5. Retention can be released 35 Calendar Days after NOC. Submit your request for retention to the Resident Engineer and they will mail to you a "Release of

Claims" form which shall be completed and returned before the retention will be released.

3-13.3 Warranty. To the "WHITEBOOK", 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 has Beneficial Use or takes Occupancy of the project earlier (excluding water, sewer, and storm drain projects).
2. You shall warranty the Work free from all latent defects for 10 years and patent defects for a period of 4 years.
3. The warranty period for specific items covered under manufacturers' or suppliers' warranties shall commence on the date they are placed into service at the direction of the Engineer in writing.
4. All express warranties from Subcontractors, manufacturers', or Suppliers', of any tier, for the materials furnished and Work performed shall be assigned, in writing, to the City, and shall be delivered to the Engineer prior to the Acceptance of your performance of the Contract.
5. Replace or repair defective materials and workmanship in a manner satisfactory to the Engineer after notice to do so from the Engineer and within the time specified in the notice. If you fail to make such replacements or repairs within the time specified in the notice, the City may perform the replacement or repairs at your expense. If you fail to reimburse the City for the actual costs, your Surety shall be liable for the cost
6. Items that shall be warranted free from defective workmanship and materials for a period longer than 1 year are as follows:

Specified Item	Minimum Warranty Period
Detectable Warning Tile Construction	3 Years of Manufacturer's Warranty
All Work Under SECTION 500 – PIPELINE REHABILITATION	3 Years
Fiber Optic Interconnect Cables	2 Years
Luminaires*	10 Years of Manufacturer's Warranty
LED Signal Modules	3 Years of Manufacturer's Warranty
Field Devices Associated with 700-6.3, "Adaptive Control Note"	See 700-6.3.9, "Warranty"

* Provide documentation verifying that the induction luminaire models being offered for the Project are covered by the 10-year warranty.

7. If installed, you shall provide the City and property owner a copy of the manufacturer's warranty for private sewer pumps, including the alarm panel and all other accessories.
 - a) You shall involve the manufacturer in the installation and startup as needed to secure any extended warranty required.
 - b) Nothing in here is intended to limit any manufacturer's warranty which provides the City with greater warranty rights than set forth in this section or the Contract Documents.
 - c) The warranty shall include all components. The form of the warranty shall be approved by the Engineer in accordance with 3-13.3.2, "Warranty Format Requirements".
8. If, during the warranty period, any item of the Work is found to be Defective Work, you shall correct it promptly after receipt of written notice from the City to do so. The warranty period shall be extended with respect to portions of the Work corrected as part of the warranty requirements.

3-14 FORMAL PARTNERING. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

Refer to Technical Specifications, Section 01 12 01 "Partnering" for requirements

3-15.2 Integration of the Work with Separate Contractors. To the "WHITEBOOK", ADD the following:

2. The list of Separate Contractors includes:
 1. Morena PS - Project, (Flatiron West, Inc.) Octavio Chiquete, phone no, 858-573-5069, email: ochiquete@sandiego.gov
 2. Morena Pipelines - Project, Robert Hanna, phone no. 858-627-3265, email: rhanna@sandiego.gov, and Middle project: Azin Nour, phone no. 619-727-0980, email: anour@sandiego.gov
 3. Morena Conveyance Northern - Project, (OHL, USA, Inc.) Clemens Wassenberg, phone no. 858-495-7872, email: cwassenberg@sandiego.gov
 4. Alvarado 2nd Pipeline Extension Project, Jericho Gallardo, phone no. 619-533-7523, email: jgallardo@sandiego.gov
 5. North City Pure Water Facility Project, (Shimmick Construction Company, Inc.) Brian Bartow, phone no. 858-495-4719, email: bbartow@sandiego.gov
 6. North City Pure Water Pump Station Project, Brian Bartow, phone no. 858-495-4719, email: bbartow@sandiego.gov
 7. North City Water Reclamation Plant Expansion Project, (Kiewit Infrastructure West Co.) Daniel Lotermoser, phone no. 858-573-5011, email: dlottemoser@sandiego.gov

8. Metro Bio Solids Center Improvements Project, (PCL Construction, Inc.) John Udan, phone no. 858-654-4430, email: judan@sandiego.gov
9. North City Pure Water Pipeline Project, (WA Rasic Construction Company Inc.) Clemens Wassenberg, phone no. 858-495-7872, email: cwassenberg@sandiego.gov
10. North City Pure Water Subaqueous Pipeline Project, Azin Nour, phone no. 619-727-0980, email: ANour@sandiego.gov
11. Morena Improvement 1, Sheila Bose, phone no. 619-533-4698, email: SBoise@sandiego.gov
12. Morena Improvement 3, Elham Lofti, phone no. 619-533-5212, email: ELofti@sandiego.gov

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 the Morena Conveyance South and Morena Conveyance Middle Projects. See **Appendix F – Adjacent Projects Map** for the approximate location. Coordinate the Work with the adjacent projects as listed below:
 1. Mid Coast Corridor Transit Project, Brett Stephens, 619-504-3016
 2. Morena Pipeline, Robert Hanna, 619-858-627-3265, email: rhanna@sandiego.gov
 3. Morena Improvement 1, Sheila Bose, phone no. 619-533-4698, email: Bose@sandiego.gov
 4. Morena Improvement 3, Elham Lofti, phone no. 619-533-5212, email: ELofti@sandiego.gov
 5. Morena Conveyance North, Clemens Wassenberg, phone no. 858-495-7872, email: cwassenberg@sandiego.gov
 6. Pure Water Genesee Avenue Median Landscape Improvement, Clemens Wassenberg, phone no. 858-495-7872, email: cwassenberg@sandiego.gov
 7. Alvarado 2nd Pipeline, Jericho Gallardo, phone no. 619-533-7523, email: jgallardo@sandiego.gov
 8. Bay Ho Improvement 3, Alex Sleiman, phone no. 619-533-7588, email: ASleiman@sandiego.gov

9. Bannock Ave Streetcape Enhancements, Elham Lofti, phone no. 619-533-5212, email: ELofti@sandiego.gov
10. Morena Blvd Median, Nicole George, phone no. 619-533-7443, email: NGeorge@sandiego.gov

SECTION 4 - CONTROL OF MATERIALS

ADD:

4-1.1

American Iron and Steel (AIS).

1. The Consolidated Appropriations Act, 2014, includes an “American Iron and Steel (AIS)” requirement in section 436 that requires this project, funded via the Clean Water State Revolving Loan Fund (CWSRF) and/or the Drinking Water State Revolving Loan Fund (DWSRF) to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system.
2. You acknowledge to and for the benefit of the City of San Diego and the State Water Resource Control Board that you understand the Work under this Contract is being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel” that requires all of the iron and steel products used for construction to be produced in the United States including iron and steel products to be provided by you. You hereby warrant to and for the benefit of the City and the State that:
 - a) You have reviewed and understand the American Iron and Steel Requirement,
 - b) All of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement with required certification (for sample certification letters, refer to **Appendix H**), unless a waiver of the requirement is approved, and;
 - c) You will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the City or the State.
3. The additional information below is being provided for reference and guidance to ensure that you comply with all requirements set forth by the CWSRF and/or DWSRF Loans:
 - a) Refer to the following EPA website:

<http://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement>

- b) The United States Environmental Protection Agency's Memorandum dated March 20, 2014 entitled, "Implementation of American Iron and Steel Provisions of P.L. 113-76, Consolidated Appropriations Act, 2014":

<https://www.epa.gov/sites/production/files/2015-09/documents/ais-final-guidance-3-20-14.pdf>

- 4. Your failure to comply with this provision shall permit the City or State to recover damages against you for any loss, expense, or cost (including without limitation attorney's fees) incurred by the City or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the City). Although you have no direct contractual privity with the State, as a lender to the City for the funding of this project, you and the City agree that the State is a third-party beneficiary and neither this provision (nor any other provision of this Contract necessary to give this provision force or effect) shall be amended or waived without the prior written consent of the State.

4-3.4 Specialty Inspection Paid for by the Contractor. To the "WHITEBOOK", ADD the following:

- 5. No special inspection shall be performed by the Contractor. The Contractor is not required to pay for special inspection unless due to circumstances detailed in Technical Specifications Section 01 45 33.

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 15 Working Days after the determination of the Apparent Low Bidder** and on the City's Product Submittal Form available at:

<https://www.sandiego.gov/ecp/edocref/>

SECTION 5 – LEGAL RELATIONS AND RESPONSIBILITIES

5-3.3 Payroll Records. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

- 1. Your attention is directed to the City of San Diego Labor Compliance Program, Section IV, pages 4-7, and the State of California Labor Code §§1771.5(b) and 1776 (Stats. 1978, Ch. 1249). These require, in part, that you and your Subcontractors maintain and furnish to the City, at a designated time, a certified copy of each weekly payroll containing a statement of compliance signed under penalty of perjury.
- 2. You and your Subcontractors shall submit weekly certified payrolls reflecting the wages of all yours and Subcontractors' employees engaged in the Work online via LCP Tracker, the City's web-based labor compliance program.

3. You and your Subcontractors shall submit the following PLA and Labor Compliance required documents online via LCP Tracker, to the City's web-based labor compliance program:
 - a) Letter of Assent (PLA Attachment A);
 - b) Contractor Core Workforce Form (PLA Attachment B-2) [if required];
 - c) Monthly Proof of Fringe Benefit Payments to Union Trust;
 - d) City of San Diego Labor Compliance Authorized Signatory Form;
 - e) City of San Diego List of Trades Craft;
 - f) Labor Compliance Checklist;
 - g) Fringe Benefit Statement;
 - h) DAS 140 Form & Transmittal Confirmation;
 - i) DAS 142 or Workforce Dispatch Request Form (PLA Attachment B-1) & Transmittal Confirmation;
 - j) Certified Payroll Report (Performance Report with Statement of Compliance, Non-Performance Reports, Confirmation Report that CPR was uploaded to the DIR website);
 - k) State & Federal Apprentice Certifications;
 - l) Payroll Confirmations (as requested per CCR 16432);
 - m) Other Deduction Forms (letter or documentation relating to non-standard deductions); and
 - n) Monthly Skilled & Trained Workforce Certification Form and Report (See Section 6: Certifications and Forms)

ADD:

5-3.6 Project Labor Agreement (PLA). The Contractor and all subcontractors agree to be bound by the Project Labor Agreement (which is attached as Attachment I and incorporated by this reference) by submitting a Letter of Assent to the City's Labor Coordinator. The Contractor shall submit its Letter of Assent as a condition of award and all subcontractors shall submit their Letter of Assent Consent before commencing any Work on the Project.

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

5-4 OWNER-CONTROLLED INSURANCE PROGRAM

5-4.1 GENERAL REQUIREMENTS

1. The City has implemented an Owner-Controlled Insurance Program (OCIP) for its Pure Water Projects. In this OCIP, the City furnishes Workers' Compensation, General, Excess, Pollution Liability and Builder's Risk insurance associated with construction of the Work. Insurance furnished under the OCIP covers the City, the Contractor, and the Contractor's subcontractors of all tiers with exceptions

stated below. As detailed in Section 5-4.17 and 5-4.18, Contractor and subcontractors still provide some insurance coverage under the OCIP.

2. Bidders, as well as their subcontractors with a subcontract amount of greater than one half of one percent of the Contractors bid amount, shall exclude from bids the costs of insurance for risks covered under the OCIP.
3. Bidders, as well as their subcontractors with a subcontract amount of greater than one half of one percent, shall determine the OCIP coverage credit by utilizing the OCIP Credit Worksheets attached herein under Section 6. Certifications and Forms.
4. OCIP enrollment is mandatory for contractors/subcontractors with contracts valued at \$10,000 or greater or onsite labor of three days or more. For contracts under \$10,000 in value, should there be any potential for additive change orders thereby increasing the contract value to \$10,000 or greater, the contractor/subcontractor must enroll in the OCIP.
5. Bidders, as well as all of their subcontractors, with a subcontract amount of greater than one half of one percent of the Contractors bid amount, shall complete OCIP credit worksheets provided as part of the bid documents attached herein. The Bidder selected to perform the work shall submit to the City, as well as OCIP credit worksheets obtained from all their subcontractors, the OCIP credit worksheets after receiving The Notice of Intent to Award and prior to the issuance of the Limited Notice to Proceed. Failure to comply with OCIP requirements shall render the bid non-responsive and ineligible for award.
6. Contractor shall still maintain minimum insurance outside of OCIP as defined in Section 5-4.17
7. OCIP related manuals mentioned in Section 5-4 can be downloaded from the following link:

<https://drive.google.com/file/d/1XhDVvhqnGNqLdUbkqIYbA30BWoxyOPAp/view>

5-4.2

OCIP DEFINITIONS

1. The following definitions apply to the OCIP program:
 - a) Claim – A covered loss asserted under the OCIP insuring policy(s).
 - b) OCIP Deductible Assessment – The amount the Enrolled Contractor is responsible for paying as its contribution for settlement of any loss that is chargeable to the Contractor, or its subcontractors. The deductible shall be paid in a proportional amount between the Contractor and subcontractor, as determined by responsibility of the party causing the loss, by the OCIP insurance carrier.
 - c) Enrolled Contractors – The Contractor and any Subcontractor who have submitted all necessary enrollment information and have received confirmation letter, as well as certificates of insurance evidencing OCIP coverage as issued from the OCIP administrator. Enrollment date shall be established by the date on the certificate of insurance.

- d) Excluded Parties: - The following parties shall not be enrolled in the OCIP:
Heavy or structural demolition utilizing wrecking balls or explosives.
 - i) Hazardous materials remediation, removal or transport companies and their consultants.
 - ii) Architects, surveyors, engineers, soil testing engineers and their respective consultants.
 - iii) Vendors, suppliers, fabricators, materials dealers, truckers, haulers, drivers and others who merely transport, pickup, deliver, or carry materials, personnel, parts or other equipment to and from the Job Site.
 - iv) Any parties or entities not specifically designated by the City at its sole discretion, even if otherwise eligible.
 - v) Subcontractors work with a value of less than \$10,000, unless their work extends to be greater than three days of work or more
- e) Insured Party - Contractor, the Contractor's subcontractors, officers, employees and agents, the City and the City's officers, employees, contractors and agents as enrolled in the OCIP, except any Uninsured Party.
- f) OCIP Administrator - The person or insurance broker firm designated by the City with responsibility for administration of the OCIP, including claims.
- g) OCIP Coverage – the insurance coverages generally described in Sections 5-4.3, through 5-4.10 of this Section and set forth more fully in the policies of insurance or forms of policies of insurance on file with the City's Public Utilities Department.
- h) Uninsured Party - Any person, partnership, corporation, or other business entity performing work under the Contract that is not an Insured Party under the OCIP.

5-4.3 OCIP INSURANCE PROVIDED BY THE CITY

1. Before commencement of the work, the City will obtain OCIP insurance coverage. Insured Parties will be enrolled in the OCIP according to the policies of OCIP insurance coverage.
2. The Contractor and the Contractor's subcontractors, officers, employees and agents, except for Excluded Parties as defined in Section 5-4.2 (d), will be Insured Parties with OCIP Coverage solely as to risks at the job site.
3. The City assumes no obligations to provide insurance other than OCIP Coverage.
4. The City does not warrant or represent that the OCIP Coverages constitute an insurance portfolio that adequately addresses all of the Contractor's risks under

the contract documents. Nothing in this Section shall be construed to relieve the Contractor of any risk or obligation under the contract documents.

5. The OCIP Coverages are set forth in full in the respective policy forms and are on file with the City's Public Utilities Department. Nothing in this section is intended to alter or amend any provision of the OCIP Coverage policies. In the event of an actual conflict between the descriptions of coverage contained in this Section and the coverage provided under the policies, the provisions of the policies shall govern.

5-4.4 INFORMATION TO BE PROVIDED BY SUCCESSFUL BIDDER AFTER CONTRACT AWARD

1. Within 15 working days from the mailing date of the Notice of Intent to Award of Contract, the successful bidder shall complete and return to the OCIP Administrator the "OCIP Insurance Enrollment Form," and provide such other information as the Project Manager or OCIP insurance carriers deem necessary. Each subcontractor shall complete the OCIP Insurance Enrollment Form and return such forms to the successful bidder for submission with, and attachment to, its form.
2. Each subcontractor shall complete the OCIP Insurance Enrollment Forms and submit to the successful bidder for submission to the OCIP Administrator not greater than thirty days before the date they are scheduled to begin work. Failure to submit the information within the time required may delay the subcontractor's ability to commence work.
3. Contractor shall ensure that each subcontractor on the Work site for whom OCIP coverage is provided has received confirmation of such coverage from the OCIP Administrator before commencement of the subcontractor's work.
4. The City will review the OCIP documents submitted by the Contractor within 15 days of their submittal. Any deficiencies noted shall be corrected by the Contractor within five days of its receipt of the returned documents. The City will endeavor to issue a Limited Notice to Proceed within 60 working days of the mailing date of the Notice of Award however, failure to complete and return the documents identified in this paragraph within the time provided may delay the City's issuance of the Limited Notice to Proceed, or result in forfeiture of the successful bidder's bid bond and award of contract to the next lowest bidder.

5-4.5 OCIP WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY

1. Coverage for workers' compensation insurance will comply with statutory limits of the workers' compensation laws of the State of California, with Coverage B - Employer's Liability, to limits of not less than one million dollars (\$1,000,000) each accident, one million dollars (\$1,000,000) each employee for bodily injury by disease, and one million dollars (\$1,000,000) policy limit for bodily injury by disease covering operations of the insured parties at the Work site. Coverage under the Broad Form All States extension is also included. This insurance is primary for all occurrences at the jobsite only.

- a) Named Insured: Contractor and subcontractors of all tiers Enrolled in OCIP
- b) Insurer: Zurich
- c) A.M. Best Rating: AXV
- d) Policy Term: Per Effective Date of each Enrolled Contractor, as defined above, to the earliest of each Enrolled Contractor Work completion, or at 12:01 AM, 7/21/25
- e) Policy Form: Per CA statutory requirements

5-4.6 OCIP GENERAL AND EXCESS LIABILITY INSURANCE

1. General and Excess liability will be provided under Commercial General Liability insurance policy(s) and covering the insured parties in connection with the performance of the work at the jobsite, that includes hazards of operations (including explosion, collapse, and underground coverage), elevators, independent contractors, employees as additional insureds, completed operations with a ten (10) year extended discovery period after substantial completion of the work, contractual liability coverage (for contracts related to the work), personal injury liability coverage, and excess Employer's Liability coverage for claims arising out of the work hereunder, for personal injury, bodily injury, and property damage, in policies of insurance such that the total available limits to all insureds combined will not be less than one hundred fifty four million dollars (\$154,000,000) combined single limits for each occurrence and aggregates, as applicable.

- a) Named Insured: City, Contractor and subcontractors of tiers Enrolled in OCIP.
- b) Insurer: HDI
- c) A.M. Best Rating: AXV
- Policy Term: July 21, 2019 to July 21, 2025, Plus 10 years Completed Operation Coverage
- d) Policy Form: Occurrence
- e) Limits: General Liability

Coverage	Limit
Per Occurrence	\$2,000,000
Personal & Advertising Injury Limit	\$2,000,000
General Annual Aggregate*	\$4,000,000
Completed Operations Term Aggregate**	\$4,000,000

NOTE: * All aggregate limits reinstate annually.
 ** 10 year Completed Operations has single aggregate

EXCESS LIABILITY

- f) Coverage: Follow form excess liability (terms and conditions, exclusions, etc.) of the underlying Commercial General Liability and Employers Liability policy wording.
- g) Named Insured: City, Contractor and subcontractors of tiers Enrolled in OCIP.
- h) Insurer(s): See Below
- i) A.M. Best Rating: AXV
- j) Policy Term: 7/21/2019 to 7/21/25
- k) Policy Form: Follow - Form
- l) Limits: Layered to \$154M.

Layer No.	Insurer	Policy Number	Shared Limit by all Enrolled Contractors	Cumulative Limits
1	AWAC		\$10M excess \$2M/\$4M	\$12M Each Occurrence \$14M Aggregate
2	CHUBB		\$15M excess \$27M/\$29M	\$27M Each Occurrence \$29M Aggregate
3	Liberty		\$25M excess \$27M/\$29M	\$52M Each Occurrence \$54M Aggregate
4	Great American		\$50M excess \$52M/\$54M	\$102M Each Occurrence \$104M Aggregate
5	Zurich		\$50M excess \$102M/\$104M	\$152M Each Occurrence \$154M Aggregate

5-4.7 CONTRACTORS POLLUTION LIABILITY

Contractor’s pollution liability shall include contractual liability coverage for liability arising out of cleanup, removal, storage, or handling of hazardous or toxic chemicals, materials, substances or any other pollutants resultant from the worksite.

- 1. Named Insured: City, Contractor and subcontractors of tiers Enrolled in OCIP.

2. Insurer: Ironshore
3. A.M. Best Rating: AXV
4. Policy Term: July 21, 2019 to July 21, 2025
5. Policy Form: Occurrence
6. Limits: \$50,000,000 per occurrence and Aggregate

5-4.8

OCIP DEDUCTIBLES – GENERAL/ EXCESS AND POLLUTION LIABILITY

1. Notwithstanding the actual policy deductibles per occurrence, the Contractor shall be liable for a \$15,000 (fifteen thousand) dollar deductible for each occurrence, to the extent losses payable are attributable to the Contractor's acts or omissions or the acts or omissions of Contractor's officers, employees, subcontractors or agents, or Uninsured Parties providing equipment, materials, supplies or services for the Work. The Contractor's deductible shall encompass the costs of investigation and defense, including court costs and attorneys' fees.
2. Any deductible amount will be invoiced to the Contractor by separate billing. If not paid within 30 calendar days of notice, the amount will be withheld from the next progress payment. Any payment of a deductible amount per occurrence by the Contractor shall not be compensable to Contractor by the City.
3. Each claim, without regard to the amount claimed, shall be reported by the Contractor to the Project Manager, OCIP administrator and the insurance company. The insurance company will adjust the claim on behalf of the Insured Parties. Insurance company will determine if there is proportional responsibility for the loss between the contractor and subcontractor, and such determination will provide the basis for payment of the deductible between the contractor and subcontractor.

5-4.9

OCIP BUILDER'S RISK INSURANCE

1. OCIP Coverage for builder's risk will provide coverage on an all-risk basis, including coverage against fire, flood, lightning, wind damage, hail, explosion, collapse, offsite storage and in-transit, and installation risks of equipment to be installed as part of the work. Earthquake coverage is not included. The policies for such insurance will be secured and maintained by the City in a form and amount consistent with such coverage commonly purchased for large construction projects. The Contractor's coverage for Builder's Risk shall be for the contract value per with no aggregate.
2. Coverage shall include materials, supplies, and equipment that are intended for specific installation in the work while such materials, supplies, and equipment are located at the jobsite, in transit, or while temporarily located away from the Work site for the purpose of repair, adjustment, or storage at the risk of one of the insured parties.

3. Except as otherwise provided in Subsection 5-4.9 (2), this insurance will not include coverage for tools or clothing of workers, or Contractor's equipment.
4. The Builder's Risk policy will be endorsed waiving the carrier's rights of recovery under subrogation against the other Insured Parties.

5-4.10 OCIP BUILDERS RISK DEDUCTIBLES

1. Notwithstanding the actual policy deductible, the Contractor shall be liable for the first \$50,000 (fifty thousand) of loss for each occurrence. Flood/Water and LEG3 deductible is \$50,000 (fifty thousand) The Contractor may insure deductible risk at the Contractor's discretion and cost.
2. Each claim without regard to the amount claimed shall be reported by the Contractor to the OCIP Administrator and the insurance company. The insurance company will adjust the claim on behalf of the Insured Parties. Insurance company will determine if there is proportional responsibility for the loss between the contractor and subcontractor, and such determination will provide the basis for payment of the deductible between the contractor and subcontractor.
3. Payments by the insurer for all losses covered under the All Risk Builder's Risk policy will be made to the City. The City will make the proceeds from the Builder's Risk policy covered losses available to the Contractor for rebuilding work damaged by covered perils.

5-4.11 NO WAIVER OF CONTRACT OBLIGATIONS

1. Nothing contained herein or in any document referenced herein shall relieve, limit, or be construed to relieve or limit the Contractor from any liability or obligations otherwise imposed by the contract documents.

5-4.12 CHANGE ORDERS

1. Change orders shall include the removal of OCIP provided insurance costs from the Contractors costs associated with the change order. Contractor shall specifically identify the OCIP insurance costs associated with the change order.
2. Contractor is solely responsible for ensuring that its subcontractors remove the cost of OCIP insurance coverage associated with the change order.

5-4.13 THE CITY'S RIGHT TO AUDIT OCIP

The Contractor hereby warrants to the City the accuracy of the information provided on the OCIP Insurance Enrollment Form and OCIP Credit Worksheets, and agrees that the City, its officers, agents, insurance carriers, and the OCIP Administrator may audit the records of the Contractor and its subcontractors to confirm the accuracy of information provided, including the accuracy of all estimated payrolls, and to ascertain any effect on insurance resulting from changes in the work. The audit will be held during the Contractor's normal business hours at the office of the Contractor or at another

mutually agreeable location. This provision is supplemental to 2018 Whitebook Section 6-10, "Right to Audit".

1. The City shall be entitled to credits in OCIP insurance premiums that may accrue as a result of the audit. The Contractor shall also be entitled to any credits as a result of the audit for any OCIP premiums paid in excess of their OCIP Credit Worksheets.
2. The Contractor shall maintain or cause to be maintained sufficient records as may be necessary to audit its compliance and its subcontractors' compliance with the requirements of the OCIP.

5-4.14 ASSIGNMENT

1. The Contractor and each of its subcontractors shall assign to the City all return premiums, premium refunds, dividends, and other monies due in connection with the insurance provided by the City. The Contractor and its subcontractors shall execute such other further documentation as may be required by the City to effect this assignment.

5-4.15 OCIP CLAIMS

1. The Contractor, its subcontractors, and uninsured parties shall assist the City, its agents, and the OCIP Administrator and shall provide the utmost cooperation in the adjustment of claims arising out of the operations conducted under, or in connection with, the work and shall cooperate with the City's insurance carriers in claims and demands that arise out of the work and that the insurance carriers are called upon to adjust or resist.
2. The Contractor and its subcontractors shall make every effort to provide modified work for injured workers who have been placed on modified duty status as a result of a Workers' Compensation injury or illness covered under this OCIP.

5-4.16 LIMIT OF OCIP COVERAGES

1. The City does not warrant or represent that the OCIP coverages constitute an insurance portfolio that adequately addresses the risk faced by the Contractor or its subcontractors. The Contractors and its subcontractors shall satisfy themselves as to the existence, extent, and adequacy of the OCIP coverages before the commencement of work under the Contract.
2. The OCIP coverages referred to above are set forth in full in the respective policy forms, and the foregoing descriptions of such policies are not intended to be complete, or to alter or amend any provision of the actual policies. In the event of an actual conflict between the foregoing descriptions of policies with such instruments, the provisions of the insurance policies shall govern.

5-4.17**CONTRACTOR PROVIDED INSURANCE THAT IS NOT COVERED BY THE OCIP INSURANCE**

1. The OCIP does not provide the insurance policies for auto liability coverage and aircraft liability coverage. In addition, the City requires that any excluded party under OCIP who is performing work to have the required insurance listed in this section. The Contractor shall procure and maintain during the period of performance of this Contract and for 12 months following completion, insurance from insurance companies authorized to do business in the State of California, as set forth in this Section. These policies shall be primary insurance as to the City so that any other coverage held by the City shall not contribute to any loss under the Contractor's insurance. Coverage may be provided by a combination of primary and excess insurance policies, provided all insurers meet the requirements of this Section.
2. The Contractor shall obtain and maintain insurance following insurance coverages in the amounts as follows:
 - a) General Commercial Liability -- \$5,000,000 for any excluded party, any subcontractor who fails or losses enrollment in the OCIP. Coverage at least as broad as ISO form CG 00 01 10 01 or its equivalent, with no exclusion endorsements.
 - b) Automobile Liability -- \$5,000,000 Coverage at least as broad as ISO form CA 00 01 10 01, for "any auto," including owned, non-owned and hired vehicles
 - c) Aircraft Liability: If aircraft is used by the Contractor, its subcontractors, or anyone else on their behalf, the Contractor or its subcontractor shall maintain or cause the operator of the aircraft to maintain aircraft public liability insurance insuring passengers and the general public against personal injury, bodily injury, or property damage arising from aircraft owned, used, operated or hired in connection with the work by the Contractor, subcontractor, or anyone else in limits of not less than ten million dollars (\$10,000,000) combined single limit for each occurrence, for each aircraft.
 - d) Workers' compensation and employer's liability: Coverage shall comply with the laws of the State of California, but an employer's liability limit of less than \$1,000,000 is not permitted. The Contractor may satisfy this requirement by proof of an approved self-insurance program under California law.
3. Any insurance policy utilizing a self-insured retention is subject to approval by the City. Contractor shall be solely responsible for the payment of any self-insured retention, however, any self-insured retention policy obtained by either the contractor, or any tier of sub-contractor, shall be endorsed to provide that the self-insured retention may be satisfied by either the named, additional insured, or City covered under the policy.
4. The insurance policies shall be endorsed as follows:

- a) For general commercial liability and automobile insurance, as well as excess or umbrella insurance covering risks within the scope of that type insurance, the City, its Council Members, officers, employees and agents are included as additional insureds with regard to liability and defense of suits or claims arising from the operations, products and activities performed by or on behalf of the Named Insured. The Contractor's insurance applies separately to each insured, including insureds added pursuant to this paragraph, against whom claim is made or suit is brought except with respect to the policy limits of liability. The inclusion of any person or entity as an insured shall not affect any right which the person or entity would have as a claimant if not so included. Any failure of the named insured to comply with reporting provisions of the policy or breaches or violations of warranties shall not affect coverage provided to the insureds added pursuant to this paragraph. The additional insured endorsement shall provide coverage at least as broad as ISO form CG 20 10 11 01 and CG 20 37 10 01
 - b) The Contractor's insurance shall be primary. Any other insurance or self-insurance available to the City or persons stated in paragraph (1) shall be in excess of and shall not contribute to the Contractor's insurance.
 - c) The Contractor's insurance shall not be canceled or materially reduced in coverage except after 30 days prior written notice has been given to the City, except 10 days' notice shall be allowed for non-payment of premium.
 - d) The workers' compensation and employer's liability insurance, and any property insurance shall be endorsed to include a waiver by the insurer all rights of subrogation against the City and other persons specified in paragraph (1) for losses paid under the terms of the insurance policy. Any of the Contractor's off-site insurance requirements shall not have the provision of naming the City as loss payee.
5. Unless otherwise specified by supplemental condition, the insurance shall be provided by an acceptable insurance provider, as determined by the City, which satisfies the following minimum requirements: An insurance carrier authorized to do business in California and maintaining an agent for process within the state. Such insurance carrier shall maintain a current A.M. Best rating classification of "A- (A minus)" or better and a financial size of \$50 million to \$100 million (Class VII) or better, or a Lloyds of London program provided by syndicates of Lloyds of London and other London insurance carriers, providing all participants are qualified to do business in California and the policy provides for an agent for process in the state and the program assures a financial capability at least equal to the required classification and size for authorized

insurers. Workers' compensation and employer's liability insurance may be provided the California State Compensation Fund.

6. Certificates of insurance and endorsements shall be provided by the Contractor and approved by the City before execution of the Contract.

5-4.18 SUBCONTRACTORS PROOF OF INSURABILITY REQUIREMENT UNDER OCIP

1. As a requirement of the OCIP Program, all subcontractors shall demonstrate insurability to the satisfaction of the OCIP Administrator as follows:
 - a) Commercial General Liability -- \$1,000,000
 - b) Automobile Liability - \$1,000,000
 - c) Workers' Compensation and employer's liability – as required by California law with employer's liability of not less than \$1,000,000
2. The Contractor shall be responsible for obtaining proof of insurability from its subcontractors and providing the information to the OCIP Administrator, as well as for assuring that all its subcontractors comply with the requirements of the OCIP Program.

5-4.19 NOTICES, COSTS, AND LOSSES - OCIP

1. Before the date on which the Contractor or any subcontractor begins performance of its part of the work, the Contractor shall cause to be furnished to the OCIP Administrator certificates of insurance for insurance required to be maintained by the Contractor and its subcontractors as provided herein. The Contractor shall not be allowed, and shall not allow subcontractors on the jobsite for the performance of work until appropriate certificates of insurance are issued by the OCIP Administrator.
2. The City will pay the cost of the OCIP insurance premiums for the insurance described above as being provided by the City, and the City will receive or pay, as the case may be, all adjustments in such costs, whether by way of dividends or otherwise. All enrolled Contractors, and Subcontractors, shall assign to the City all adjustments, premium discounts, dividends, costs or other monies due for the OCIP insurer(s).
3. The cost of losses sustained because of clauses that specify the Contractor deductible amounts in any of the insurance policies furnished by the City shall be paid by the Contractor. If the City-provided OCIP policies described in Sections 5-4.6., 5-4.7 and 5-4.9 have deductible amounts greater than the Contractor-deductible amounts, such excess amounts will be paid by the City provided that the Contractor shall be responsible for losses greater than OCIP policy limits.
4. Require its subcontractors to waive the rights of recovery in the same manner as waived in the employees, and Contractors rendering services at the Work

site, the Contractor, other Project contractors, and their subcontractors regardless of tier.

5-4.20 CONTRACTOR OBLIGATIONS UNDER OCIP

1. The Contractor shall:
 - a) Provide OCIP Coverage enrollment information as required by the City. Furnish to the OCIP Administrator and the insurance carriers all information and documentation that the OCIP Administrator may require from time to time in connection with the issuance of policies under this Contract, in such form and substance as the OCIP Administrator may prescribe.
 - b) Furnish to the OCIP Administrator monthly payroll reports on the form provided by OCIP Administrator, and payroll records as required.

Segregate their respective reports relating to the work for which OCIP coverage is herein provided from their records relating to other work for which such coverage is not provided.
 - c) Promptly comply with the policy requirements of the OCIP insurance carriers as submitted through the Project Manager.
2. The Contractor shall not violate or knowingly permit any subcontractor to violate any conditions of the policies of insurance provided by the City under the terms of the Contract and shall at all times satisfy the requirements of the insurance companies issuing them.
3. The Contractor shall assure that all OCIP requirements imposed upon and to be performed by the Contractor shall likewise be imposed upon, assumed, and performed by each of its subcontractors and uninsured parties with whom it or its subcontractors have a contractual relationship.
4. The Contractor shall furnish each bidding and negotiating subcontractor, vendor, supplier, material dealer, or other person or business entity that may provide goods or services in connection with the work a copy of this Section describing the insurance requirements for the Contractor and its subcontractors shall require each to impose the same requirement in their subcontracting and procurement procedures.
5. If the Contractor or any of its subcontractors should fail to comply with the requirements of this Section, the City may withhold payments due to the Contractor or suspend the work until such time as the Contractor and its subcontractors have performed such obligations to the reasonable satisfaction of the Project Manager.
6. The Contractor shall include in the bid price the cost of complying with the OCIP as herein described.
7. Failure of the Contractor to enroll any sub-contractor of any tier in the OCIP, or to allow any sub-contractor to begin work on-site without proof of

enrollment, shall constitute a breach of the OCIP insurance requirements. As such, all work performed by the sub-contractor, or any accident or injury as a result of the sub-contractor's activity, shall be considered an uninsured risk under the OCIP coverage. No OCIP insurance coverage of any line of insurance described in this document, shall extend coverage to the conditions described above.

5-4.21 OCIP INSURANCE MANUAL

1. The OCIP Administrator will provide an OCIP Insurance Manual that will describe procedures relevant to the OCIP to the Contractor. The Contractor and its subcontractors are required to comply with the procedures therein described.

5-4.22 ALTERNATIVE INSURANCE

1. In the event the City is unable to furnish, or after commencement of work elects not to furnish or to continue to furnish the OCIP coverage herein described, and upon 30 days written notice from the City, the Contractor shall secure insurance as required under the Section 5-4.17 with limits as specified below (2). The Contractor shall be allowed a change order for additional costs of insurance that were excluded from the bid as required by this Supplemental Condition.
2. The coverage limits for insurance required pursuant to paragraph (a), and also for coverage not provided by OCIP Coverage such as automobile liability, shall be as follows:
 - a) Commercial General Liability -- \$25,000,000 annual aggregate renewal
 - b) Contractors Pollution Liability - \$5,000,000 annual aggregate
 - c) Automobile Liability -- \$5,000,000
 - d) Workers' Compensation and employer's liability - as required by California law with employer's liability of not less than \$1,000,000
 - e) Builder's Risk – Contract Value
 - f) Aircraft Liability: If aircraft is used by the Contractor, its subcontractors, or anyone else on their behalf, the Contractor or its subcontractor shall maintain or cause the operator of the aircraft to maintain aircraft public liability insurance insuring passengers and the general public against personal injury, bodily injury, or property damage arising from aircraft owned, used, operated or hired in connection with the work by the Contractor, subcontractor, or anyone else in limits of not less than \$10,000,000 combined single limit for each occurrence, for each aircraft.

5-4.23 ACCIDENT REPORTS AND CLAIMS

1. Contractor shall immediately report (as soon as feasible, but not more than 24 hours after occurrence) to the City any accident or other occurrence causing injury to persons or property during the performance of this Contract. If required by the City's Risk Management Department, the report shall be made in writing and shall include, at a minimum:

- a) the names, addresses, and telephone numbers of the persons involved,
 - b) the names, addresses and telephone numbers of any known witnesses,
 - c) the date, time and description of the accident or other occurrence.
2. All claims for damages, losses, expenses and other costs, received by the Contractor or the City, arising out of or resulting from or in connection with the performance of the Work shall be acknowledged by the Contractor by sending written notice to the claimant within 10 days of the Contractor's receipt of the claim. The written notice shall either:
- a) confirm the Contractor's responsibility for damages and losses, and intent to pay or settle claim directly with the claimant; or
 - b) confirm the Contractor's responsibility for prompt investigation and processing of the claim, including identifying the Contractor's insurance carrier and claims adjuster, describing the Contractor's or insurance carrier's procedure for investigating and processing of the claim, and providing a name and telephone number for contacting the representative of the Contractor. A copy of the written notice of claim shall be delivered to the Project Manager. Should the Contractor state his intent to pay or settle the claim directly with the claimant, payment or settlement shall be made within 45 working days of receipt of the claim. Claims to be submitted to the Contractor's insurance carrier shall be forwarded to the insurance carrier within 30 calendar days of receipt of the claim. Failure by the Contractor to send the written notice of claim, or to notify the Project Manager of any claim, shall be cause for the City to withhold payments to the Contractor.
3. The City shall have full authority to compromise or otherwise settle any claim related to the Contract at any time. The City will notify the Contractor of the receipt of any third party claim arising from or relating to the Work within 14 working days of the receipt of the claim by the City. The City shall be entitled to recover its reasonable costs incurred in providing the Contractor timely notification of third-party claims. Neither this Section nor the City's failure to give notice shall limit the City's ability to compromise or settle any claim.

5-4.24 ADDITIONAL INSURANCE PROVISIONS

- 1. Nothing in Section 5-4 shall be construed to limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Contract, including but not limited to the provisions relating to indemnity and warranty.
- 2. The City may require the Contractor to provide complete copies of all insurance policies required by Section 5-4.
- 3. If at any time, the Contractor fails to maintain in full force any insurance required by the Contract, the City may acquire the necessary insurance for the Contractor and deduct the cost thereof from any payment due the Contractor.

PURE Program OCIP – Insurance Coverage by Project Segment Summary

Project Name: **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)**

Owner Controlled Insurance Program Insurance coverage provided for Contractor				Contractor/Sub-Contractor Insurance Requirements by type of insurance and limits still required under OCIP		
Type	Limit		Deductible	Contractor	Limit	Self-Insured Retention
General Liability*	\$154M		\$15K	General Liability	\$5M	Needs Approval
Automobile Liability**	N/A		N/A	Automobile Liability	\$5M	Needs Approval
Workers Compensation	CA Statutory - \$1M employers Liability		N/A	Workers Compensation	CA Statutory - \$1M employers Liability	
Pollution Liability*	\$50M			Pollution Liability*	N/A	N/A
Builders Risk***	Contract value		\$50K	Builders Risk*	N/A	N/A
*Indicates shared limit among all Pure projects, per project limit applies **N/A indicates not provided by OCIP coverage *** AOP deductible per occurrence with no aggregate – deductible limit for Flood and LEG3 is \$50K				Sub-Contractor	Limit	Self-Insured Retention
				General Liability	\$1M	Needs Approval
				Automobile Liability	\$1M	Needs Approval
				Workers Compensation	CA Statutory - \$1M employers Liability	
				Pollution Liability*	N/A	N/A
				Builders Risk*	N/A	N/A

Contractor Insurance Required if OCIP is unavailable at commencement of work or cancelled after construction has begun			General Notes – Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)
Type	Limit	Self-Insured Retention	1) Contractor obligation for payment of the deductible under the OCIP coverage is triggered by insurance carrier acceptance of claim. 2) At issuance of the Notice to Proceed, the shared OCIP coverage limits remain at 100% of the values stated above.
General Liability	\$25M	Needs Approval	
Automobile Liability	\$5M		
Workers Compensation	CA Statutory - \$1M employers Liability		
Pollution Liability	\$5M		
Builders Risk	Contract Value	Needs Approval	

Notes: OCIP will utilize a per-occurrence deductible program. If Contractor utilizes Self-Insured retention insurance, it will require approval of the self-insurance retention amount the contractor declares.

5-4.25. OTHER REQUIRED INSURANCE.

1. The insurance provisions herein shall not be construed to limit your indemnity obligations contained in the Contract.
2. The provisions identified in the following Sections shall apply only to the preparation and development of Storm Water Pollution Prevention Plan (SWPPP), engineered traffic control plans, other structural and Engineering work and remediation, handling and disposal of hazardous materials.
3. All other work will fall under the provisions of the Owner Controlled Insurance Program (OCIP) as describe in Section 5-4.

5-4.25.1 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.

5-4.26 Types of Insurance.

5-4.26.1 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.

5-4.26.2 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.

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.

5-4.27 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.

5-4.27.1 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.

5-4.28 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.

5-4.29 Policy Endorsements.

5-4.29.1 Contractors Pollution Liability Insurance Endorsements.

5-4.29.1.1 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.

5-4.29.1.2 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.

5-4.29.1.3 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.

5-4.29.2 Contractors Hazardous Transporters Pollution Liability Insurance Endorsements.

5-4.29.2.1 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.

5-4.29.2.2 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.

5-4.29.2.3 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.

5-4.30 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.

5-4.31 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.

5-4.32 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.

5-4.33 Excess Insurance. Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

5-4.34 Architects and Engineers Professional Insurance (Errors and Omissions Insurance).

1. For Contracts with required engineering services (e.g., Design-Build, preparation of engineered Traffic Control Plans (TCP), and etc.) by you, you shall keep or require all of your employees or Subcontractors, who provide professional engineering services under this contract, Professional Liability coverage with a limit of **\$1,000,000** per claim and **\$2,000,000** annual aggregate in full force and effect.
2. You shall ensure the following:
 - a) The policy retroactive date is on or before the date of commencement of the Project.

- b) The policy will be maintained in force for a period of 3 years after completion of the Project or termination of this Contract, whichever occurs last. You agree that for the time period specified above, there will be no changes or endorsements to the policy that affect the specified coverage.
3. If professional engineering services are to be provided solely by the Subcontractor, you shall:
- a) Certify this to the City in writing and
 - b) Agree in writing to require the Subcontractor to procure Professional Liability coverage in accordance with the requirements set forth above.

ADD:

5-7.2.1.1 Safety, Sanitation, Medical, And Drug And Alcohol Requirements.

1. The Contractor shall have ultimate responsibility for the health and safety of its employees. These specifications shall not be construed to limit the Contractor's liability nor to assume that the City, its employees, agents, or designates shall assume any of the Contractor's liability associated with its safety performance.
2. The Contractor shall promptly and fully carry out the safety, sanitary, and medical requirements as stated in the contract documents and as may from time to time be prescribed by the Engineer, to the end that proper work shall be done, and the safety and health of the employees and of the public are preserved and safeguarded. In case such regulations and orders are not observed by the Contractor, they may be enforced by the Engineer at the Contractor's expense. The Contractor shall summarily dismiss and shall not again engage, except with the written consent of the Engineer, any employee or subcontractor who knowingly and willingly violates the safety, sanitary, or medical requirements. Such discharge shall not be the basis of any claim for compensation or damages from the Contractor against the City, its OCIP Insurance, or any of its officers, employees, consultants or agents.
3. Appropriate first aid facilities and supplies shall be kept at the site of the Work, and the Contractor shall provide and maintain all measures required by the Construction Safety Orders issued by the Division of Industrial Safety of the State of California.
4. The Contractor shall prohibit the use or possession of intoxicating liquors or controlled substance at the jobsite or in any vehicle or equipment used in performance of the Work. This prohibition shall not apply to use or possession of prescription or non-prescription medication in accordance with prescribed directions.
5. Employ a "competent person" as defined by Cal OSHA. The "competent person" shall monitor, educate, and facilitate safety related jobsite activities.

This individual shall be on the jobsite during all work hours identified in Section 6.7, Paragraph (b), or as authorized in writing by the Engineer.

6. When trenching, place your name and emergency telephone number adjacent to the Work at intervals and locations approved by the Engineer. The method of marking shall be approved by the Engineer.
7. The City shall not assume any role in determining the adequacy of the Contractors Safety and Health Plan.

ADD:

5-7.2.1.2 Contractor's Safety And Health Representatives.

1. The Contractor shall provide a qualified and experienced full-time, on-site Safety Professional to serve as their Safety and Health Representative. Qualifications shall include at least 10 years of construction related safety experience as the lead site safety representative (only duty) and experience in developing and implementing accident prevention programs for construction projects. If the Contractors Safety and Health Representative has less than 10 years construction related safety experience, or equivalent level of education and experience, the Contractors Safety and Health Representative must be approved by The City of San Diego. This individual shall be assigned only to this project and whose sole duty is monitoring and supervising the Contractor's and Subcontractors' Safety, Health, and Environmental Program, and who shall be on-site when any work is in progress. In the event the Contractor's Safety Representative gives notice of separation of employment or is transferred from the Contractor's work site, the Contractor shall ensure that the incumbent Safety Representative remains on site for a minimum of two weeks after giving notice, and that the Contractor's replacement Safety Representative receives a minimum of two weeks safety orientation on the construction site before being allowed to assume the full duties as the Contractor's Safety Representative. This requirement may be waived upon written approval by the City. The Contractor's Safety and Health Representative shall support and Implement the OCIP Safety Program, or its equivalent and shall coordinate and require the Contractor's and Subcontractor's foremen to participate in the OCIP Program and conduct and submit the required audits as described in the Safety Programs section of the OCIP Construction Safety Procedures Manual. In the event the Contractor fails to comply with the above safety professional requirements, the Engineer shall obtain the services of a Safety Professional, and charge all costs associated with the services to the Contractor.
2. The Contractor's safety and health representatives shall be responsible for, and have the authority to, direct the required safety and health programs, correct unsafe conditions and unsafe practices, and stop work in areas containing unsafe conditions or practices until such unsafe conditions or practices are correct.
3. The Contractor's safety and health representatives shall be charged with the responsibility of daily on-site safety and health coordination and inspections

and shall record the results of the inspections and corrective actions, if any, on a report form provided by the City.

4. The weekly report shall be submitted to the Engineer not later than the first working day following the workweek covered by the report.
5. Contractor's Safety and Health representatives shall participate in weekly progress meetings and report out on safety conditions at the worksite.

5-7.2.1.3 Submittals.

1. Submit, within 30 days of the Notice of Award and before execution of the Contract or at a later time as directed by the Engineer a Project-specific safety and health program conforming to applicable laws and regulations that includes the following:
 - a) A Project-specific Injury and Illness Prevention Program covering work performed by or for the Contractor at the site.
 - b) The resume of qualification and experience for the Contractor's on-site safety representative responsible for safety and health.
 - c) A written Hazard Communication Program covering work performed by or for the Contractor at the site.
 - d) A written Emergency Action and Fire Protection Plan and a written Fire Prevention Plan covering work performed by or for the Contractor at the site. The Contractor shall have the Fire Protection Plan reviewed and approved by the jurisdictional fire protection agency. The Contractor's Fire Protection Plan shall include:
 - i. Dedication of an on-site 2,000 gallon or greater water truck fitted with a one and one-half inch fire hose that shall have the ability to access all on-site construction operations.
 - ii. Fire watch on-site during construction operations. This role may be filled by the Contractor's safety representative.
 - iii. Contractor shall check in daily with CAL FIRE for an update on fire conditions and to determine if any fire restrictions have been ordered. This information shall be included on the Contractor's Daily Report to the Engineer.
 - iv. Contractor shall cease brush clearing, cutting, or chipping operations when a red flag fire day is declared by the jurisdictional fire agency.
 - v. Contractor shall have tailgate meetings daily to communicate fire conditions and fire prevention measures necessary for the daily work.
 - e) A written hazard safety analysis of the project conditions. The Contractor shall perform a comprehensive site analysis before commencement of work to determine any existing hazards and shall

abate these hazards or inform the Engineer and all affected employees of these hazards and how to protect themselves from them.

- f) In addition to the reports that the Contractor is required to file under the provisions of California Workers' Compensation law and other applicable laws, submit a report to the Engineer on or before the 10th day of each month giving:
 - i. The total force employed on the contract in workdays during the previous calendar month.
 - ii. The number and character of all accidents resulting in loss of time, medical treatment and first aid treatment.
 - iii. Any other information or classification of employee injuries incurred on the Project and disabilities resulting there from that may be required by the Engineer.
- g) Obtain and keep copies of the Material Safety Data Sheets of all hazardous materials brought to and stored at the site.

5-7.2.1.4 Emergency Procedures.

1. Designate responsible personnel to make emergency calls. Should an emergency occur, the Contractor shall:
 - a) Immediately secure the area and implement the Emergency Action Plan. Preserve the site for investigation until released by OSHA, the Engineer or OCIP Insurance Provider.
 - b) Notify the Construction Management Team or another representative previously designated by the Engineer in writing.
 - c) Provide information regarding the emergency to the appropriate authorities and authorized City representatives only. Questions from others including the press and media shall be referred to the Engineer.
2. Emergency procedures shall ensure that the Contractor's Safety Representative or the most qualified senior supervisor present takes charge and directs the handling of the emergency. The Contractor shall ensure proper handling of all Subcontractor related emergencies per the Contractor's and OCIP Emergency Procedures.
3. All Incidents, whether causing injury, environmental impacts or unauthorized property damage or not, shall be investigated by the Contractor and documented on forms provided by the OCIP and as required by the OCIP Construction Procedures Safety Manual. Instruct and require supervisors that, except for rescue or other emergency measures, the Incident site shall be secured until investigation has been completed and the scene has been released by both the Contractor and the Engineer, and as appropriate, the insurance company/OSHA.

4. Injuries which require medical attention shall be reported to the Engineer or Construction Management Team immediately after summoning medical help and securing the scene to prevent further injury. Injuries which meet the Cal/OSHA, Title 8 requirement as reportable shall also be reported to Cal/OSHA immediately. The Contractor shall investigate and generate a report which identifies the root causes and corrective actions for all accidents and incidents. This report shall be on the OCIP Incident form or an equivalent form approved by the Engineer. The Construction Management Team will also investigate all accidents and incidents to identify means to prevent further occurrences
5. For incidents that caused or had the potential to cause injury or significant losses, the Engineer or Construction Management Team may request a post Incident review. In such cases, the Contractor, Subcontractor, or other entity shall send an appropriate Manager to present the facts of the incident and provide information how future similar incidents will be prevented.
6. Immediately notify the Engineer or OCIP Safety Manager of any unabated hazardous conditions and take action to guard or control access to these conditions until correction has been accomplished. Notify the Engineer of any property or equipment found at the work site that is not under the Contractor's control. However, it shall be the Contractor's responsibility to take necessary precautions to prevent injury to persons or damage to property from such hazardous conditions until corrected by the responsible party.

5-7.2.1.5 Safety and Health.

1. Have and implement a written site-specific IIPP and Code of Safe Work Practices covering site work to be performed under the contract.
 - a) If not a part of the IIPP, the following procedures shall also be implemented:
 - i. Stress the importance of and conduct a thorough hazard safety analysis at the start of the project.
 - ii. Participate to develop and ensure all key staff are aware of the project hazards and keep staff informed of existing and developing safety hazards.
 - iii. Encourage all suppliers to visit the project site to assess hazards before the delivery of materials.
 - b) Foremen and superintendents shall provide written Job Task Analysis for all tasks. The JTA shall include all hazards that might be encountered while performing the task and methods for assuring that each employee will be protected from the hazard.
 - c) Utilize supervisory and craft employees to conduct and document a jobsite Safety Survey each week. Each survey shall include subcontractor activities. Utilize the results of each survey to inform

Contractor and Subcontractor employees and other affected jobsite individuals of hazards on the job and how to protect themselves from these identified hazards. Survey shall be submitted to the Engineer for review and comment. Identify upcoming jobs and associated hazards and notify affected employees and individuals.

- d) Before authorization or start of construction, the Contractor shall prepare a Spill Prevention and Contingency Plan for review and approval of the appropriate jurisdictional agency and all construction crew members shall be trained in the requirements of the Spill Prevention and Contingency Plan. The Plan will include information on storage of hazardous materials, emergency response procedures, employee training requirements, fire safety, first-aid procedures, hazardous materials release containment/control procedures, and release reporting requirements. The Contractor shall integrate this SP&CP into the IIPP.
- e) All persons shall be required to wear American National Standards Institute approved hard hats while at the Work site; no bump caps will be permitted. Each employee's hard hat shall identify the employee's name and employer. Steel toed shoes shall be worn when in active construction zone. Safety vest or equivalent shall be worn in addition to hard hat when in active construction zone.
- f) When sufficient time is available, notify the City in advance of safety inspections by Cal/OSHA, the fire department, or other governmental agencies. When regulatory agencies arrive on-site for unannounced inspections, the Contractor shall immediately inform the Engineer and the Construction Management Team and shall escort the inspector(s) for the entire duration of their time on-site. When the Engineer is not present during a safety inspection, immediately report to the Engineer that an inspection has taken place, and describe any violations, or citations, and the Contractor's abatement actions or salient events arising from the inspection.
- g) The Contractor shall be responsible to ensure compliance with the specific policies and procedures established in the OCIP Construction Safety Procedures Manual. To ensure Contractor and Subcontractor compliance with the IIPP's and applicable laws, contractor specifications, and the Owner Controlled Insurance Program, the Engineer or Construction Management Team Representative will use a Schedule Driven Safety Program and a Managing Safety Performance or equivalent program(s) as approved by the Engineer to gauge the Contractor's compliance and adherence to its site-specific IIPP and applicable laws and regulations. Such monitoring and audits by the Construction Management Team or the Engineer will not relieve the Contractor of any safety and health obligations.
- h) Eating and drinking shall not be permitted in areas containing hazardous materials.

- i) Equipment shall be maintained in a proper state of operation as per the manufacturer's specifications. Equipment service records will be maintained and be available for inspection to ensure compliance.
- j) Reduce harmful combustion engine emissions to the greatest extent feasible by conducting preventive maintenance on construction equipment and, whenever possible, limit equipment idling time by such means as turning engines off while vehicles are in loading and unloading queues; use clean and low sulfur fuels and use electric motors to drive conveyor belts, pumps, compressors, and other equipment.
- k) All personnel shall wear appropriate Personal Protective Equipment in accordance with the Contractor's IIPP, regulatory requirements, and the OCIP Construction Safety Procedures Manual. All personnel in active construction areas shall be required to wear approved hard hats, eye protection, safety vests with reflective stripes, steel toed work shoes, long pants, and shirts with sleeves. Gloves, hearing protection, and additional eye protection may be required as appropriate.
- l) No asbestos- or PCB-containing materials shall be used.
- m) At the beginning of the Project, the Contractor shall post at the entrance to the construction site a sign of size and wording approved by the Engineer listing the general rules, regulations, attire, and PPE requirements.

5-7.2.1.6 Safety and Health Training.

- 1. The Contractor's safety and health representatives shall conduct training classes before commencement of the Work and on a monthly basis, or more often if needed, on safety and health, emergency procedures, first aid, fire prevention, and other areas applicable to the Work. The Contractor may seek input from the Engineer.

5-7.2.1.7 First Aid.

- 1. The Contractor is responsible to provide initial emergency care and to notify Emergency Responders by calling 911 when required. The contractor is also responsible to arrange for transportation of sick or injured persons off the job site when other than emergency transport is appropriate.

5-10 COMMUNITY OUTREACH. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTED with the following:

5-10.1 General.

- 1. To ensure consistency with the City's community outreach plan for the project, the City shall work with you to inform the public (which includes, but shall not be limited to, property owners, renters, homeowners, business owners, business patrons, recreational users, and other community members and

stakeholders) of construction impacts, including when, where, and how long the impacts will last. Your efforts to mitigate construction impacts by communicating with the public require close coordination and cooperation with the City. Community outreach will be led by the Owner's Outreach team and supported by the Contractor.

2. You shall perform the community outreach activities required throughout the Contract Time. You shall assign a staff member from your construction team who shall perform the required community outreach services as a point of contact for the Owner's Outreach team and Construction Manager/Resident Engineer.
3. You shall closely coordinate with the Owner's Outreach team the Work with the businesses, institutions, residents, and property owners impacted by the Project.
4. Your example duties include working with the Owner's Outreach team to notify businesses, institutions, and residents of the commencement of construction activities not less than five (5) days in advance, coordinating access for vehicular and pedestrian traffic to businesses, institutions, and residences impacted by the Project, reporting activities at all Project progress meetings scheduled by the Engineer, attending the Project Pre-construction meeting, attending up to eight (8) community meetings, attending one-on-one meetings with businesses and stakeholders as needed, and supporting responses to community questions and complaints related to your activities.
5. Members of your team shall participate in outreach meetings, including an initial orientation meeting (superintendent and foremen), led by the City and Owner's Outreach team to discuss expectations for and participation in outreach tasks throughout the Contract Time. The superintendent shall participate in the subsequent outreach meetings on a quarterly basis following the initial orientation.
6. The assigned staff member responsible for performing required community outreach services shall maintain an outreach materials kit provided and updated by the Owner's Outreach team.
7. You shall execute the Information Security Policy (ISP) Acknowledgement Form - For Non-City Employees within 15 Days of the award of the Contract if any of the following apply:
 - i. Your contact information is made available on any outreach materials.
 - ii. You will be the primary point of contact to resolve project related inquiries and complaints.

8. Electronic Communication.
 - i. All inquiries and complaints shall be sent to the Owner's Outreach team to be logged in to the City's internal public contact tracking system within 24 hours of receipt of inquiries and complaints.
 - ii. Any updates or a resolution of inquiries and complaints shall be sent to the Owner's Outreach team to be documented in the City's internal public contact tracking system within 24 hours.
 - iii. Copies of email communications shall be saved individually on to the City's internal public contact tracking system in an Outlook Message Format (*.msg).
 - iv. All graphics, photos, and other electronic files associated with inquiries and/or complaints shall be provided to the Owner's Outreach team to be saved into the individual records, located within the City's internal public contact tracking system.

5-10.1.1 Quality Assurance

1. During the course of community outreach, you shall ensure that the character of all persons that conduct community outreach (distributing door hangers, attending community meetings, interacting with the public, etc.) on your behalf shall:
 - a. Have the ability to speak and comprehend English and/or English and Spanish, as appropriate for the community or public they are informing.
 - b. Possess and display easily verifiable and readable personal identification that identifies the person as your employee.
 - c. Have the interpersonal skills to effectively, professionally, and tactfully represent you, the project, and the City to the public.

5-10.1.2 Submittals

1. All public notifications and outreach materials will be prepared by the Owner's Outreach team and shall be delivered/distributed by the Contractor. After distributing, you shall submit verification of delivery and any copies of returned notices to the Owner's Outreach team. Submit a PDF copy of the approved letters and notices to the Owner's Outreach team.
2. You shall provide the required information to the Owner's Outreach team for the creation and distribution of newsletters, e-newsletters, website updates, etc., for a project including: a written update on the progress of Work, 3 week look-ahead schedules, contact names and phone numbers, and any other information which may be of interest to the public for this purpose.
3. You shall identify and summarize communications (via phone, in person, and email) with the public within 24 hours of receipt, even if your response to the

individual is still incomplete, to the Owner’s Outreach team for inclusion in the City’s internal public contact tracking system. You shall submit copies of all written, electronic, and verbal communications and conversations with the public to the Owner’s Outreach team for reporting to the City’s internal public contact tracking system.

ADD:

5-10.1.3 Weekly Updates Recipients.

1. Submit a weekly correspondence with updates, traffic control issues and locations, lane closures, and any other pertinent information (with additional contact names given during award process) to the following recipients:

Reyhaneh Martin, Senior Engineer, RMartin@sandiego.gov

Juan Eli Bermudo, Project Manager, JBermudo@sandiego.gov

Robert Hanna, Construction Manager , RHanna@sandiego.gov

Azin Nour, Construction Manager, ANour@sandiego.gov

5-10.2 Community Outreach Services

5-10.2.1 Public Notice by Contractor. To the “WHITEBOOK”, items 2 and 3, DELETE in their entirety and SUBSTITUTE with the following:

2. No less than 5 Working Days in advance of Project construction activities and utility service interruptions, you shall notify all critical facilities, businesses, institutions, property owners, residents, or any other impacted stakeholders within a minimum 300-foot (90 m) radius of the Project. Verbal and written notifications shall be sent to critical facilities (including but not limited to police stations, fire stations, hospitals, and schools). A copy of written notifications sent to any critical facility shall also be sent to the Resident Engineer. You shall keep records of the people contacted, along with the dates of notification, and shall provide the record to the Engineer upon request. You shall identify all other critical facilities that need to be notified.
3. Furnish and distribute public notices in the form of door hangers using the City’s format to all occupants and/or property owners along streets:
 - a. Where Work is to be performed at least Working 5 Working Days before starting construction or survey activities or impacting the community as approved by the Resident Engineer.
 - b. Within 5 Working Days of the completion of your construction activities where Work was performed, you shall distribute public notices in the form of door hangers, which outlines the anticipated dates of Asphalt Resurfacing or Slurry Seal.
 - c. 72 hours in advance of the scheduled resurfacing.

5-10.2.2 Communication with the Public

1. Coordinate access for vehicular and pedestrian traffic to businesses, institutions, and residences impacted by the Project.
2. You shall provide updates on construction impacts to the Resident Engineer and the Owner's Outreach team. You shall notify the Resident Engineer in advance about time-sensitive construction impacts and may be required to distribute construction impact notices to the public on short notice.
3. You shall incorporate community outreach activities related to construction impacts in the baseline schedule and update the Resident Engineer and the Owner's Outreach team with each week's submittal of the Three-Week Look Ahead Schedule.
4. At the request of the Resident Engineer or the Owner's outreach team, you shall attend and participate in project briefings at community meetings and one-on-one meetings with businesses and/or stakeholders.
5. You shall coordinate with the Resident Engineer and Owner's Outreach team on all responses and actions taken to address public inquiries and complaints within the 24 hours that they are received.

5-10.2.3 Communication with Media

1. The City may allow members of the media access to its construction site(s) on a case-by-case basis only.
2. Occasionally, uninvited members of the media may show up at construction Sites. Members of the media (including, but not limited to newspapers, magazines, radio, television, bloggers, and videographers) do not have the legal right to be in the construction Site without the City's permission.
3. In the event that media representatives arrive near or on the construction Site(s), you shall keep the media representative off the Site(s) in a courteous and professional manner until a Public Information Officer is available to meet them at an approved location.
4. You shall report all visits from members of the media to the Resident Engineer and the Owner's Outreach team as quickly as possible so that the City's Public Information Officer can be contacted and can meet with the members of the media at the construction Site(s).
5. If the City allows members of the media to access a construction Site, you shall allow the City to escort the media representatives while they are on the construction Site and shall ensure their safety.

6. You shall require media representatives to sign in and out of the Site Visitor Log and to use personal protective equipment.
7. You have a right to speak to members of the media about your company and its role on the project. All other questions shall be referred to the City.

5-10.2.4 Payment

1. The payment for these community outreach services shall be included in the Contract Price.

5-11 NEWSLETTER. To the "WHITEBOOK" DELETE in its entirety.

5-13 ELECTRONIC COMMUNICATION. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. PMWeb shall be used on this Contract. See Technical Section 01 33 22 Web Based Construction Document Management.
2. You shall post all communications addressed to the Engineer concerning construction including RFIs, submittals, daily logs, and transmittal through PM Web. Review and act on all communications addressed to the Contractor in PM Web will be provided at the Pre-Construction meeting and demonstration will be provided.
3. Contractor shall comply with Section 5-3.3 for items related to "Payroll Records".

5-15.1 General. To the "WHITEBOOK", item 10, DELETE in its entirety and SUBSTITUTE with the following:

10. If your construction activities have encountered flammable liquids or other hazardous substances, you shall ensure that construction staff have the required Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. Construction staff shall include: City Engineers, City Laboratory Technicians, and City staff that perform onsite inspections.
 - a) If your Work encounters flammable liquids or other hazardous substances, you shall be responsible for scheduling training for all construction staff to attend and for submitting verification to the Engineer that construction staff have the required HAZWOPER certification prior to continuing that Work in that area. You shall maintain the HAZWOPER certifications annually until the construction activities triggering the requirement is complete, as approved by the Resident Engineer.
 - b) You shall be responsible for implementing, training, and submitting verification to the Engineer that construction staff have the required HAZWOPER certification before the Notice to Proceed (NTP) has been issued.

5-15.17 Payment. To the "WHITEBOOK", ADD the following:

5. The payment for Hazardous Waste Operations and Emergency Response (HAZWOPER) certification and training for construction staff shall be included in the Contract Price.

SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK

6-1.1 Construction Schedule. To the "GREENBOOK", paragraph (1), sentence (1), DELETE in its entirety and SUBSTITUTE with the following:

After notification of award of the Contract and prior to the start of any Work, you shall submit your proposed Cost Loaded Construction Schedule to the Engineer at the pre-construction meeting.

To the "WHITEBOOK", item 1, subsection "e", "h", and "s", DELETE in their entirety and SUBSTITUTE with the following:

- e) Monthly progress payments are contingent upon the submittal of an updated Schedule to the Engineer. The Engineer may refuse to process the whole or part of any monthly payment if you refuse or fail to provide an acceptable schedule.
- h) Your Schedule shall include 7 Working Days for the Engineer to schedule and conduct a Walk-through inspection and 15 Working Days for the generation of the Punchlist. You shall Work diligently to complete all Punchlist items within 30 Working Days after the Engineer provides the Punchlist.
- 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 Cash Flow Forecast** and use the format shown.
 - ii. See also the "Cash Flow Forecast Example" at the location below:

<https://www.sandiego.gov/ecp/edocref/>

6-1.1.2 Contracts More Than \$500,000 In Value. To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. Provide the Schedule to the Engineer in accordance with 6-1.1, "Construction Schedule" and 6-1.2, "Commencement of the Work".

To the "WHITEBOOK", item 2, DELETE in its entirety.

6-1.2

Commencement of the Work. To the "WHITEBOOK", ADD the following:

5. You shall submit a Cost Loaded Construction Schedule in accordance with 6-1.1, "Construction Schedule" at the scheduled pre-construction meeting.
6. If a Cost Loaded Construction Schedule is not provided, the pre-construction meeting will still be held. The Contract Time shall commence at issuance of the NTP, but you shall be limited to the following activities until the Cost Loaded Construction Schedule has been submitted to the Resident Engineer with no exceptions taken:
 - a) Mobilization of your trailers, associated utility setup, and grading for trailer area
 - b) Permit Procurement
 - c) Fencing and temporary utilities for your storage areas
 - d) Submittal of anticipated critical path submittals

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.

ADD:

6-2.2

Work Restrictions. The items below are in reference to the Morena Conveyance South and the Middle:

1. Construction across Buenos Avenue and Dorcas Street may not occur at the same time to ensure access to the Overlook Heights neighborhood.
2. Staging on Ashton Street is prohibited.
3. Contractor shall coordinate stop work for up to (7) working days per calendar year to accommodate events. These events include but are not limited to the

following; Rock and Roll Marathon, Kaiser Permanente Half Marathon, Susan G Komen Race for the Cure, USD Move in and Graduation and additionally during large trolley usage events such as Comic Con, Opening Day for Padres, and major events at SDSU Mission Valley.

4. Contractor shall remain available through commissioning of the entire conveyance system to assist as required in the start-up and integration activities.
5. Contractor shall ensure access to all properties along the alignment during their hours of operation.
6. Work along Morena Boulevard, Milton Street and Clairemont Drive (Night Work) shall not coincide with the work along Chicago Street, Jellett Street and Denver Street (Day Work). A minimum stage of 7-calendar days is required for a transition of work from Night to Day or Day to Nightwork in this area in order to provide a temporary reprieve from construction noise for the adjacent residents.
7. Contractor shall provide protection in place methods for all SDG&E crossings identified as Protect in Place for review and approval by SDG&E.
8. SDG&E will be removing a 6-inch diameter gas main on West Morena Blvd. from 400-feet south of Morena Blvd. to 150-feet north of Milton Ave. and replace with a 2-inch diameter gas main on West Morena Blvd. from Asher St. to Littlefield St. Contractor shall coordinate with SDGE crews during construction. Contractor will not be able to install the Brine Line until the 6-inch diameter gas main is removed.
9. Contractor shall not be allowed to construct on Sherman and Custer Streets within the first 200 working days to allow for large vehicle traffic for Morena Pump Station construction.
10. SDG&E's anticipated schedule for this work is April 2022 to November 2022.
11. Contractor shall provide delivery access point to the northern drive entrance adjacent to Station 303+00.
12. The northern drive access adjacent to Station 239+00 has periodic events on Monday evenings between 7:00 PM and 9:00 PM, Contractor to coordinate with the Salvation Army schedule to avoid conflicts.
13. No work shall occur between Stations 298+00 and 331+00 during the Holiday Moratorium (Thanksgiving to January 3rd)
14. Contractor shall coordinate with Morena Pipelines Contractor for Tecolote Creek crossing.

6-2.3 Schedule Milestones

1. Milestone 1 – Intermediate Substantial Completion – Completion of all requirements defined herein for Intermediate Substantial Completion.
2. Milestone 2 – Substantial Completion– Completion of all requirements defined herein for Substantial Completion.

3. Milestone 3 – Final Completion – Completion of all requirements defined herein for Final Completion.

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”.

6-4.4

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.

ADD:

6-6.1.1 Environmental Document.

1. The City of San Diego has prepared a **Environmental Impact Report/Environmental Impact Statement (EIR/EIS)**, Project. No. **SCH#2106081016/PS #499621** for Pure Water Phase 1, which includes the Morena Conveyance South and Middle. This document may be obtained at the following web link:

<https://www.sandiego.gov/public-utilities/sustainability/pure-water-sd/reports>

In addition, Pure Water Phase 1 has obtained the Environmental Documents and permits listed below with corresponding links that the Contractor shall comply with.

PURE WATER ENVIRONMENTAL DOCUMENTS
Site Development Permit
Record of Decision
Section 1602 Streambed Alteration Agreement
Army Corps of Engineers 404 Permit
Clean Water Act Section 401 Water Quality Certification

These documents can be obtained at the following link:

<https://drive.google.com/drive/folders/1ha2YTi2S4J0arelnkULofOqD7UD94IYd?usp=sharing>

2. The City of San Diego has prepared Final Program Environment Impact Report No. 290781 SCH# 2012061075, Final Program Environment Impact Report No. 416603 SCH# 2015021053, Balboa Avenue Station Specific Plan Final Program Environment Impact Report No. 586601 SCH# 2017071007, Morena Corridor Specific Plan Final Program Environment Impact Report No. 582608 SCH# 2016101021, for the **PHASE 1 NORTH CITY PURE WATER PROJECT, MORENA CONVEYANCE (BL)**. These documents may be obtained at the following web link:

<https://drive.google.com/drive/folders/17D-6woxybgAjhYWEi1TVQ3mdHzuOv43v?usp=sharing>

3. Compliance with the City's environmental documents shall be included in the Contract Price.

6-6.2.1 Archaeological and Native American Monitoring Program. To the "WHITEBOOK", ADD the following:

4. The City will retain a qualified archaeologist and Native American Monitor for this Contract. You shall coordinate your activities and Schedule with the

activities and schedules of the archaeologist and Native American monitor. Notify the Engineer before noon of the Working Day before monitoring is required. See 3-5, "INSPECTION" for details.

6-6.2.2 Paleontological Monitoring Program. To the "WHITEBOOK", ADD the following:

3. The City will retain a qualified paleontologist for this Contract. You shall coordinate your activities and Schedule with the activities and schedules of the paleontologist monitor. Notify the Engineer before noon of the Working Day before monitoring is required. See 3-5, "INSPECTION" for details.

6-9 LIQUIDATED DAMAGES. To the "WHITEBOOK", ADD the following:

3. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Contract Times in the Scope of Work. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), the Contractor shall pay the following amounts for each Milestone for each day that expires after the time specified herein until the Work is substantially complete. If the Work of multiple Milestones are simultaneously not completed by the times specified, the Contractor shall pay the amount for the first Milestone not completed.

Milestone No.	Milestone Description	Required Completion Date	Amount of Liquidated Damages
Milestone 1	Intermediate Substantial Completion	560 Working Days after Notice to Proceed	\$9,500/Working day
Milestone 2	Substantial Completion	640 Working Days after Notice to Proceed	\$1,000/Working day
Milestone 3	Final Acceptance and Completion	680 Working Days after Notice to Proceed	\$1,000/Working day

SECTION 7 – MEASUREMENT AND PAYMENT

7-3.1 General. To the “GREENBOOK” and “WHITEBOOK”, paragraph (8), DELETE in its entirety and SUBSTITUTE with the following:

If, within the time fixed by law, a properly executed notice to stop payment is filed with the City, due to your failure to pay for labor or materials used in the Work, all money due for such labor or materials will be withheld from payment in accordance with applicable laws.

To the “WHITEBOOK”, ADD the following:

1. Unless specified otherwise, the Contract Price includes use, consumer, and other taxes mandated by applicable legal requirements.
2. As provided in §7105 of the California Public Contract Code, if the Contract is not financed by revenue bonds, you are not responsible for the cost of repairing or restoring damage to the Project when damage was proximately caused by an act of God, in excess of 5% of the Contract Price, if the following occur:
 - a) The Project damaged was built in accordance with the Contract requirements.
 - b) There are no insurance requirements in the Contract for the damages.
3. The bid items and their scope are specified in the plans, contract documents and technical specification Section 01 29 00.

7-3.2 Partial and Final Payment. To the “WHITEBOOK”, item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. The Final Payment, which is the release of Retention, shall be paid to you after you have successfully submitted the following required documents:
 - a) An affidavit that payrolls and bills for materials, equipment, and other indebtedness connected with the Work for which the City or the City's property might be responsible for or encumbered by.
 - b) A certificate evidencing that insurances required by the Contract Documents shall remain in force after Final Payment is currently in effect and shall not be canceled or allowed to expire until at least a 30 Calendar Days prior written notice has been given to the Engineer.
 - c) Consent of Surety to Final Payment.
 - d) If required by the Engineer, other data establishing payment or satisfaction of obligations such as receipts, releases and waivers of liens, claims, and security interests or encumbrances arising out of the Contract Documents. If a Subcontractor refuses to furnish a release or

waiver required by the City, you may furnish a bond satisfactory to the Engineer to indemnify the City against such lien.

- e) If required in the Contract Documents, the successful completion and submittal of the required reports such as construction demolition, waste recycling, and hydrostatic discharge reports.
- f) Required EOCP Final Summary Report in accordance with Section 0-12, "Contract Records and Reports", record drawings, operations manuals, test reports, warranty documentation, and UL labels shall be submitted before requesting the release of retention.
- g) Acceptance of the completed Project by the asset owning Department.

To the "WHITEBOOK", ADD the following:

- 2. Submit an invoice for payment after you successfully complete the required documents and the City will pay the invoice within 30 Calendar Days. The City will pay 6% annually for late retention payments.

7-3.2.1 Application for Progress Payment. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

- 3. The City shall not pay progress or partial payments until you submit to the Engineer an acceptable updated Schedule. It is solely your responsibility to prepare and submit the Schedule updates.

7-3.2.2 Amount of Progress Payments. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

- 1. The City will pay 6% annually for late progress payments.
- 2. Progress payments will be considered "late" if the following occur:
 - a) The City does not pay the contractor within 30 Calendar Days from receipt of an undisputed and properly submitted invoice. A properly submitted payment invoice means that the City has approved for payment the entire invoice amount or if the Resident Engineer has not disputed any portion of the application within 7 Calendar Days of the date of submission.
 - b) The application for payment does not require signing of a Contract Change Order.
- 3. The Engineer may withhold payment for any of the following reasons:
 - a) Defective or incomplete Work.
 - b) Not providing an updated and accurate Cost Loaded Construction Schedule in accordance with 6-1.1, "Construction Schedule".

- c) Stop notices, wage orders, or other withholdings required by Applicable Law. Your failure to comply with 5-3.3, "Payroll Records" and the Contractor Registration and Electronic Reporting System requirements of the Contract Documents.
4. The Engineer may back charge the contract for any of the following reasons:
- a) Defective or incorrect Work not remedied.
 - b) Damage to City property or a third party's property that was caused by you.
 - c) Liquidated Damages.

7-3.2.3 Waiver of Claims at Final Payment. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

- 1. Your acceptance of Final Payment constitutes a waiver of affirmative Claims by you, except those previously made in writing and identified as unsettled at the time of Final Payment.

7-3.2.4 Withholding of Payment and Back Charge. To the "WHITEBOOK", DELETE in its entirety.

7-3.4.1 Payment. To the "WHITEBOOK", ADD the following:

- 4. The cost for mobilization excludes the costs for all mobilization and demobilization Work associated with each paving phase. The costs for all mobilization and demobilization Work associated with each paving phase shall be paid in accordance with 306-1.2.1, "Payment".

7-3.5.1 General. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

- 1. Unit Bid prices shall not be subject to adjustment regardless of quantity used, or if none is used, for the following Bid items:
 - a) imported backfill
 - b) shoring
 - c) water services
 - d) house connection sewers
 - e) water pollution control items
- 2. Unit Bid prices for "Potholing Existing Utilities Not Shown on Plans (Depth up to 7 feet)" shall not be subject to adjustment regardless of quantity used or if none is used.
- 3. Upon discovery and prior to the Work, you shall notify the Resident Engineer if there is a change in Bid item quantity that increases the total Contract Price by 5% or \$100,000 or more, whichever is less.

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**

Contract Price	Maximum Field Order Work Amount
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.

7-4.3

Markup. To the "WHITEBOOK", item 4, DELETE in its entirety and SUBSTITUTE with the following:

4. When a Subcontractor is performing Extra Work, the allowance for overhead and profit shall be applied to the labor, materials, and equipment costs of the Subcontractor as follows:
 - a) Regardless of the number of a Subcontractor's tasks for Extra Work, you may only apply 10% for the first \$50,000 of the Subcontractor's portion of accumulated total cost then 5% for any remaining costs. You shall not apply 10% to any costs after the first \$50,000 of accumulated total costs from performing Extra Work.
 - b) If the accumulated costs of single or subsequent tasks exceed the \$50,000 threshold, you shall instead only apply 5% to any amounts in excess of the \$50,000.
 - c) Regardless of the number of hierarchical tiers of Subcontractors, you may only markup a Subcontractor's Work once.

SECTION 8 - FACILITIES FOR AGENCY PERSONNEL

8-2

FIELD OFFICE FACILITIES. To the "WHITEBOOK", ADD the following.

1. Provide Owner's Representative Field Office per Section 8-2.5.

ADD:

8-2.5

Owner's Representative Field Office

A. General:

1. Separate from Contractor's field office, Contractor shall provide field offices, equipment, services and utilities specified herein for the Owner's Representative and the Engineer at the project site. Alternatives to the modular trailer configuration and criteria described herein may be proposed by the Contractor, provided that the alternatives meet the requirements outlined below. Alternatives will need to be reviewed and approved by the Owner's Representative. Potential alternatives include commercial or industrial office space.
2. Unless released earlier by the Owner's Representative in writing, said field office(s) shall be maintained in full operation at the site with all utilities connected and operable until the Notice of Completion has been executed or recorded. Upon execution or recordation of the Notice of Completion, or upon early release of the field office(s) by the Owner's Representative, the Contractor shall remove the field office(s) within 14 days from said date, and shall restore the site occupied by said field office(s).
3. Field Office shall be located within the limit bounds as follows:
 - a. North – Appleton Street

- b. East – Tecolote Canyon
- c. South – Friars Road
- d. West – Interstate 5

B. Office Facilities:

1. General: The Contractor shall provide all necessary electrical utility service connection and trailer wiring, plumbing with hot and cold water, toilet and lavatory fixtures, air conditioning and heating equipment, and shall furnish all necessary light, heat, water, and janitorial services in connection with all field offices specified herein, for the duration of the Work.
2. Field office: The Contractor shall provide and maintain for the exclusive use of the Owner's Representative and the Engineer one separate, well lighted, field office trailer with the following:
 - a. The area of said field office shall not be less than 5,760 (48'x120') square feet, including toilet facilities. The Contractor shall provide all furnishings, services, and equipment specified herein.
 - b. The office shall have a minimum of four outside doors with security locks and 10 keys provided. Lockable exterior door bars shall be provided. Railed landings and railed stairs shall be provided at each door. An 8-foot full trailer width deck at the main entrance of the trailer shall be provided with rails and ADA compliant handicap access ramp.
 - c. Trailer shall have a minimum of fifteen exterior windows. Windows shall be equipped with security guard screens and interior blinds.
 - d. Contractor shall provide a sign on the main entrance door reading Construction Manager, letter height 4 inches minimum.
 - e. The field office trailer will have a minimum of 6 offices (to be confirmed via approved floor plan submittal), two toilet rooms, one 15' x 48' conference room and a common area with sink and counter space and electrical outlets.
 - f. A minimum of four (4) 110-v ac duplex electric convenience outlets shall be provided in each individual office and four (4) in the conference room. Additional duplex outlets shall be evenly distributed around the common area. Each desk location shall have at least one duplex outlet. The electric distribution panel(s) shall be of sufficient size to provide uninterrupted service. Should sizing of panels be found inadequate Contractor shall, at no additional cost, increase the circuits and wiring to provide uninterrupted service. A

dedicated 20-amp circuit shall be provided for the copy machine.

- g. Three Ethernet outlets shall be provided in each office and shall be spaced throughout the common area and the conference room. Contractor shall provide all Ethernet cabling.
- h. Contractor shall provide a preliminary layout of the field office trailer for approval by the Owner's Representative prior to fabrication of the trailer.

C. Field Office Furnishings:

- 1. The Contractor shall provide the following listed items in new condition or as approved by the Owner's Representative for the field office:
 - a. 15 each - Standard 30 x 60-inch desks
 - b. 1 each - Plan table 36 x 72-inch top; 36-inches high
 - c. 15 each - File cabinets, legal size, 4-5 drawer, with suspension racks
 - d. 30 each - Office chairs, standard arm rest type, adjustable, swivel, tilt-back with casters.
 - e. 15 each - Waste baskets.
 - f. Clothes Rack: Two
 - g. 1 each - Reverse osmosis/cartridge filter water dispenser unit (supplying both hot and cold water) with continuous supply of paper cups.
 - h. 12 each - Book case, 30 x 72 x 12 inches
 - i. 18 each - Stackable chairs, cushion type
 - j. 15 each - Conference tables, 30" x 60"
 - k. 1 each - First aid kit.
 - l. 4 each - Fire extinguishers,
 - m. 4 each - Marker board, 2' x 4'
 - n. 3 each - Marker board, 4' x 8'
 - o. Provide and install 55-inch Samsung Smart TV
 - p. 1 each - Refrigerator/freezer, 21.7 cu ft minimum capacity
 - q. 1 each - Microwave oven
 - r. 1 each - Office copy machine. The copy machine shall be a Xerox VersaLink Model C7120 with the two tray option and the Integrated Office Finisher or equal with full maintenance support. Toner shall also be provided with two spare toner cartridges with the copier at all times. The Contractor shall set up the copy machine so that it can perform its full range of

features such as copy, print, scan, e-mail, and send/receive fax. The Contractor shall obtain and pay for a service contract with a local representative of the dealer or manufacturer for on-site service and repair within 24 hours.

D. Field Office Services:

1. The field office shall be provided with sufficient lighting to provide not less than 60-foot-candles at desk top height. Lighting shall be provided over the entrance doors.
2. Plumbing shall be connected to the sanitary sewer. A continuous supply of toilet paper and paper towels shall be furnished.
3. Two (2) times a week (Tuesday and Thursday) janitorial services shall be performed after working hours each day. Offices shall be swept, dusted, waste receptacles emptied, and all debris properly disposed of. Toilet facilities shall be sanitized and cleaned. Supplies shall be replenished, as required, of paper towels, paper cups, hand soap, toilet paper, and first-aid kit.
4. Provide and Install Electrical power service. Monthly power bill shall be paid by the Contractor.

E. Contractor shall pay for all permits and connection fees associated with the trailer installation.

F. Execution:

1. Make available for Construction Manager's use prior to start of the Work at Site or within 30 Days of the Notice to Proceed, whichever comes first. Field Office shall remain on Site through Notice of Completion. Contractor shall also demobilize trailer facilities.
2. Provide minimum 100 square feet of gravel or crushed rock base, minimum depth of 4 inches, at each entrance. Provide gravel or crushed rock base, minimum depth of 4-inches, for parking area suitable for fifteen vehicles.
3. Locate where directed by Construction Manager; level, block, tie down (seismic restraint), skirt, provide stairways, ADA accessible ramp, 8-foot-wide decking at entrance for the entire width of the trailer and relocate when necessary and approved. Construct on proper foundations, and provide proper surface drainage and connections for utility services.
4. Raise grade under field office, as necessary, to elevation adequate to avoid flooding.

5. Provide sanitary facilities in compliance with state and local health authorities.
6. Exterior Door Keys: Furnish two sets of keys.
7. Telephone:
 - a. Provide and install Voice over Internet Protocol (VOIP) phones for the number of incoming lines equal to that specified.
 - b. Provide and install appropriate jacks; locate as directed by Construction Manager.
8. Computer:
 - a. Provide and install four HP Inspiron Desktop Model # I3470-3903BLK-PUS with 24- inch Dell Monitors Model # S2419NX) or approved equal, including required connecting cables and plugs.
9. Local Area Network (LAN):
 - a. Provide Ethernet network prewired in compliance with EIA/TIA 568B.
 - b. LAN shall be designed and installed by personnel experienced in similar LAN systems.
10. Telecommunications:
 - a. Site/Room Requirements:
 - 1) Provide and install a 4' x 4' x ¾" fire-rated plywood backboard
 - 2) Provide and install a 120V AC dedicated outlet on a dedicated 15Amp circuit breaker. Single standard 3 prong 120V AC, 15Amp dedicated receptacle. Within 5' of equipment mount
 - 3) Provide and install new #6 ground wire bonded to an MGN (except in CA) or UFER Ground terminated to a grounding bus bar 2" Sleeve(s).
 - 4) Backboard shall be mounted to wall with proper drywall anchors and not just screws
 - 5) Active equipment shall not be installed within 3' of electrical panels
 - 6) Active equipment shall not be installed within 3' of water sources (sinks, wash basins)
 - 7) All equipment shall be installed in accordance with all ADA code (leaving 36" open fare way).
 - 8) Provide and install two (2), 5-15P outlets on 120 volt, 15 amp circuits. Within three feet of the network racks
 - 9) Provide and install all labor, materials and equipment to connect to the City's SANNET fiber network.

- b. Network Cabling Requirements:
- 1) Provide and install fourteen (14) network wall plates with two (2) data jacks per wall plate for a total twenty-eight (28) data jacks.
 - 2) All data jacks shall be clearly and professionally labeled with matching labels at the face-plate and at the patch panel. Naming convention shall be based upon the matrix attached. Handwritten labels are not acceptable.
 - 3) All data jacks shall be home runs from the face-plate to a Category 6 patch panel to the nearest IDF.
 - 4) Cabling between the wall jack to the patch panel shall be plenum rated cable where required by code. The Category 6 cables shall be "Blue" in color. Use T568A wiring pattern terminating into Keystone Jack, Category 6, 110 type, 90 degree at the wall jack. The wall jack shall match the color of the face-plate.
 - 5) The cabling between the wall plate and the patch panel, the cabling will terminate into the patch panel using a T568A wiring pattern into a Keystone Jack, Category 6, 110 type, 90 degree at the patch panel. The keystone shall match the color of the patch panel.
 - 6) All data jacks shall be tested and certified. The vendor will provide a complete testing report for all data jacks.
 - 7) Install one (1), 48-port Category 6 Patch Panel. Each patch panel will be a 2U, 48-port Category 6 Patch Panel.
 - 8) Install a Wall mounted cabinet. Rack Size - 19". Height (Rack Units) - 12U. Dimensions (WxDxH) - 25.1 in x 23.6 in x 17.7 in.
- c. Network a printer of quality and capabilities equal, or similar, to the following with contracted for immediate site services:
- 1) Sharp MX 4070V B&W an Color Networked capable of 11X17 printing and network accessible, with full maintenance support. Toner shall also be provided with two spare toner cartridges with the copier at all times. The Contractor shall setup the copy machine so that it can perform its full range of features such as copy, print, scan, e-mail, and send/receive fax. The Contractor shall obtain and pay for a service contract with a local representative of the dealer or manufacturer for on-site service and repair within 24 hours; or
 - 2) Multi-Function Device (MFD): Provide a Konica Minolta BizHub C350 or C351 capable of color printing, 11X17 printing, scan to

email and fax capabilities with full maintenance support. Toner shall also be provided with two spare toner cartridges with the copier at all times. The Contractor shall setup the copy machine so that it can perform its full range of features such as copy, print, scan, e-mail, and send/receive fax. The Contractor shall obtain and pay for a service contract with a local representative of the dealer or manufacturer for on-site service and repair within 24 hours.

- 3) Multi-Function Device (MFD): Provide a Konica Minolta BizHub C350 or C351 capable of color printing, 11X17 printing, scan to email and fax capabilities.
 - d. The contractor shall provide an Internet, T1 line or greater. The internet circuit shall be provided for the duration of the project to the CM with an Ethernet handoff. Provide a public routable IP address scheme with a subnet mask of /29 for routable addresses. The Contractor shall provide LAN Line telephone service and voicemail and will perform maintenance including move, add, and changes for the duration of the project. Each network component and UPS device will carry the stated maintenance types until thirty (30) days after Final Acceptance. Contractor also shall provide wired/wireless router. Provide wifi for wifi enabled devices/printers to be used in all workspaces
 - e. Contractor shall provide all consumable supplies necessary for complete operation of the equipment specified under this section shall be furnished by Contractor until thirty (30) days after Final Acceptance. These supplies include, but are not limited to, ink and toner cartridges, plain paper, first-aid supplies, and fire extinguishers and certifications.
 - f. Provide appropriate jacks, wiring, and equipment required for a complete telecommunications system.
 - g. Arrange and provide for telecommunication service for use during construction. Pay costs of installation, maintenance, and monthly service of internet connection.
 - h. Provide conference room speaker: Anker PowerConf S3 Bluetooth Speakerphone with 6 microphones or equal
 - i. Provide and install conference room phone: Polycom SoundStation IP 6000 (or equal)
11. Maintain in good repair and appearance, and provide weekly cleaning service and replenishment, as required, of paper towels, paper cups, hand soap, toilet paper, first-aid kit supplies, and bottled water.

8-2.5.1.1 Payment. To the "WHITEBOOK", ADD:

The payment for Field Office Facilities shall be included in the Lump Sum bid item "Field Office (Owner's Rep)" and shall comply with all requirements discussed in supplementary provisions section 8-2.5.

SECTION 201 – CONCRETE, MORTAR, AND RELATED MATERIALS

201-1.1.2 Concrete Specified by Class and Alternate Class. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Monolithic curb and pavement shall not be allowed.
2. To Table 201-1.1.2, REVISE the following:
 - a) Concrete class for "Concrete Pavement (not integral with curb)", DELETE "520-A-2500" and SUBSTITUTE with "560-C-3250".
 - b) Concrete class for "Sidehill Surface Drainage Facilities", DELETE "500-C-2500" and SUBSTITUTE with "520-C-2500".
 - c) Concrete class for "Fence and Guardrail Post Foundations", DELETE "500-C-2500" and SUBSTITUTE with "520-C-2500".

ADD:

201-10.5 Crystalline Waterproofing for Concrete Surfaces.

201-10.5.1 General.

This section includes materials and application of crystalline waterproofing for concrete surfaces.

201-10.5.1.1 Submittals.

1. Submit shop drawings in accordance with the General Provisions.
2. Submit manufacturer's specifications, installation instructions, and general recommendations for the use of the waterproofing materials.
3. Submit a copy of manufacturer's representative's report certifying that surfaces to which waterproofing is to be applied are in an acceptable condition to receive same, that materials to be installed comply with specified requirements, and that applicator has the experience to install the materials in accordance with manufacturer's product data.
4. Submit certified independent test data for each material showing compliance with the specified requirements.

201-10.5.1.2 Quality Control.

1. Performance Criteria: Install waterproofing materials so that the completed work provides an impermeable barrier to withstand prevailing water pressure.
2. Applicator: Waterproofing applicator shall be a firm experienced in the installation of cementitious crystalline waterproofing as demonstrated by

previous successful installations. Waterproofing applicator shall be acceptable to the manufacturer and such acceptance shall be submitted in writing.

3. Qualification of Manufacturers: Provide only products of manufacturers with experience in supplying the principal materials for the required work.
4. Pre-installation Conference: Before start of construction of surfaces to receive waterproofing, schedule a meeting with waterproofing applicator and Owner's Representative to review procedures for substrate preparation and waterproofing application.

201-10.5.1.3 Independent Testing And System Description.

1. Testing shall be performed by an independent laboratory meeting requirements of ASTM E329 and certified by the United States National Bureau of Standards. Testing laboratory shall obtain concrete samples and waterproofing product samples.
2. Perform independent testing according to CRD C48-73 under the following conditions:
 - a) Concrete samples shall be 6 inches in diameter and no thicker than 2 inches.
 - b) Coatings shall be a maximum thickness of 0.05 inch per coat with up to two coats permitted.
 - c) Concrete samples shall have a design strength of 2,000 psi or less. No admixtures are permitted.
 - d) Test a minimum of four samples: two treated and two untreated. Untreated samples shall exhibit leakage at 10 psi or less.
 - e) Test samples to a pressure of 175 psi. Treated samples, after crystalline growth has occurred, shall exhibit no measurable leakage.

201-10.5.2 Materials.

201-10.5.2.1 Products.

1. XYPEX
2. KOESTER
3. PENETRON
4. Or approved equal

201-10.5.2.2 Crystalline Waterproofing.

Crystalline waterproofing shall be a cementitious coating containing components that will diffuse into the concrete by water, react with free lime, and create an impervious, waterproof, calcified barrier in the substrate. Technical requirements:

1. Permeability: 2.6×10^{-8} cm/second maximum (two coats) per U.S. Army Corps of Engineers Specification CRD-C48-92.
2. Compatibility: Produce no degradation of substrate.

201-10.5.3 Execution.

201-10.5.3.1 Delivery, Storage, And Handling.

Deliver materials in their original sealed packages clearly marked with the brand and manufacturer's name and store under cover in a dry, protected place.

201-10.5.3.2 Examination.

1. Prior to start of waterproofing installation, arrange a visit to project site by waterproofing material manufacturer's representative. Representative shall inspect and certify that surfaces to which waterproofing is to be applied are in acceptable condition.
2. Verify that surfaces are sound and clean.
3. Verify that form release agents, methods, and materials used to cure concrete surfaces are compatible with waterproofing materials.

201-10.5.3.3 Preparation.

Examine surfaces to be waterproofed for form tie holes and structural defects such as honeycombing, rock pockets, faulty construction joints, and cracks. Repair these defects prior to application.

201-10.5.3.4 Concrete Finish.

Concrete surfaces shall have an open capillary system to provide tooth and suction and shall be clean and free from scale, excess form oil, laitance, curing compounds, and foreign matter. Surfaces shall be lightly sandblasted or water blasted as necessary to provide a clean absorbent surface.

201-10.5.3.5 Application.

1. After completing repairs, apply a two-coat system to the concrete surfaces to be treated. Apply after concrete curing and finishing is completed. Application of waterproofing and any paint topcoats shall conform to the manufacturer's recommended application procedures.
2. Apply with a stiff bristle brush or broom. Application rates shall be in accordance with the manufacturer's printed recommendations.
3. The Contractor shall have the manufacturer's representative advise and/or supervise the waterproofing application in person.
4. Apply crystalline waterproofing material to concrete that has been thoroughly saturated with clean water. Moisten surfaces to be treated prior to application. Remove free water prior to application of waterproofing material.

5. Apply crystalline waterproofing to:
 - a. Faces of walls that will be in contact with water. Coat from bottom of wall to top edge of wall.
 - b. Exposed face of slabs and footings on grade that will be exposed to water.
6. Apply second coat when the first coat has reached an initial set. Use light water spray on surfaces to be coated if rapid drying occurs.

201-10.5.3.6 Curing.

1. Begin curing as soon as waterproofing materials have set up sufficiently so as not to be damaged by a fine spray.
2. Fog-spray treated surfaces three times a day for a two-day period or cover treated surfaces with damp burlap for the prescribed period.
 - a) In warm climates, more than three sprayings per day may be necessary to prevent excessive drying of coating.
 - b) Do not lay plastic sheeting directly on waterproofing coating as air contact is required for proper curing.
 - c) Cure waterproofing materials for 3 days and then allow to set for 12 days minimum before filling structure with liquid.
 - d) For structures that will contain corrosive liquids, cure waterproofing for 3 days and allow to set for 18 days minimum.
 - e) If there is poor air circulation in treated areas, provide fans or blown air to aid in curing of waterproofing.
 - f) Horizontal Surfaces: Begin curing as soon as final set has occurred but before surface starts to dry. Conventional moist procedures such as water spray and wet burlap may be used. Cure for a minimum of 48 hours.
 - g) In hot dry sunny conditions, consult manufacturer's product data.
 - h) Protect cured surfaces from damage due to wind, sun, rain, and temperatures below 36°F for a period of not less than 48 hours after application. If plastic sheeting is used as protection, it shall be raised off waterproofing coating to allow air circulation.

201-10.5.3.7 Bond.

Remove and apply fresh waterproofing in any area that has not developed full bond within 48 hours.

201-10.5.3.8 Backfilling.

1. Do not backfill against structures for at least seven days after application of waterproofing.
2. Prior to backfilling, check treated surfaces for newly developed cracks. Repair cracks, apply waterproofing, and cure surface for 48 hours before backfilling. Do not backfill with dry material until after complete cure of coating.

SECTION 203 – BITUMINOUS MATERIALS

203-6.3.1 General. To the “WHITEBOOK”, ADD the following:

3. Asphalt concrete for Job Mix Formula (JMF) and Mix Designs shall be Type III and shall not exceed 15% RAP.

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.

209-2.2.1 Materials. To the “GREENBOOK” Table 209-2.2.1, "Pipe", "Material", DELETE in its entirety and SUBSTITUTE with the following:

Material	Fabrication of mill manufactured steel pipe shall conform to the requirements of AWWA C200 . Pipe shall be fabricated from steel sheet, plate, or coil that conforms to ASTM A36 Grade 36 modified to have minimum yield strength of 40,000 psi, or equivalent.
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To the WHITEBOOK, Table 209-2.2.1, "Lining and Exterior Coating (Required on exposed steel surfaces and ring joints)", "Cement-Mortar Interior Lining and Exterior Coating", DELETE in its entirety and SUBSTITUTE with the following:

	Pipe Size	Lining Thickness
Cement-Mortar Interior	30 inch (900 mm) and Larger pipe	1 inch (25mm)
	Conform to AWWA C205 using Type II/V cement.	

Lining (AWWAC205)	Trim lining as necessary to allow full operation of butterfly or check valves at connections to steel pipe.	
	Line exposed portions of pipe interior with hand-applied epoxy-conforming to SECTION 212 WATER AND SEWER SYSTEM VALVES AND APPURTENANCES.	
	1 inch (25 mm) minimum coating thickness unless otherwise specified or if soil is identified as corrosive.	
	Trim coating 6 inch to 12 inch (150mm to 300 mm) above grade on spools penetrating to daylight or vault interiors.	

To The GREENBOOK, Table 209-2.2.1, "Lining and Exterior Coating (Required on exposed steel surfaces and ring joints)", "Cold Applied Tape Exterior Coatings", DELETE in its entirety and SUBSTITUTE with the following:

Cold Applied Tape Exterior Coatings	Conform to AWWA C217-16 Microcrystalline Wax and Petrolatum Tape Coating Systems for Steel Water Pipe and Fittings. Min thickness: 50 mils.
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To the GREENBOOK, Table 209-2.2.1, "Lining and Exterior Coating (Required on exposed steel surfaces and ring joints)", "Fusion-Bonded Epoxy Interior Lining and Exterior Coatings of Above-Ground Pipe", DELETE in its entirety and SUBSTITUTE with the following:

Fusion-Bonded Epoxy Interior Lining and Exterior Coatings of Above-Ground Pipe and Appurtenances	Conform to AWWA C213-15 Lining and coating shall be a 100% solids, thermosetting, fusion bonded, dry powder epoxy resin: Scotchkote 134 or 206N, Valspar "Pipeclad 2000" or approved qual. Min thickness: 16 mils.
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ToThe WHITEBOOK, Table 209-2.2.1, "Joints", "FlangedJoint", DELETE in its entiretyand SUBSTITUTE with the following:

Flanged Joint	Conform to AWWA C207 . Flange joints identified on the plans to receive dielectric insulation kits shall have the flange bolt holes over-drilled per section 4.2.3 of AWWA C207 . Faced and dimensioned in accordance with ASME/ANSI B16.5 for the pressure class shown on the Plans or specified in the Special Provisions.
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To the GREENBOOK, Table 209-2.2.1, "Fittings", "Material", DELETE in its entirety and SUBSTITUTE with the following:

Flanged Joint	Same steel as pipe, 3/8 inch (10 mm) min.
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ADD:

209-2.2.1.1 Straight Run Pipe Application.

1. For straight run pipe, plant applied conditions, the cold-applied plastic tapes shall be a four layer system consisting of: (1) primer; (2) corrosion prevention tape (inner layer); (3) mechanical protective tape (first outer layer); and (4) mechanical protective tape (second outer layer).
2. Perform the entire coating operation as a one station operation where the pipe is supported at the ends in a manner which will permit the application of the primer, corrosion prevention tape inner layer, and the mechanical protective tape outer layer. The final cement mortar overcoat may be installed at a different locations. Minimize the amount of additional handling following the initial setup of the pipe section, from application of primer and the different tape layers. No application involving rollers to support the pipe during the primer application, plastic tape, or cement mortar coating application will be permitted.
3. Perform the entire coating operation by experienced workers skilled in the application of cold-applied plastic tapes and cement mortar coating underqualified supervisors. The Engineer is to be immediately informed of any personnel changes associated with the pipe coating operation.

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 for the fabrication of pipe, pipe specials, and joint details.

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 City.

- 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 with belt slings of sufficient width to avoid damage to the exterior surface or forks with protection to prevent the coating of the pipe from damage. 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 in accordance with the contract documents

All pipe with side outlets shall be considered as a special section and requires the outlet pipe to have a minimum steel wall thickness of 3/8-inch thick. All outlets, connecting welds and associated appurtenances shall be designed by the pipeline manufacturer and submitted for approval by the owner.

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.

ADD:

209-9 GALVANIC ANODE CATHODIC PROTECTION SYSTEM.

209-9.1 General.

209-9.1.1 Work.

The Contractor shall provide all labor, materials, tools, and incidentals to install a cathodic protection system for the new 48-inch and 30-inch Wastewater, which is Cement Mortar Lined and Tape Coated/Mortar Coated (CML&TCMC) steel pipe. The cathodic protection system shall include all electrical connections, anodes, rectifiers,

test stations, insulators, enclosures, and all accessories required for a complete and operable system.

The Contractor shall retain a qualified Corrosion Engineer to direct the construction of facilities specified herein. The Corrosion Engineer shall test and certify that the corrosion control facilities for this project are constructed properly and as specified, and are fully functional.

209-9.1.2 Definitions.

1. Contractor: The licensed prime installer selected by the Owner to install the pipeline.
2. Owner: The City of San Diego.
3. Corrosion Engineer: A qualified Corrosion Engineer retained by the Contractor who is either a Registered Professional Corrosion Engineer or NACE-International Certified Cathodic Protection Specialist or Corrosion Specialist.
4. Engineer: The City of San Diego's Resident Engineer or designated representative.
5. City's Corrosion Engineer: The Engineer's appointed representative from the City's Corrosion Section.

209-9.1.3 Contractor Qualifications.

All work must be conducted by qualified, experienced personnel working under continuous, competent supervision. Qualified Contractors must demonstrate experience with cathodic protection installations. The drilling subcontractor and well drilling foreman must have experience with the installation of deep well anodes. Cathodic protection installation and testing shall be done under the direct supervision of a Corrosion Engineer. The Contractor doing the electrical installations and well drilling work shall have proper valid State of California licenses.

209-9.1.4 Reference Specifications, Codes And Standards.

1. A497 – Steel Welded Wire Reinforcement
2. ASTM A615 - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
3. AWWA C217 - Wax Coating Systems for Underground Piping Systems
4. Bulletin 74 - California Well Standards
5. Green Book - Standard Specifications for Public Works Construction, 2018 edition
6. Mil-C-18480-B - Coating Compound, Bituminous, Solvent, Coal Tar Base
7. NACE SP0169 - Standard Practice, Control of External Corrosion on Underground or Submerged Metallic Piping Systems
8. NACE SP0572 - Design, Installation, Operation, and Maintenance, of Impressed Current Deep Groundbeds

9. NACE SP0286 - Electrical Isolation of Cathodically Protected Pipelines
10. NEC 70 – National Electrical Code
11. NEMA LE - Cotton Phenolic Resin – Electrical Grade
12. NEMA CE - Canvas Phenolic Resin - General Purpose Grade
13. NEMA 3R - Enclosures for Outdoor Applications
14. NEMA MR-20 – Semiconductor Rectifiers Cathodic Protection Units
15. NEMA WC 70 – Power Cables Rated 2,000 Volts or Less
16. NEMA G10 – Glass Reinforced Epoxy
17. NFPA 70 - National Electrical Code (NEC)
18. UL 514 - Metallic Outlet Boxes
19. Standard Specifications of Public Works Construction City Supplement (White Book) 2018 edition.
20. Standard Drawings for Public Works Construction 2018 edition.

209-9.1.5 Contractor Submittals.

The Contractor shall furnish the following documents (Submittals) AS ONE SUBMITTAL PACKAGE:

1. Catalog cuts and other information for products to be used including:
 - a) Mixed Metal Oxide Anodes
 - b) Anode Centering Devices
 - c) Calcined Coke
 - d) Deep Anode Construction Materials
 - e) Anode Wellhead Vault
 - f) Ornamental Enclosure
 - g) AC Meter Pedestal
 - h) AC Disconnect Switch
 - i) Manual Controlled Rectifier
 - j) Anode Shunt Panel
 - k) Conduit and Fittings
 - l) Wire, Leads, and Cable
 - m) Anode Shunts
 - n) Ready Mix Concrete
 - o) Plastic Warning Tape
 - p) Exothermic Weld Kits

- q) Elastomeric Weld Caps
 - r) Exothermic Weld Coating
 - s) MicroMax GPS Interrupter, Relay and Heat sink
 - t) At-Grade Concrete Test Box
 - u) Micarta Test Board
 - v) Flange Isolation Kits
 - w) Wax Tape Coating System
 - x) Standard Potential Galvanic Anode
2. As-Built Drawings: The Contractor shall maintain as-built drawings showing the exact locations of the deepwell anode bed, rectifier, test stations, insulators, and wire trenching runs. Location changes shall be clearly indicated in red on a blue-line copy of the design drawings. These drawings shall be submitted to the Engineer before the work is considered complete. Provide subfoot GPS coordinates for all test stations and impressed current equipment.
 3. Rectifier Owner's Manual: The rectifier Owner's Manual shall be submitted to the Engineer:
 4. Rectifier Test Results: The following shall be submitted to the Engineer:
 - a. Rectifier test results.
 - b. Testing Laboratory safety approval. The rectifier shall have a UL Approval Label or ETL Approval Label.
 - c. Driller's logs for deep anode and grounding installations.

209-9.1.5.1 Certifications.

The Contractor shall submit a notarized affidavit of compliance that all Work, materials and equipment required according to this Section were properly constructed and manufactured in full conformance with these Contract Documents. The Contractor shall submit the manufacturers' Certificates of Compliance.

209-9.1.5.2 Operations And Maintenance Information.

The Contractor shall submit operation and maintenance related information, rectifier field test reports, parts list with part replacement numbers, and troubleshooting procedures.

209-9.1.5.3 Test And Inspection Reports.

The Contractor shall submit field test and inspection reports, along with wiring diagrams of the installed system. Testing reports shall include at a minimum: native or baseline pipe-to-soil potentials; electrical isolation from casings, and insulating

flange kits; electrical continuity for all metallic pipe sections containing non-welded joints or inline specials not intentionally electrically isolated; cathodic protection system activation; any deficiencies; and conclusions and recommendations. The final testing report issued for this project shall include all previous testing results, approved material submittals, and as-built drawings. The reports shall be submitted in an electronic PDF format. In addition all tabulated calculated data shall be submitted as a Microsoft Excel file format.

209-9.1.5.4 Impressed Current Anode Current Measurements.

The Contractor shall tabulate and submit all anode current outputs before and after the addition of the calcined coke backfill. These data shall be part of the final testing report.

209-9.1.5.5 Qualifications.

The Contractor shall submit documentation of the qualifications of the Corrosion Engineer.

209-9.1.5.6 Permits.

The Contractor shall submit copies of all permits including state and local well drilling permits and traffic control permits for deepwell anode sites.

209-9.1.5.7 Drilling Log.

Drilling records shall be submitted to the Engineer within ten days of the completion of the anode well. Records shall include:

1. Drillers Log.
2. Identification of water-bearing strata.
3. Resistance-to-well of all anodes before and after calcined coke is added to the well.
4. Anode Well Drilling Permit and Final Well Completion Permit.

209-9.1.5.8 Packaging And Shipping.

The Contractor shall coil wires, secure and package anodes as required to prevent damage during shipment.

209-9.1.5.9 Notification For Testing And Inspection.

The Contractor shall notify the Engineer at least seven days in advance of the deepwell drilling and the installation of rectifier, wiring, and test stations. Well loading and completion shall be done in the presence of the Engineer. The Engineer or the Owner's Representative shall witness all corrosion control installations at their discretion.

209-9.1.5.10 Notification For Testing And Inspection.

The Contractor shall notify the Engineer at least seven days in advance of the deepwell drilling and the installation of rectifier, wiring, and test stations. Well loading and completion shall be done in the presence of the Engineer. The Engineer or the Owner's Representative shall witness all corrosion control installations at their discretion.

209-9.1.5.11 Corrosion Engineer Qualifications Submittal.

Services of Corrosion Engineer: Obtain the services of a Corrosion Engineer to inspect, activate, adjust, and evaluate the effectiveness of the cathodic protection system. The Corrosion Engineer is herein defined as a registered Professional Engineer with certification or licensing that includes education and experience in cathodic protection of buried or submerged metal structures, or a person accredited or certified by NACE International at the level of Corrosion Specialist or Cathodic Protection Specialist (i.e. NACE International CP Level 4). Such a person shall have experience inspecting pipeline cathodic protection systems. The Corrosion Engineer shall directly oversee the Cathodic Protection Technician, review all specification, and certify the accuracy and completeness of all cathodic protection submittals and reports.

Services of Cathodic Protection Technician: Obtain the services of a Cathodic Protection Technician to inspect, activate, adjust, and evaluate the effectiveness of the cathodic protection system. The Cathodic Protection Technician is herein defined as a person accredited or certified by NACE International as a Cathodic Protection Level 2 Technician

209-9.2 Products.

209-9.2.1 Impressed Current Anodes.

209-9.2.1.1 Mixed Metal Oxide - Tubular

1. Description: Dimensionally stable, tubular titanium anodes with a mixed metal oxide coating and having the dimensions listed below:
 - a) Length: 60 inches, minimum.
 - b) Outside Diameter: 1 inch, minimum.
 - c) Weight: 1.6 pounds, minimum.
2. Manufacturer: De Nora Lida "One" Anodes, or approved equal

209-9.2.2 Anode Centralizers.

Centering devices shall consist of three metal or plastic assemblies that can be securely attached to the anodes and vent pipe to center them in the drilled hole. Centralizers shall not block the hole or impair installation of the anode, anode wire, or calcined coke. Centralizers shall be LIDA Ventralizers or approved equal.

209-9.2.3 Calcined Coke.

1. Calcined Petroleum Coke: Lubricated, low resistance, calcined petroleum coke shall be provided, suitable for pumping and with the following composition:
 - a) Bulk Density: 64 to 74 pounds per cubic foot.
 - b) Fixed Carbon: 98% to 99.8%.

- c) Maximum Particle Size: 2.5mm
- 2. Manufacturers:
 - a) Loresco RS-3, or approved equal.

209-9.2.4 Deep Anode Construction Materials.

- 1. Vent Pipe: 2-1/2 inch, Schedule 40 PVC pipe with screwed and glued joints, with 0.006-inch longitudinal slots, 1.5-inches long, cut completely through both sides of the pipe at 4-inch centers in the active anode column area. Use Loresco All-Vent, or approved equal.
- 2. Ground Bed Sealing Material: Cement grout, bentonite-gelatinous mud, puddled clay, or concrete, in accordance with the applicable state and local regulations.
- 3. Deep Anode Well Head Vault: The wellhead vault shall be H-20 traffic rated. Use South Bay Foundry SBF 1243 or approved equal. The well head vault will need to be poured in place to fit the well head frame. Mark wellhead vault as shown on the drawings.
- 4. Surface Vent Pipe: ASTM A 53 standard steel pipe, hot dipped galvanized after fabrication, 1-inch diameter with 180-degree fabricated gooseneck and SST bug screen at the top.

209-9.2.5 Ornamental Enclosure.

- 1. The enclosure for the rectifier, AC disconnect switch, shunt panel, and AC outlet shall be freestanding, pad-mounted, aluminum enclosure. The enclosure shall be aluminum and finish shall be powder coated White inside and out. The color shall be as approved by the Engineer. Use Myers MSX NEMA 3R or approved equal. The enclosure shall accommodate all components and have the following dimensions:
 - a) Height: 57.5 inches
 - b) Width: 30 inches
 - c) Depth: 17 inches
- 2. The enclosure shall have stainless steel door handles with provisions for padlocks, louvered vents with filters, and stainless steel hardware.
- 3. AC Outlet: Provide a conveniently located 120V/20A receptacle with its own 20 amp breaker and circuit coming from the meter pedestal.
- 4. Shunt Panel Board: Anode shunts and test/reference cell leads shall terminate on a panel board made of micarta, 1/4-inch thick. Double-nutted brass bolts, nuts, and lock washers shall be installed on the panel boards as indicated and per UL 486.
- 5. Shunts: Anode shunts shall be 0.01 ohm.
- 6. Mounting Pad: The ornamental enclosure shall be mounted on a 24-inch deep reinforced concrete pad. The concrete pad shall extend above grade by 3-

inches. The total thickness of the concrete pad is 27-inches. The concrete pad dimensions shall be at least 4-inches larger on all sides of the ornamental enclosure.

209-9.2.6 AC Meter Pedestal.

1. The AC meter pedestal (per SDG&E Guidelines, latest edition) shall be located at the location shown on the drawings with approval from 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.
2. Concrete mounting pad size for the meter pedestal shall be 24 X 24 X 6 Inches thick with reinforcing steel. The wire conduit shall penetrate the concrete mounting pad.

209-9.2.7 Rectifier Assembly.

1. Construction: The rectifier shall be mounted in a freestanding ornamental enclosure and installed on a metal frame which slides out for access and maintenance. The rectifier unit, anode shunt panel, and 120 VAC convenience outlet shall all be mounted inside the ornamental enclosure. The rectifier shall be Universal air-cooled standard line Model ASAI 25-15 or approved equal.
2. Electrical Characteristics:
 - a) Rectifier shall have a 120/240 Volt single phase AC input, with filter choke, and have a rated DC output of 25 Volt 15 Amp, satisfying the requirements of NEMA publication MR-20 and NFPA 70. Rectifiers 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 30 equal steps from approximately 5% of rated voltage to full rated output. This adjustment may be accomplished with studs and link-bars or tap switches and shall 5 coarse and 6 fine adjustments, at minimum. If tap switches are used, they shall not carry over 50% of the nominal current rating assigned by the manufacturer. The rectifier shall have a faceplate mounted 120 V convenience outlet.
 - b) Rectifiers shall be designed to operate continuously at rated maximum voltage and current in ambient temperature of 122 degrees F without damage to the rectifier components. Cooling shall be accomplished by natural convection. Fan cooling is not acceptable for unattended equipment.
 - c) Silicon stacks shall be equipped with silicon diodes rated a minimum of 800 peak inverse volts. Heat sinks shall be sized to keep diode junction and case temperatures from exceeding 212 degrees F under 113 degrees F ambient temperature conditions.

3. Transformers: Transformers shall be isolation type with a grounded electrostatic shield between the primary and secondary windings. Dielectric strength of all insulating materials shall not be less than 2,000 V RMS as tested for one minute when applied between windings and the transformer core. Magnet wire insulation and layer insulation shall be rated no less than 311 degrees F. The transformer efficiency shall not be less than 85%. The transformer voltage regulation shall not exceed 3% from full rated load to 1/4 of rated load.
4. Output Monitoring: Separate voltmeter and ammeter shall be provided for monitoring rectifier output. Minimum meter width shall be 3.5 inches round or rectangular with minimum scale length of 2-7/8 inches. Meter movement shall be jewel and pivot D'Arsonval type
5. Meter accuracy shall be a minimum of plus or minus 2% of full scale at 80 degrees F and shall be temperature compensated to vary no more than 1% per 10 degrees F temperature variation. Scale faces shall be metal or plastic. Ammeter shunt shall be block type mounted on the front panel for easy access. Current and millivolt ratings shall be clearly stamped on the shunt. Shunt accuracy shall be at least plus or minus one percent. Output meters shall have on/off switches.
6. Overload Protection: All rectifiers shall have overload protection. Protection from overload on the input shall be accomplished by molded case fully magnetic circuit breakers on the incoming power lines. These circuit breakers shall hold at 100% of load and may trip between 101% and 124% of rated load. They shall trip at 125% of rated load. The trip point shall be unaffected by changes in ambient temperature. Trip handles of individual pole breakers shall be mechanically linked to open all lines when an overload occurs. Units shall be equipped with silicon stacks, overload protection shall be provided by a quick opening fuse in the transformer secondary. The rectifier shall have secondary breakers for AC and DC outputs.
7. Surge Protection: Voltage surge protection for units equipped with silicon stacks shall be supplied by AC and DC lightning arresters.
8. Testing: Electrical tests shall be performed at the factory and recorded as listed below:
 - a) AC Volts Input
 - b) AC Amperes Input
 - c) Apparent Watts Input
 - d) True Watts Input
 - e) Power Factor
 - f) DC Volts Output
 - g) DC Amperes Output
 - h) DC Watts Output

- i) Conversion Efficiency
 - j) Dielectric Strength
 - k) Transformer Primary to Ground
 - l) Transformer Secondary to Ground
 - m) Transformer Primary to Secondary
 - n) Stack AC to Ground
 - o) Stack DC to Ground
 - p) Ripple Voltage at Full Output
9. Results of the tests shall be furnished to the Engineer with the Owner's Manual.
 10. Rectifier Warranty: The manufacturer shall warrant the rectifier for one year against failures due to defective parts and/or faulty workmanship.
 11. Rectifier Spare Parts: The rectifier unit shall be equipped with three spare fuses for each of the fuses used in the unit. The spare fuses shall be secured inside the rectifier cabinet and shipped with the unit.

209-9.2.8 Conduit, Fittings, And Accessories.

1. All below-grade wire shall be run in schedule 40 PVC conduit. All above-grade conduit shall be rigid galvanized steel.
2. Fittings: Fittings for use with rigid steel conduit shall be galvanized cast ferrous metal, with gasket covers. Rigid metallic conduit fittings shall be galvanized conforming to UL 514. Fittings for use with either rigid nonmetallic conduit shall be PVC and shall have solvent weld-type conduit connections.
3. Elbows: All buried conduit elbows shall be long radius ell type.

209-9.2.9 Wires.

1. General: Conform to applicable requirements of NEMA WC 70. All wires shall be single conductor, unless otherwise specified. All wires shall be single conductor, stranded copper wire with 600-volt HMWPE insulation, unless otherwise specified.
2. Joint Bond: Two No. 2 AWG HMWPE.
3. Cathode (Pipe) Lead: Two No. 2 AWG HMWPE.
4. Positive Jumper Wire: No. 6 AWG THWN with red insulation.
5. Negative Jumper Wire: No. 6 THWN with blue insulation.
6. Test Station Pipeline Leads: No. 8 AWG HMWPE.
7. Galvanic Anode Leads: No. 12 AWG THWN (WHITE).
8. Casing Test Leads: No. 10 AWG HMWPE.
9. IR Drop Test Leads: No. 8 AWG HMWPE

10. Impressed Current Anode Wires:

- a) Construction: The wire attached to the anodes shall be AWG stranded, single conductor, copper, insulated for 600 V. Wire size shall be No. 8 AWG Halar/HMWPE, Kynar/HMWPE, PVDF/HMWPE, or approved equal. The inner insulation shall be 0.020-inch minimum, radiation-cross linked polyvinylidene fluoride. The outer insulation shall be 0.065-inch minimum HMWPE per ASTM D1248. Connection of wire to the anode shall have a pulling strength, which shall exceed the tensile strength of the wire. Any damage to the wire insulation or anode shall require complete replacement of the wire and anode.

Anode wires shall be of one continuous length without splices from the anode connection to the Anode Shunt Panel. Anode wires with the attached anode shall be shipped to the job site with the wire wound on a reel. The minimum core diameter of the reel shall be 7½-inches. The anode wire insulation shall be free of nicks, abrasions and scratches throughout the entire length of the wire. Precaution shall be taken during fabrication, transportation and installation of the anodes to see that the wire is not kinked or sharply bent. Bends sharper than 2½-inches in radius are not permissible.

- b) Resistance Testing: The anode manufacturer shall conduct and report resistance tests performed on each anode wire connection to assure the finished connection does not exceed 0.004 ohms. These resistance tests shall be performed with a Kelvin bridge circuit or approved equal. Anode wire connections that have a resistance value of greater than 0.004 ohms shall not be acceptable. An accurate record of tests shall be submitted to the Engineer. The records shall include the following information, as a minimum:
- i. Anode numbering system to identify anode under test
 - ii. Anode wire length
 - iii. Resistance value as indicated by test
 - iv. Test equipment
 - v. Description of test method
- c) The anode manufacturer shall mark the reel holding the anode wire for shipment to the job site with the same anode numbering system used on the test records and the total length of attached anode wire.

209-9.2.10 Shunts.

1. Impressed Current Anodes: Holloway Type RS, 0.01 ohm, 6 ampere capacity.
2. Galvanic Anode Test Stations: The shunt resistance shall be such that a 2-Amp current causes a voltage drop of 20-millivolts (i.e. 0.010-ohms). Shunts shall be flat manganin ribbon style as manufactured by Cott or approved equal.

209-9.2.11 Concrete.

1. Reinforcing steel: ASTM A615, Grade 60 deformed bars and welded wire fabric.
2. Welded Wire Fabric: ASTM A497.
3. Formwork: Plywood, earth cuts may be used.
4. Concrete with minimum 3,000 psi compressive strength at 28 days.

209-9.2.12 Ancillary Materials.

1. Electrical Tape: Linerless rubber high-voltage splicing tape and vinyl electrical tape suitable for moist and wet environments. Use Scotch 130C and Scotch 88 as manufactured by 3M Products.
2. Wire Connectors: One-piece, tin-plated crimp-on lug connector as manufactured by Burndy Co., Thomas and Betts.
3. Insulating Resin: At Contractor's option, bitumastic coating (Koppers 50 or approved equal) may be used if allowed to dry completely before covering.

209-9.2.13 Marking Tape.

1. Inert polyethylene, impervious to known alkalis, acids, chemical reagents, and solvents likely to be encountered in soil.
2. Thickness: Minimum 4-mils.
3. Width: 6-inches.
4. Identifying Lettering: Minimum 1-inch high, permanent black lettering imprinted continuously over entire length.
5. Color: Red with black lettering as follows: "CAUTION CATHODIC PROTECTION CABLES BURIED BELOW."

209-9.2.14 Exothermic Welds.

1. General: Wire sleeves, welders, and weld cartridges according to the weld manufacturer's recommendations for each wire size and pipe or fitting size and material. Welding materials and equipment shall be the product of a single manufacturer. Interchanging materials of different manufacturers will not be accepted.
2. Weld Caps: Exothermic welds shall be sealed with a pre-fabricated plastic cap filled with formable mastic compound on a base of elastomeric tape. Use Royston Handy Cap IP or approved equivalent.
3. Weld Coating: All bare metal shall be coated. Exothermic welds and weld caps shall be coated with a cold-applied, fast-drying mastic consisting of bituminous resin and solvents per MIL-C-18480B. Use Royston R28, Royston R28 Zero VOC, Royston A51 Plus, Royston A51 Low VOC, Tapecoat TC Mastic or approved equal.

209-9.2.15 GPS Interrupter, Relay, And Heat Sink.

1. A separate GPS Interrupter shall be supplied to be installed within the rectifier ornamental enclosure. The interrupter shall be an American Innovations MicroMax GPS 300.
2. Relay: 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.
3. Heat Sink: The relay shall be mounted on an aluminum heat sink. Heat sink shall be a Crydom Model HS202 or approved equal

209-9.2.16 At-Grade Test Stations.

1. At-Grade (Flush) Mounted:
2. Test Box: Concrete box of dimensions as shown on the Drawings. Use Brooks 3RT or Christy G5 with cast iron lid per South Bay Foundry Part Number B1160 or B6199 respectively. The cast iron lid shall be 11-1/16 inch diameter with the letters "City of San Diego Corrosion Test Station".
3. Each CP Test Box shall include a 5 inch x 5 inch cross-laminated phenolic terminal board with a minimum thickness of 1/4-inch. The phenolic material shall be NEMA type CE or LE or phenolic grade XX. The terminal board shall contain individual electrical lugs for each wire entering the test station or junction box.

209-9.2.17 Pipe Flange Isolation Kit.

1. For purposes of this specification, the terms "Pipe Flange Isolation Kit", "Insulating Flange", "Insulating Joint", and "Dielectric Flange" are used synonymously.
2. The Contractor shall over drill flange holes where insulating kits are to be used per AWWA C207 to accommodate insulating sleeves.
3. The Pipe flange isolation kit materials shall be designated by the manufacturer as suitable for service at the operating temperatures and pressures specified on the Plans.
4. Flange isolation kits shall consist of a one piece, full-face, insulating gasket, an insulating sleeve for each bolt, insulating washers, and steel washers. For nominal pipe diameters up to and including 36-inches, provide one insulating washer and one steel washer on each side of the flange for each flange bolt. For nominal pipe diameters greater than 36-inches, the insulating washers shall be installed sandwiched between a pair of matching steel washers on each side of the flange for each flange bolt.
5. Insulating Gasket: Insulating gasket retainers shall be full face, Type E, NEMA G-10 glass reinforced epoxy retainers with an Ethylene Propylene Diene Monomer (EPDM) rubber rectangular cross section O-ring seal. Minimum total gasket thickness shall not be less than 1/8-inch. The gasket shall have the same outside diameter as the pipe flange. For steel pipe the gasket's inside

diameter shall be equal to the inside diameter of the pipe's steel cylinder. At valve to pipe connections where the inside diameters are not equal, the gasket's inside diameter shall be equal to the smaller of the two inside diameters. Dielectric strength shall be not less than 550-volts per mil, and compressive strength shall be not less than 50,000-psi. The manufacturer's name and date of manufacture shall be marked on both sides of the gasket with minimum two-inch tall block letters using a durable marking ink or paint. The gasket shall be installed within 12 months of its date of manufacture. Do not store insulated flange gaskets at jobsites under direct sunlight or at temperatures exceeding 110 degrees Fahrenheit. Use PSI Linebacker insulating gasket, or approved equal.

6. Insulating Sleeves: Provide full length, one piece, NEMA G-10 glass reinforced epoxy insulating flange bolt sleeves. Dielectric strength shall be not less than 400-volts per mil. The length of the insulating sleeves shall provide an air gap between the end of the insulating sleeve and inside surface of the stud bolt nut with a tolerance of 1/32-inch minimum and 1/8-inch maximum. Insulating sleeve length must be adjusted for the actual thickness of the washers and insulating washer thickness.
7. Insulating Washers: Insulating washers shall be NEMA G-10 glass reinforced epoxy with a minimum thickness of 1/8-inch. Dielectric strength shall not be less than 550-volts per mil, and compressive strength shall not be less than 50,000-psi. The insulating washer's inside diameter shall be sized to fit over the insulating sleeve's outside diameter.
8. Steel Washers: Provide hardened steel washers that conform to ASTM F436 for insulated flanges greater than 36 inches in nominal diameter. Double steel washers (4 steel washers per flange bolt) are required for insulated flanges greater than 36 inches in nominal diameter. The inside and outside diameter of the steel washers shall match those of the insulating washers. The steel washers must be able to freely rotate around the insulating sleeve. Attention must be paid to the fit between the steel washers and the insulating sleeve in order to avoid the washers twisting and cracking the sleeves when the flange bolts are torqued.
9. Provide four extra insulating sleeves and eight extra insulating washers for each insulating flange upon successful inspection of the insulating flange by the Engineer.
10. The Contractor shall caulk the inside of flange isolation kits with a non-sag, polyurethane elastomeric sealant. The sealant shall be flush with the inside of the pipe lining. Use Sika 2C-NS-EZ or approved equal.

209-9.2.18 Wax Tape Coating For Buried Surfaces And Buried Isolation Flanges.

1. All buried pipe sections of pipe, specials, and fitting surfaces that are not tape wrapped or epoxy coated shall be wrapped with a petrolatum wax tape

coating per AWWA C217 with plastic outer wrap. No bare metallic surfaces shall be buried, backfilled, or in contact with the soil.

2. Apply a wax tape coating system which conforms to AWWA C217 and consists of three parts: surface primer, wax-tape, and outer covering.
3. The primer shall be a blend of petrolatum, plasticizer, and corrosion inhibitors having a paste like consistency. It shall have a pour point of 100-degrees F to 110-degrees F and a flash point of 350-degrees. Use Trenton Wax-Tape Primer, or approved equal.
4. The wax-tape shall consist of a synthetic-fiber felt, saturated with a blend of high melt microcrystalline wax, solvents, and corrosion inhibitors, forming a tape coating that is easily formable over irregular surfaces and which firms up after application. The tape shall have a saturant pour point between 125-degrees F and 130-degrees F and a dielectric strength equal to a minimum of 100-volts per mil. Tape thickness shall be 70-mils to 90-mils in 6-inch wide rolls. Use Trenton No. 1 wax-tape, or approved equal.
5. The outer covering shall consist of two layers of a plastic wrapper. The plastic wrapper material shall consist of three 10-mil thick clear polyvinylidene chloride, high cling membranes wound together as a single sheet. Use Trenton Poly-Ply, or approved equal.

209-9.2.19 Standard Potential Magnesium Anodes.

1. CAPACITY. Standard potential magnesium anodes shall have a theoretical energy content of 1000 ampere-hours per pound and have a minimum useful output of 500 ampere-hours per pound.
2. CHEMICAL COMPOSITION (STANDARD POTENTIAL MAGNESIUM) ASTM B843
 - a) aluminum 5.30 to 6.70 percent
 - b) manganese 0.15 to 0.70 percent
 - c) zinc 2.50 to 3.50 percent
 - d) copper 0.02 percent max
 - e) nickel 0.002 percent max
 - f) iron 0.003 percent max
 - g) silicon 0.10 percent max
 - h) others, total 0.30 percent max
 - i) magnesium remainder
3. OPEN CIRCUIT POTENTIAL. The open circuit potential of all anodes, buried in the soil, shall be between 1.45 and 1.55 volts dc versus a copper-copper sulfate reference electrode.

4. INGOT SIZE AND WEIGHT. Anodes shall be 17-pound pre-packaged, standard potential ingots with a trapezoidal cross section. Ingot length shall be 25.25 inches long. The total packaged weight shall be 45 lbs.
5. ANODE CONSTRUCTION. Anodes shall be cast magnesium with a galvanized steel core rod recessed on one end to provide access to the rod for connection of the lead wire. Silver braze the lead wire to the rod and make the connection mechanically secure. Insulate the connection to a 600 volt rating by filling the recess with epoxy and covering any exposed bare steel core or wire with heat shrinkable tubing. The insulating tubing shall extend over the lead wire insulation by not less than 1/2 inch. The anode lead wire shall be stranded copper and shall be connected directly to the anode steel core as described above. There shall be NO wire splices between the anode steel core and the tag end at the test station.
6. ANODE PRE-PACKAGED BACKFILL MATERIAL. The anodes shall be completely encased and centered within a permeable cloth bag in a special low resistivity backfill mix with the following composition:
 - a) Gypsum 75%
 - b) Powdered bentonite 20%
 - c) Anhydrous sodium sulfate 5%
7. Backfill grains shall be such that 100 percent is capable of passing through a screen of 100 mesh. Backfill shall be firmly packed around the anode such that the ingot is approximately in the center of the backfill. The resistivity of the backfill shall be no greater than 50 ohm-cm when tested wet in a soil box. Total prepackaged weight shall be approximately 45 pounds.

209-9.3 Execution.

209-9.3.1 General.

Work not specifically described herein shall conform to NACE SP0169, NACE SP0572, NACE SP0286, the Standard Specifications for Public Works Construction 2018 (Greenbook) and City Supplement White Book and Standard Drawings.

209-9.3.2 Deepwell Anodes.

1. No specific alternate deepwell anode sites are provided however, if bedrock is reached prior to the design depth then alternate well locations may be designated by the Engineer. The following anode bed design changes shall apply depending upon the actual well depth achieved:
 - a) Bedrock depth greater than 142-feet to full design depth of 300-feet: Install all 10 anodes with active anode column length as shown in the detail drawings.
 - b) Bedrock depth greater than 134-feet but less than 142-feet: Install as shown in drawings except with 9 anodes.
 - c) Bedrock depth greater than 126-feet but less than 134-feet: Install as shown in the drawings except with 8 anodes.

- d) Bedrock depth greater than 118-feet but less than 126-feet: Install as shown in the drawings except with 7 anodes.
 - e) Bedrock depth greater than 110-feet but less than 118-feet: Install as shown in the drawings except with 7 anodes.
 - f) Bedrock depth greater than 102-feet but less than 110-feet: Install as shown in the drawings except with 6 anodes.
 - g) Bedrock depth greater than 96-feet but less than 102-feet: Install as shown in the drawings except with 5 anodes. Install a second anode bed within the City's Easement, but no closer than 25-feet of the first well location with direction from the Engineer. Install the five remaining anodes in the second well and at the same depths. The active anode column lengths must be the same for both anode wells.
 - h) If bedrock is encountered at a depth less than 96-feet than an alternate anode well site will be selected by the Engineer.
2. The Contractor shall notify the Engineer immediately if rock is encountered. Drilling shall continue to the design well depth until specifically instructed otherwise by the Engineer.
 3. The Contractor's base price quotation shall be based upon the assumption that the deepwells will be drilled to their full design depth and shall include 2-hours of rock-drilling.
 4. Inspection and Notification: The drilling, preparation, loading of anodes and calcined coke shall be done in the presence of the Engineer and the Corrosion Engineer. The Contractor shall give the Engineer a 7-day notice before drilling and installation.
 5. Location and Responsibility: The final location of the anode well shall be determined in the field by the Contractor and shall be approved by the Engineer. The well location can be adjusted to accommodate positioning of the drill rig such that there will be minimum impact on traffic. The Contractor is responsible to locate and avoid all utilities prior to drilling. The Contractor shall retain his responsibility regardless of the approval of the drilling site by the Engineer.
 6. Drilling: Anode well drilling shall be done in the presence of the Engineer and the Corrosion Engineer and shall be done by means of a rotary drill rig using circulating water base drill mud or by rotary air drilling. It is the Contractor's responsibility to provide the proper drilling method with the knowledge that rock or cobble may be encountered. Holes shall be nominal 10-inches in diameter and shall be drilled essentially straight and plum. Drilling mud shall be circulated from a portable sump or tank provided by the Contractor.
 7. The Contractor shall dispose of drilling mud and cuttings at a suitable disposal site at no additional cost to the Owner. Drilling fluid may be considered hazardous and must be disposed of in accordance with Local, State, Federal, and US EPA approved methods.

8. When the hole has been drilled to specified depth, fresh water shall be circulated from the bottom of the hole to clear the hole of drilling mud and cuttings. The hole shall be flushed until fluid is thinned as much as possible without danger of cave-in. The degree to which the hole is flushed shall be determined by the Engineer. The hole shall be maintained full to the top with fresh water throughout the entire loading operations.
9. Rock Drilling:
 - a) The Contractor shall notify the Engineer immediately if a rock strata is encountered. Drilling shall be stopped until authorized by the Engineer to proceed.
 - b) Rock drilling shall be defined as a condition where the rate of drilling drops below 6-feet per hour (1-foot every 10-minutes). It is assumed that the drillers' equipment is suitable for the intended purpose and can achieve a 50 to 90-feet per hour rate in good drilling conditions.
 - c) Rock drilling shall commence only upon the approval and direction of the Engineer and shall cease upon direction of the Engineer.
10. Loading:
 - a) Preparation of the impressed current system anode hole and loading of anodes and other equipment in the hole shall be done in the presence of the Engineer. A minimum of 7-day notice before anode loading shall be given by the Contractor to the Engineer. Loading of the anode hole shall be begun early enough in the day to insure completion of all loading, including backfilling, during regular working hours. Loading shall not be started later than 1:00 p.m. unless prior approval has been obtained by the Contractor from the Engineer.
 - b) Anode assemblies, with centralizers attached, shall be lowered into the hole supported by the attached lead wires. Anode vent pipes shall be lowered to the depth indicated. 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. The Engineer will reject all anodes with damaged insulation or wire, and they shall not be installed. Splices and/or any form of wire repair shall not be allowed on the anode lead wire from the point of connection at the anode to the top of the deep well anode bed hole. In the event that an anode must be retrieved after it has been lowered into the hole, the entire length of the anode lead wire shall be inspected by the Engineer for abrasion or other forms of damage to the insulation and wire. Anodes with damaged wires shall be rejected by the Engineer and shall not be reinstalled.
 - c) When an anode has been placed at specified depth, it shall be securely fixed in that position by tying the anode lead wire to a rack, sawhorse, etc., placed over or adjacent to the anode hole. That portion of the

device to which the anode wire is tied shall be smooth and round and shall have a diameter of not less than 3-inches so as to prevent kinking or sharply bending the wire.

- d) All anodes shall be loaded before calcined coke backfill is loaded. No anodes shall be covered until the Engineer has inspected the placement of the anodes and given permission to backfill.
- e) The vent pipe shall be installed along with the first anode placed in the hole by attaching it to one of the centralizer straps with a stainless steel clamp. The vent pipe shall not be attached to the anode proper. The Engineer will approve the attachment before the vent pipe is lowered into the hole. Joints shall be made up as the anode assembly, with the vent pipe attached, is lowered into the hole.

11. Calcined Coke:

- a) Calcined coke shall be placed in the hole by pumping. The pumping shall be at a steady rate and shall be slow enough to insure that the calcined coke does not bridge or block in the hole. The hole shall be kept completely full of water during placement of backfill. The top of the hole shall be kept free of floating coke breeze particles.
- b) Settling of the backfill and coverage of the anodes shall be determined by the Engineer by observing the Contractor's measurement of anode current output through a 12V DC power source circuit. During backfill placement, continuous monitoring of the current output of the lowermost uncovered anode shall be made. Coverage of the anode will be indicated by a rapid increase in current output, normally by at least 50%. As soon as coverage of a lower anode is indicated, the circuit shall be attached to the next higher anode in the hole and so on until coverage of all anodes has been verified. The Contractor shall record the anode current output of each backfilled anode on the same form used for recording the initial current output of the anode. After coverage of the top anode has been verified, sufficient coke shall be placed in the hole to insure backfilling a minimum of 10-feet above the uppermost anode.

12. Well Sealing:

- a) The hole above the coke column shall be No. 4 river run pea gravel (no sharp edges) up to the bottom of the grout seal. At the Contractor's option, the pea gravel intermediate backfill may be substituted with grout from the top of the calcined coke column to the wellhead. Following placement of the pea gravel, the hole shall be sealed per California State Bulletin Number 74.
- b) Well sealing operations above the calcined coke column shall begin no sooner than 30 minutes, nor later than 24 hours, after the anode current measurements, indicating that the uppermost anode had

been covered with calcined coke. Once backfilling has begun, it shall continue until the hole is filled with grout. The annular seal shall extend to vault.

13. Wellhead Box: Concrete box shall be set at the top of the anode hole as indicated. From the top of the anode hole, the anode leads shall be run to the rectifier enclosure. The anode vent pipe shall be terminated at the ornamental enclosure as indicated in the detail drawings. Individual anode leads shall terminate in the anode junction box and be permanently marked with cable identifiers to their respective position in the anode hole as indicated. The wellhead vault shall have an approved H-20 traffic rated box.

209-9.3.3 Rectifier Installation.

1. Installation: The rectifier, anode shunt panel, and 120-volt convenience outlet with GFCI shall be installed inside the ornamental enclosure and wired as shown in the drawings. The installation shall conform to NEC 70 and be in compliance with all applicable electrical codes and standards. Upon completion of the installation, the Contractor shall leave the rectifier in the off position until activated by the Corrosion Engineer.
2. Concrete Pad: The ornamental enclosure shall be mounted on a concrete pad as shown in the detail drawings. The hold-down bolt pattern and locations shall be obtained by the Contractor from the manufacturer. The top of the concrete pad shall be 3-inches minimum above the final grade.
3. Meter Pedestal: The meter pedestal shall be mounted adjacent to the transformer. AC wires shall be trenched between ornamental enclosure and the meter pedestal. The AC wiring shall be installed in a conduit. Additionally, AC wiring shall be trenched from the meter pedestal to the SDG&E transformer or handhold. Connections to transformers or handholds shall be made by SDG&E crews. It is the Contractor's responsibility to contact SDG&E for AC wiring connections.
4. Ground Rod: Install a ground rod and ground wiring at the rectifier in accordance with NFPA NEC 70.
5. Notification: Provide the Engineer with 7 working days notice before the completion of the rectifier, ground bed, and AC power service installation to allow scheduling of the required energizing and testing.

209-9.3.4 Wire Cables And Conductors.

1. Rectifier to Pipeline: Wire shall be single-conductor; No. 2 AWG stranded copper with 600-V High Molecular Weight Polyethylene (HMWPE) insulation 7/64-inch thick.
2. Installation: Arrange conductors neatly in rectifier and ornamental enclosure. Cut to proper length, remove surplus wire, and attach terminal or connect to appropriate junction box or rectifier terminal.
3. Below ground Seals: Seal below ground conduit to prevent intrusion of foreign material after wire is in place.

4. Buried Wires, Cables and Leads: Buried rectifier, pipeline, test station, or anode leads and conduits shall be at a 36-inch deep, minimum, below finished grade. Wires shall be free of splices. The Contractor shall compact wire trenches and re-pave in accordance with the Greenbook/Whitebook Standards.
5. AC Wiring Backfill: AC wire shall be installed and backfilled per SDG&E Service Guide (latest edition).
6. Warning Tape: Bury warning tape in the trench 12-inches below grade and above underground conductors and conduits. Align parallel to and within 2-inches of the centerline of the conduit run.

209-9.3.5 Conduits.

1. Securing Conduits: Secure conduits entering test station boxes or ornamental enclosures with double locknuts, one on the outside and one on the inside.
2. Insulation Fittings: Install insulated bushings and insulated throat connectors on the ends of rigid metallic conduit.
3. Watertight Fittings: Use watertight couplings and connections. Install and equip boxes and fittings to prevent water from entering the conduit or box. Seal unused openings.

209-9.3.6 Wire-To-Pipe Connections.

1. Exothermic Weld:
 - a) Use exothermic weld method for electrical connection of copper wire to steel surfaces. Observe proper safety precautions, welding procedures, weld charge selection, and surface preparation recommended by the welder manufacturer. Assure that the pipe or fitting wall thickness is of sufficient thickness that the exothermic weld process will not damage the integrity of the pipe or fitting wall or protective lining. One exothermic weld shall be used for one wire only.
 - b) Preparation of Metal: Remove all coating, dirt, grime, and grease from the metal surface by wire brushing and/or use of suitable safe solvents. Clean the surface to a bright, shiny surface free of all pits and flaws. The surface must be completely dry.
 - c) Testing: After the weld connection has cooled, remove slag, visually inspect, and physically test wire connection by striking the weld with a 2-lb hammer while pulling firmly on the wire. All unsound welds shall be completely removed, the surface prepared again, and re-welded. All weld slag shall be removed from the weld before applying coating and weld cap.
2. Protective Coating: The Contractor shall furnish all materials, clean surfaces and repair any damage to protective coatings and linings damaged as a result of the welding. A coating shall be applied to all exothermic weld locations. The coating for dielectrically coated steel shall be as described in Section 2.14

above. All surfaces must be clean and dry and free of oil, dirt, loose particles and all other foreign materials before application of the coating. The coating must cure per the manufacturer's recommendations prior to backfill. The mortar rockshield shall be repaired per the manufacturer's recommendations.

209-9.3.7 Magnesium Anodes.

1. INSPECTION. All lead wires shall be inspected to ensure that the lead wire is securely connected to the anode core and that no damage has occurred to the lead wire. Lead wire failures shall require replacement of the complete anode and lead wire.
2. PRE-PACKAGED ANODE INSPECTION. Each anode shall be inspected to ensure that the backfill material completely surrounds the anode and that the cloth bag containing the anode and backfill material is intact. If the prepackaged anodes are supplied in a waterproof container or covering, that container or covering shall be removed before installation. The CONTRACTOR shall notify the ENGINEER at least seven (7) days in advance of installing the anodes.
3. LOCATION. Anodes are to be installed in augured holes as shown in the drawings. Anode positions can be adjusted slightly to avoid interference with existing structures. Alternate anode positions must be approved by the ENGINEER.
4. HANDLING. Care shall be taken to ensure that the anode is never lifted, supported, transported, or handled by the lead wire. All anodes shall be lowered into the hole using a sling or a rope.
5. ANODE HOLE SIZE AND DEPTH. Anodes shall be placed vertically at the bottom of a 12 feet deep augured hole, 12 inches in diameter (minimum).
6. SOAKING REQUIREMENTS, PRE-PACKAGED ANODES. Once the prepackaged anodes are in the hole, water shall be poured into the hole so that the anodes are completely covered with water. Allow the anodes to soak for a minimum of 30 minutes before any soil backfill is added.
7. SOIL BACKFILL. After the pre-packaged anodes are soaked, the hole is backfilled with stone-free, native soil. No voids shall exist around the anode bags and the anode lead wire shall not be damaged. The backfill shall be tamped and compacted in 18 inch lifts above the anode taking care not to damage the anode lead wire.

209-9.3.8 At-Grade Test Stations.

1. LOCATION. At-grade corrosion monitoring test boxes shall be located behind the curb or sidewalk and NOT in traffic lanes or gutters. All test box locations shall be approved by the ENGINEER.
2. TEST BOX BOTTOM. Test boxes shall be set in native soil.

3. TEST LEAD ATTACHMENT. Test leads shall be attached to the pipe using the exothermic weld process. An 18-inch length of slack wire shall be coiled at each weld and inside each test box.
4. CONCRETE PAD. A 24-inch square by 4-inch thick reinforced concrete pad is required around each at-grade test station. Test boxes and concrete pad shall be flush with the top of the median curb.

209-9.3.9 External Coating.

1. All insulating couplings shall be covered with a 3-layer wax tape coating system per AWWA C217 with plastic outer wrap. Additionally, all in-line valves, flanges couplings, and adapters that are not coated with a bonded dielectric coating shall be wax tape coated per AWWA C217 with plastic outer wrap.
2. Primer: Surfaces must be cleaned of all dirt, grime, and dust by using a wire brush and clean cloth. The surface shall be dry. Apply the primer by hand or brush. A thin coating of primer shall be applied to all surfaces and worked into all crevices. The primer shall be applied generously around bolts, nuts, and threads, and shall fully cover all exposed areas. The primer should overlap the pipe coating by a minimum of 3-inches.
3. Petrolatum Saturated Tape: The wax tape can be applied immediately after the primer. Short lengths of tape shall be cut and carefully molded around each individual bolt, nut, and stud end. For long bolts (such as in couplings), short lengths of tape shall be cut and circumferentially wrapped around each individual bolt. After the bolts are covered, the tape shall be circumferentially wrapped around the flange with sufficient tension to provide continuous adhesion without stretching the tape. The tape shall be formed, by hand, into all voids and spaces. There shall be no voids or gaps under the tape. The tape shall be applied with a 1-inch minimum overlap. Minimum thickness of 70 mils over flat surfaces. Minimum thickness of 140 mils over edges.
4. Outer Covering: A plastic outer cover shall be applied over the petrolatum-saturated tape. The plastic shall be a minimum of 50-guage (10-mils) and shall have two layers applied.

209-9.3.10 Rebar Ground Cable At Concrete Structures.

Minimum size #2 AWG, bare copper stranded grounding cable. The quantity of cable required should be sufficient to run two ground cables from a flush-to-grade concrete ground box down to two separate exothermic connections made to rebar inside each concrete encasement or major reinforced concrete structure. Locate the rebar ground text boxes adjacent to cathodic protection test boxes.

209-9.3.11 Installation Of Flange Isolation Materials.

1. Provide a minimum of five days advance notice to the Engineer before assembling insulated pipe flanges to allow for coordination and observance of its installation. The Engineer shall inspect the condition of the gasket's O-ring

immediately before the gasket is installed to ensure it is free of cracks, dry rot, cuts, or other defects.

2. Install pipe flange insulating materials at the locations shown on the Plans. Install pipe flange insulating materials in accordance with the manufacturer's recommendations and NACE recommended practice SP0286, "Electrical Isolation of Cathodically Protected Pipelines." Particular attention shall be paid to properly aligning the flanges prior to inserting the insulating sleeves around flange bolts.
3. Prevent moisture, soil, or other foreign matter from contacting any portion of the insulated flange prior to or during installation. If moisture, soil, or other foreign matter contacts any portion of the insulated flange, disassemble it, clean with a suitable solvent and dry prior to reassembling. Follow the manufacturer's recommendations regarding the torque pattern of the bolts and the amount of torque to be used when installing the flange insulating kit. Do not use conductive grease on the flange bolts or any other flange components. Note: the following products have been tested for electrical conductivity and approved for use: Huskey 2000 Lubricating Paste & Anti-Seize compound, Triflow aerosol lubricant with Teflon additive, or approved equal.
4. All insulating flange kits that will be buried must be tested and approved by the City's Corrosion Engineer before burial. Failure to have written approval by the City before burial may require the contractor to re-excavate the insulating flange assembly for proper testing at the contractor's expense.

209-9.4 Testing And Inspection.

209-9.4.1 General.

The CP system shall be activated and adjusted by the Contractor's Corrosion Engineer. The Contractor is required to contact the City's Corrosion Section (phone number 619-527-5439) at least 5 days in advance of all corrosion control/cathodic protection facility installations. The Engineer, City's Corrosion Engineer, or the Owner's Representative shall witness all testing and installations at their discretion. All test data shall be submitted to the City's Corrosion Engineer within seven (7) days of the completion of the testing. All testing shall be conducted under the supervision of a qualified Corrosion Engineer who is retained by the Contractor. All deficiencies found to be due to faulty materials or workmanship shall be repaired or replaced by the Contractor and at his/her expense.

209-9.4.2 Test Leads And Bond Wires.

1. Responsibility: The Contractor shall be responsible for testing and inspecting all test leads, bond wires, and exothermic welds.
2. Test Method: All completed wire connections shall be tested by striking the weld with a 2-lb. Hammer while pulling firmly on the wire. Failed welds shall be completely removed, the surface re-prepared, and re-welded. Welds shall

be spot tested by the Engineer. After backfilling, all test leads shall be tested using a standard ohmmeter.

3. Acceptance: The resistance between each pair of test leads shall not exceed 120% of the total wire resistance as determined from published wire data.

209-9.4.3 Anode Lead Wire Inspection.

1. Responsibility: The City's Corrosion Engineer will inspect each anode lead wire at the anode site. The Contractor shall assist the City's Corrosion Engineer and is responsible for inspecting/testing the anode lead wire insulation prior to storing and shipping.
2. Test Method: Inspection shall be visual and by feel, or by using a Holiday Tester. The Engineer shall inspect and run his or her hand along the full length of each anode lead wire cable just prior to installation in the well.
3. Acceptance: All anode lead wires shall be free of cuts, nicks, and abrasions. Cables with damage shall be rejected.

209-9.4.4 Test Lead Trenching And Backfill.

1. Responsibility: The Engineer, at his or her discretion, shall inspect wire trenches and backfill material and methods.
2. Test Method: The depth, trench bottom padding, and backfill material shall be visually inspected before backfilling.
3. Acceptance: Conformance with specifications.

209-9.4.5 Rectifier Testing.

1. Responsibility: The rectifier shall be inspected and tested by the Corrosion Engineer and witnessed by the City's Corrosion Engineer. Testing shall be done in the presence of the Engineer.
2. Test Method: Rectifier tests shall verify that AC power is available at the rectifier, that all switches and circuit breakers work, and that DC voltage is applied to the anodes. The current output of all anodes shall be measured and recorded with the rectifier taps set at 25%, 50%, and 75% capacity.
3. Acceptance: Compliance with this specification and full operation of the rectifier in accordance with the owner's manual description and manufacturer's claims. Anode current outputs shall be in proportion to the anode bed resistance as determined by the anode well logs.

209-9.4.6 Flange Isolation Kit Testing.

1. Each buried insulating flange shall be tested for its electrical isolation effectiveness by and acceptable to the City's Corrosion Engineer prior to burial. The insulating flange shall be tested for electrical isolation before the wax tape coating is applied. Testing shall be performed and deemed as acceptable as described in the above grade testing procedure.

2. Each above grade or insulating flange within a vault shall be tested for its electrical isolation effectiveness. This testing shall be performed by the Contractor's Cathodic Protection Technician and witnessed by the City's Corrosion 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, 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.
3. 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.
4. 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.
5. 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.

6. 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.
7. 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.
8. 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.
9. 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.

209-9.4.7 Electrical Continuity Testing Of Pipe With Bonded Joints.

1. 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 bond cables. 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 cable

connections in the event that electrical continuity of the pipeline is not achieved.

2. Perform electrical continuity tests between test stations. 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.
3. 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 cables at each bonded joint.
4. 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 City's Corrosion Engineer for approval a minimum of 30 days before the pipe laying begins.

209-9.4.8 CP Test Station Wire Integrity Testing.

1. 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.
2. 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 prior to backfilling the wires.
3. 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 re-excavate the pipeline and replace or re-weld 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.
 - a) No. 2 AWG wire 0.162 Ohms / 1000 feet
 - b) No. 4 AWG wire 0.258 Ohms / 1000 feet
 - c) No. 6 AWG wire 0.411 Ohms / 1000 feet

- d) No. 8 AWG wire 0.653 Ohms / 1000 feet
- e) No. 10 AWG wire 1.038 Ohms / 1000 feet
- f) No. 12 AWG wire 1.650 Ohms / 1000 feet
- g) No. 14 AWG wire 2.624 Ohms / 1000 feet

209-9.4.9 Electrical Isolation Testing Between Pipe And Steel Reinforcement, Tunnels, And Casings.

1. Prior to placing concrete, all pipe/wall/slab penetrations must be inspected by the City's Corrosion Engineer. Prior to backfilling tunnels and casing installations, the City's Corrosion Engineer will witness the testing for electrical isolation. Testing shall be performed and deemed acceptable as described herein. A seven-day notice is required before placing concrete or backfilling.
2. Conduct visual and electrical testing at all steel pipe penetrations through reinforced concrete structures before and after the concrete is placed. Conduct visual and electrical testing at all steel pipe/casing installations before backfilling. This testing is required to demonstrate that all buried steel pipe is not in contact with any metallic objects embedded in the tunnel, casing, concrete wall, or concrete slab including all of the following:
 - a) rebar
 - b) rebar tie wire
 - c) snap ties
 - d) shebolts
 - e) tie rods
 - f) taper ties
 - g) dowels
3. 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. 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 witness and ensure proper electrical isolation. 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 pipeline passes the electrical isolation test. For steel pipeline/casing installations, the Contractor shall correct all direct contacts

(shorts) between the steel pipeline and the tunnel or casing at no cost to the City of San Diego.

4. 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, tunnel, or casing.
5. Rebar Ground Cable 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 cable to two different pieces of rebar. Each ground cable connection to the rebar shall be made with a separate exothermic weld or a separate mechanical compression ground clamp.
6. 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, tunnel, or casing then measure the pipe to rebar, tunnel, or casing resistance. If the resistance is 10 Ohms or more, the pipe is sufficiently electrically isolated from the rebar, tunnel, or casing. If the test reading is less than 10 Ohms, proceed with the Steel Polarization Isolation Test described below.
7. Steel Polarization Isolation Test:
 - a) Step 1: Measure the baseline CP potentials of the buried pipeline and of the rebar, tunnel, or 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 the length or width (whichever is greater) of the concrete structure under

construction. If the difference between the readings of the pipe and rebar, tunnel, or 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.

- b) 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 cables. Set up the DC power source with the positive cable connected to the rebar, tunnel, or casing and the negative cable 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.
 - c) Step 3: Re-measure CP Potentials of the pipe and rebar, tunnel, or casing using the same reference electrode in the same location with the test current off. These are called polarized CP potentials.
 - d) Step 4: Compare the polarized CP Potentials with the previously measured baseline CP Potentials. If the pipe is electrically isolated from the rebar, tunnel, or casing, the test current will polarize the buried pipeline's steel cathodically (i.e. a more negative CP Potential) and shift the rebar, tunnel, or casing anodically (i.e. a more positive CP Potential). If the difference between the polarized potentials of the pipeline and rebar, tunnel, or casing is less than 300 millivolts DC there are one or more metallic contacts between the buried pipeline and the rebar, tunnel, or casing. If the difference is 300 millivolts DC or greater the steel pipeline is sufficiently electrically isolated from the rebar, tunnel, or casing.
8. 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.
9. Electrical isolation tests shall be conducted for each pipeline encasement, each pipe to vault penetration, each tunnel installation, and each casing installation, and any other reinforced concrete or steel structure that a pipeline passes through. The electrical isolation tests must be performed by the City's Corrosion Engineer one day before concrete is placed or before backfill (in the case of tunnel and casing installations), and the day after concrete is placed or before backfill. The Engineer will witness the electrical isolation test conducted before the concrete is placed.

10. After the pipeline passes the rebar isolation test, direct bury the two bare copper ground cables 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 cable 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.

209-9.4.10 Pipeline Continuity Through In-Line Appurtenances And Pipe Joints.

1. The CONTRACTOR'S CORROSION ENGINEER shall measure the linear resistance of sections of pipe in which in-line valves, non-welded pipe joints, or other flanged mechanical joints have been installed. All testing shall be done by the CORROSION ENGINEER in the presence of the ENGINEER.
2. TEST METHOD. Resistance shall be measured by the linear resistance method. A direct current shall be impressed from one end of the test section to the other (test station to test station). A voltage drop is measured for a given current level. The measured resistance (R) is calculated using the equation $R=dV/I$, where dV is the voltage drop between the test span and I is the corresponding current. The resistance shall be measured at least three (3) times for accuracy.
3. ALTERNATIVE METHODS. 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. The alternative method must be acceptable to the City's Corrosion Engineer with written approval before being conducted by the Contractor.
4. ACCEPTANCE. Acceptance is a comparison between the measured resistance (from the field test data) and the theoretical resistance. The theoretical resistance must consider the pipe (length and wall thickness) and the resistance of the bond wires. The measured resistance shall not exceed the theoretical resistance by more than 120% to determine electrical continuity. The CONTRACTOR'S CORROSION ENGINEER shall submit, within seven (7) days of the completion of the testing, and in a report format, to the ENGINEER, all calculations of the theoretical resistance and measured pipe resistance for each section tested.

209-9.4.11 Cathodic Protection Performance.

1. Responsibility: The cathodic protection system shall be activated and tested by the Corrosion Engineer in the presence of the City's Corrosion Engineer.

Upon completion of the performance testing, the Contractor shall adjust the level of protection in accordance with NACE SP0169 to a structure-to-electrolyte potential of -850 mV or more negative as measured with respect to a saturated copper/copper sulfate (CSE) reference electrode. This potential may be either a direct measurement of the polarized potential or a current-applied potential. Interpretation of a current-applied measurement requires consideration of the significance of voltage drops in the earth and metallic paths.

2. Test Method: Achievement of cathodic protection shall be accomplished by a pipe-to-soil potential survey at each test station of the pipeline. In the event that the full length of the pipeline has not been installed, then the extent of the survey shall be determined by the Engineer. Potential survey data shall include native pipe-to-soil potentials and instant-off pipe-to-soil potentials.
3. Acceptance Criterion for Steel Pipe with Dielectric Coating: 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.

209-9.4.12 Compliance With Specifications.

- a) Deficiencies: Any deficiencies or omission in materials or workmanship shall be rectified by the Contractor and at his expense. Deficiencies shall include, but not limited to: anode failures, rectifier malfunctions, electrical discontinuities, lack of electrical isolation, broken or missing test leads or test boxes, improper or unclean trench backfill, and other deficiencies associated with the workmanship, installation, and non-functioning equipment.

SECTION 210 - PAINT AND PROTECTIVE COATINGS

210 To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

210-1 GENERAL.

210-1.1 References.

The following is a list of standards that shall be complied with:

1. American Water Works Association (AWWA):
 - a) C203, Coal-Tar Protective Coatings and Linings for Steel Water Pipelines—Enamel and Tape—Hot-Applied.

- b) C209, Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipelines.
 - c) C213, Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines.
 - d) C214, Tape Coating Systems for the Exterior of Steel Water Pipelines.
2. NACE International (NACE): SP0188, Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates.
 3. NSF International (NSF): 61, Drinking Water System Components – Health Effects.
 4. The Society for Protective Coatings (SSPC):
 - a) PA 2, Procedure for Determining Conformance to Dry Coating Thickness Requirements.
 - b) PA 10, Guide to Safety and Health Requirements for Industrial Painting Projects.
 - c) SP 1, Solvent Cleaning.
 - d) SP 2, Hand Tool Cleaning.
 - e) SP 3, Power Tool Cleaning.
 - f) SP 5, White Metal Blast Cleaning.
 - g) SP 6, Commercial Blast Cleaning.
 - h) SP 7, Joint Surface Preparation Standard Brush-Off Blast Cleaning.
 - i) SP 10, Near-White Blast Cleaning.
 - j) SP 11, Power Tool Cleaning to Bare Metal.
 - k) SP 16, Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals.
 - l) SP 13, Surface Preparation of Concrete.

210-1.2

Definitions.

Terms used in this section:

1. Coverage: Total minimum dry film thickness in mils or square feet per gallon.
2. FRP: Fiberglass Reinforced Plastic.
3. HCl: Hydrochloric Acid.
4. MDFT: Minimum Dry Film Thickness, mils.
5. MDFTPC: Minimum Dry Film Thickness per Coat, mils.
6. Mil: Thousandth of an inch.
7. PDS: Product Data Sheet.
8. PSDS: Paint System Data Sheet.

9. PVC: Polyvinyl Chloride.
10. SFPG: Square Feet per Gallon.
11. SFPGPC: Square Feet per Gallon per Coat.
12. SP: Surface Preparation.

210-1.3 Submittals.

210-1.3.1 Action Submittals.

1. Shop Drawings:
 - a) Data Sheets:
 - i. For each paint and coating product, furnish a Safety Data Sheet (SDS) and a Product Data Sheet (PDS), the manufacturer's technical data sheets, and paint colors available (where applicable). The PDS form is appended to the end of this section.
 - ii. For each paint system, furnish a Paint System Data Sheet (PSDS). The PSDS form is appended to the end of this section.
 - iii. Technical and performance information that demonstrates compliance with specification.
 - iv. Furnish copies of paint system submittals to the coating applicator.
 - v. Indiscriminate submittal of only manufacturer's literature is not acceptable.
 - b) Detailed chemical and gradation analysis for each proposed abrasive material.
 - c) Samples:
 - d) Proposed Abrasive Materials: Minimum 5-pound sample for each type.
 - e) Reference Panel:
 - i. Surface Preparation:
 1. Prior to start of surface preparation, furnish a 4-inch by 4-inch steel panel for each grade of sandblast specified herein, prepared to specified requirements.
 2. Provide panel representative of the steel used; prevent deterioration of surface quality.
 3. Panel to be reference source for inspection upon approval by Engineer.
 - ii. Paint:
 1. Unless otherwise specified, before painting work is started, prepare minimum 8-inch by 10-inch sample

with type of paint and application specified on similar substrate to which paint is to be applied.

2. Furnish additional samples as required until colors, finishes, and textures are approved.
3. Approved samples to be the quality standard for final finishes.

210-1.3.2 Informational Submittals.

1. Applicator's Qualification: List of references substantiating experience.
2. Coating manufacturer's Certificate of Compliance.
3. Factory Applied Coatings: Manufacturer's certification stating factory applied coating system meets or exceeds requirements specified.
4. Manufacturer's written verification that submitted material is suitable for the intended use.
5. Coating for Faying Surfaces: Manufacturer's test results that show the proposed coating meets the slip resistance requirements of the AISC Specification for Structural Joints using ASTM A325 or ASTM A490 bolts.
6. If the manufacturer of finish coating differs from that of shop primer, provide finish coating manufacturer's written confirmation that materials are compatible.
7. Manufacturer's written instructions and special details for applying each type of paint.

210-1.4 Quality Assurance.

1. Applicator Qualifications: Experience in application of specified products.
2. Regulatory Requirements:
 - a) Meet federal, state, and local requirements limiting the emission of volatile organic compounds.
 - b) Perform surface preparation and painting in accordance with recommendations of the following:
 - i. Paint manufacturer's instructions.
 - ii. SSPC PA 10.
 - iii. Federal, state, and local agencies having jurisdiction.
3. Mockup:
 - a) Before proceeding with Work under this section, finish one complete space or item of each color scheme required showing selected colors, finish texture, materials, quality of work, and special details.
 - b) After Engineer approval, sample spaces or items shall serve as a standard for similar work throughout the Project.

210-1.5 Delivery, Storage, And Handling.

1. Shipping:
 - a) Where precoated items are to be shipped to the Site, protect coating from damage. Batten coated items to prevent abrasion.
 - b) Protect shop painted surfaces during shipment and handling by suitable provisions including padding, blocking, and use of canvas or nylon slings.
2. Storage:
 - a) Store products in a protected area that is heated or cooled to maintain temperatures within the range recommended by paint manufacturer.
 - b) Primed surfaces shall not be exposed to weather for more than 2 months before being topcoated, or less time if recommended by coating manufacturer.

210-1.6 Environmental Requirements.

Do not apply paint in temperatures or moisture conditions outside of manufacturer's recommended maximum or minimum allowable.

Do not perform final abrasive blast cleaning whenever relative humidity exceeds 85 percent, or whenever surface temperature is less than 5 degrees F above dew point of ambient air.

210-2 PRODUCTS.

210-2.1 Manufacturers.

Nationally recognized manufacturers of paints and protective coatings who are regularly engaged in the production of such materials for essentially identical service conditions.

210-2.2 Abrasive Materials.

Select abrasive type and size to produce surface profile that meets coating manufacturer's recommendations for specific primer and coating system to be applied.

210-2.3 Paint Materials.

1. General:
 - a) Manufacturer's highest quality products suitable for intended service.
 - b) Compatibility: Only compatible materials from a single manufacturer shall be used in the Work. Particular attention shall be directed to compatibility of primers and finish coats.

- c) Thinners, Cleaners, Driers, and Other Additives: As recommended by coating manufacturer.

2. Products:

- a) Block Filler: Primer-sealer designed for rough masonry surfaces, 100% acrylic emulsion
- b) Coal-Tar Epoxy: Amine, polyamide, or phenolic epoxy type 70% volume solids minimum, suitable for immersion service
- c) DTM Acrylic Primer: Surface tolerant, direct-to-metal water borne acrylic primer
- d) DTM Acrylic Finish: Surface tolerant, direct-to-metal water borne acrylic finish coat
- e) Elastomeric Polyurethane: 100% solids, plural component, spray applied, high build, elastomeric polyurethane coating, suitable for the intended service
- f) Epoxy Filler/Surfacer: 100% solids epoxy trowel grade filler and surfacer, nonshrinking, suitable for application to concrete and masonry. Approved for potable water contact and conforming to NSF 61, where required
- g) Epoxy Nonskid (Aggregated): Polyamidoamine or amine converted epoxies aggregated; aggregate may be packaged separately
- h) Epoxy Primer—Ferrous Metal: Anticorrosive, converted epoxy primer containing rust-inhibitive pigments
- i) Epoxy Primer—Other: Epoxy primer, high-build, as recommended by coating manufacturer for specific galvanized metal, copper, or nonferrous metal alloy to be coated
- j) Fusion Bonded Coating: 100% solids, thermosetting, fusion bonded, dry powder epoxy, suitable for the intended service
- k) TFE Lube or Grease Lube: Tetrafluoroethylene, liquid coating, or open gear grease as supplied by McMaster-Carr Supply Corporation, Elmhurst, IL
- l) High Build Epoxy: Polyamidoamine epoxy, minimum 69% volume solids, capability of 4 to 8 MDFT per coat
- m) Inorganic Zinc Primer: Solvent or water based, having 85% metallic zinc content in the dry film; follow manufacturer's recommendation for topcoating
- n) NSF Epoxy: Polyamidoamine epoxy, approved for potable water contact and conforming to NSF 61
- o) Epoxy, High Solids: Polyamidoamine epoxy, 80% volume solids, minimum, suitable for immersion service

- p) Polyurethane Enamel: Two-component, aliphatic or acrylic based polyurethane; high gloss finish
- q) Organic Zinc Rich Primer: Epoxy or moisture cured urethane with 85-percent zinc content in the dry film, meeting the requirements of RCSC Specification for Structural Joints using High Strength Bolts, Class A or Class B, as required.
- r) Rust-Inhibitive Primer: Single-package steel primers with anticorrosive pigment loading
- s) Sanding Sealer: Co-polymer oil, clear, dull luster
- t) Silicone/Silicone Acrylic: Elevated temperature silicone or silicone/acrylic based
- u) Stain, Concrete: Acrylic, water repellent, penetrating stain
- v) Stain, Wood: Satin luster, linseed oil, solid or transparent as required
- w) Varnish: Nonpigmented vehicle based on a variety of resins (alkyd, phenolic, urethane) in gloss, semigloss, or flat finishes, as required
- x) Water Base Epoxy: Two-component, polyamide epoxy emulsion, finish as required

210-2.4 Mixing.

1. Multiple-Component Coatings:
 - a) Prepare using each component as packaged by paint manufacturer.
 - b) No partial batches will be permitted.
 - c) Do not use multiple-component coatings that have been mixed beyond their pot life.
 - d) Furnish small quantity kits for touchup painting and for painting other small areas.
 - e) Mix only components specified and furnished by paint manufacturer.
 - f) Do not intermix additional components for reasons of color or otherwise, even within the same generic type of coating.
2. Colors: Formulate paints with colorants free of lead, lead compounds, or other materials that might be affected by presence of hydrogen sulfide or other gas likely to be present at Site.

210-2.5 Shop Finishes.

1. Shop Blast Cleaning: Reference Paragraph, Shop Coating Requirements.

2. Surface Preparation: Provide Engineer minimum 7 days' advance notice to start of shop surface preparation work and coating application work.
3. Shop Coating Requirements:
 - a) When required by equipment specifications, such equipment shall be primed and finish coated in shop by manufacturer and touched up in field with identical material after installation.
 - b) Where manufacturer's standard coating is not suitable for intended service condition, Engineer may approve use of a tie-coat to be used between manufacturer's standard coating and specified field finish. In such cases, tiecoat shall be surface tolerant epoxy as recommended by manufacturer of specified field finish coat. Coordinate details of equipment manufacturer's standard coating with field coating manufacturer.
4. Steel Pipe:
 - a) Surface preparation and application of primer shall be performed by pipe manufacturer.
 - b) For pipe with epoxy lining, do not place end cap seals until pipe lining material has sufficiently dried.

210-3 EXECUTION.

210-3.1 General.

1. Provide Engineer minimum 7 days' advance notice to start of field surface preparation work and coating application work.
2. Perform the Work only in presence of Engineer, unless Engineer grants prior approval to perform the Work in Engineer's absence.
3. Schedule inspection of cleaned surfaces and all coats prior to succeeding coat in advance with Engineer.

210-3.2 Examination.

1. Factory Finished Items:
 - a) Schedule inspection with Engineer before repairing damaged factory-finished items delivered to Site.
 - b) Repair abraded or otherwise damaged areas on factory-finished items as recommended by coating manufacturer. Carefully blend repaired areas into original finish. If required to match colors, provide full finish coat in field.
2. Surface Preparation Verification: Inspect and provide substrate surfaces prepared in accordance with these Specifications and printed directions and

recommendations of paint manufacturer whose product is to be applied. The more stringent requirements shall apply.

210-3.3 Protection Of Items Not To Be Painted.

1. Remove, mask, or otherwise protect hardware, lighting fixtures, switchplates, aluminum surfaces, machined surfaces, couplings, shafts, bearings, nameplates on machinery, and other surfaces not specified elsewhere to be painted.
2. Provide drop cloths to prevent paint materials from falling on or marring adjacent surfaces.
3. Protect working parts of mechanical and electrical equipment from damage during surface preparation and painting process.
4. Mask openings in motors to prevent paint and other materials from entering.
5. Protect surfaces adjacent to or downwind of Work area from overspray.

210-3.4 Surface Preparation.

210-3.4.1 Field Abrasive Blasting.

1. Perform blasting for items and equipment where specified and as required to restore damaged surfaces previously shop or field blasted and primed or coated.
2. Refer to coating systems for degree of abrasive blasting required.
3. Where the specified degree of surface preparation differs from manufacturer's recommendations, the more stringent shall apply.

210-3.4.2 Surface Contamination Testing.

1. A surface contamination analysis test shall be performed every 500 square feet by means of a Chlor Test CSN Salts or approved equivalent.
2. Surface with chloride levels exceeding 3 µg/square centimeter for submerged surfaces and 5 µg/square centimeter for exposed surfaces shall be treated with a liquid soluble salt remover equivalent to CHLOR*RID (CHLOR*RID International, Chandler, AZ).
3. Follow manufacturer's recommendations and procedures for the use of this product to remove the surface contamination.

210-3.4.3 Metal Surface Preparation.

- a. Where indicated, meet requirements of SSPC Specifications summarized below:
 - a) SP 1, Solvent Cleaning: Removal of visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants by cleaning with solvent.

- b) SP 2, Hand Tool Cleaning: Removal of loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, using nonpower hand tools.
 - c) SP 3, Power Tool Cleaning: Removal of loose rust, loose mill scale, loose paint, and other loose detrimental foreign matter, using power-assisted hand tools.
 - d) SP 5, White Metal Blast Cleaning: Removal of visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter by blast cleaning.
 - e) SP 6, Commercial Blast Cleaning: Removal of visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter, except for random staining limited to no more than
 - f) 33 percent of each unit area of surface which may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings.
 - g) SP 7, Brush-Off Blast Cleaning: Removal of visible rust, oil, grease, soil, dust, loose mill scale, loose rust, and loose coatings. Tightly adherent mill scale, rust, and coating may remain on surface.
 - h) SP 10, Near-White Blast Cleaning: Removal of visible oil, grease, dust, dirt, mill scale, rust, coatings, oxides, corrosion products, and other foreign matter, except for random staining limited to no more than
 - i) 5 percent of each unit area of surface which may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings.
 - j) SP 11, Power Tool Cleaning to Bare Metal: Removal of visible oil, grease, dirt, dust, mill scale, rust, paint, oxide, corrosion products, and other foreign matter using power-assisted hand tools capable of producing suitable surface profile. Slight residues of rust and paint may be left in lower portion of pits if original surface is pitted.
 - k) SP-16, Brush Blasting of Non-Ferrous Metals: A brush-off blast cleaned non-ferrous metal surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, metal oxides (corrosion products), and other foreign matter. Intact, tightly adherent coating is permitted to remain. A coating is considered tightly adherent if it cannot be removed by lifting with a dull putty knife. Bare metal substrates shall have a minimum profile of 19 micrometers (0.75 mil).
- b. The words “solvent cleaning”, “hand tool cleaning”, “wire brushing”, and “blast cleaning”, or similar words of equal intent in these Specifications or in paint manufacturer’s specification refer to the applicable SSPC Specification.

- c. Where OSHA or EPA regulations preclude standard abrasive blast cleaning, wet or vacu-blast methods may be required. Coating manufacturers' recommendations for wet blast additives and first coat application shall apply.
- d. Hand tool clean areas that cannot be cleaned by power tool cleaning.
- e. Round or chamfer sharp edges and grind smooth burrs, jagged edges, and surface defects.
- f. Welds and Adjacent Areas:
 - a) Prepare such that there is:
 - i. No undercutting or reverse ridges on weld bead.
 - ii. No weld spatter on or adjacent to weld or any area to be painted.
 - iii. No sharp peaks or ridges along weld bead.
 - b) Grind embedded pieces of electrode or wire flush with adjacent surface of weld bead.
- g. Preblast Cleaning Requirements:
 - a) Remove oil, grease, welding fluxes, and other surface contaminants prior to blast cleaning.
 - b) Cleaning Methods: Steam, open flame, hot water, or cold water with appropriate detergent additives followed with clean water rinsing.
 - c) Clean small isolated areas as above or solvent clean with suitable solvent and clean cloth.
- h. Blast Cleaning Requirements:
 - a) Type of Equipment and Speed of Travel: Design to obtain specified degree of cleanliness. Minimum surface preparation is as specified herein and takes precedence over coating manufacturer's recommendations.
 - b) Select type and size of abrasive to produce surface profile that meets coating manufacturer's recommendations for particular primer to be used.
 - c) Use only dry blast cleaning methods.
 - d) Do not reuse abrasive, except for designed recyclable systems.
 - e) Meet applicable federal, state, and local air pollution and environmental control regulations for blast cleaning, confined space entry (if required), and disposition of spent aggregate and debris.
- i. Post-Blast Cleaning and Other Cleaning Requirements:
 - a) Clean surfaces of dust and residual particles from cleaning operations by dry (no oil or water vapor) air blast cleaning or other method prior

- to painting. Vacuum clean enclosed areas and other areas where dust settling is a problem and wipe with a tack cloth.
- b) Paint surfaces the same day they are blasted. Reblast surfaces that have started to rust before they are painted.
- j. Galvanized Metal, Copper, and Nonferrous Metal Alloy Surface Preparation:
- a) Remove soil, cement spatter, and other surface dirt with appropriate hand or power tools.
 - b) Brush blast in accordance with SSPC SP 16.
 - c) Obtain and follow coating manufacturer's recommendations for additional preparation that may be required.
- k. Concrete Surface Preparation:
- a) Do not begin until 30 days after concrete has been placed.
 - b) Meet requirements of SSPC SP 13.
 - c) Remove grease, oil, dirt, salts or other chemicals, loose materials, or other foreign matter by solvent, detergent, or other suitable cleaning methods.
 - d) Brush-off blast clean to remove loose concrete and laitance, and provide a tooth for binding. Upon approval by Engineer, surface may be cleaned by acid etching method. Approval is subject to producing desired profile equivalent to No. 80 grit flint sandpaper. Acid etching of vertical or overhead surfaces shall not be allowed.
 - e) Secure coating manufacturer's recommendations for additional preparation, if required, for excessive bug holes exposed after blasting.
 - f) Unless otherwise required for proper adhesion, ensure surfaces are dry prior to painting.
- l. Plastic and FRP Surface Preparation:
- a) Hand sand plastic surfaces to be coated with medium grit sandpaper to provide tooth for coating system.
 - b) Large areas may be power sanded or brush-off blasted, provided sufficient controls are employed so surface is roughened without removing excess material.
- m. Masonry Surface Preparation:
- a) Complete and cure masonry construction for 14 days or more before starting surface preparation work.
 - b) Remove oil, grease, dirt, salts or other chemicals, loose materials, or other foreign matter by solvent, detergent washing, or other suitable cleaning methods.

- c) Clean masonry surfaces of mortar and grout spillage and other surface deposits using one of the following:
 - i. Nonmetallic fiber brushes and commercial muriatic acid followed by rinsing with clean water.
 - ii. Brush-off blasting.
 - iii. Water blasting.
 - iv. Do not damage masonry mortar joints or adjacent surfaces.
 - v. Leave surfaces clean and, unless otherwise required for proper adhesion, dry prior to painting.
 - vi. Masonry Surfaces to be Painted: Uniform texture and free of surface imperfections that would impair intended finished appearance.
 - vii. Masonry Surfaces to be Clear Coated: Free of discolorations and uniform in texture after cleaning.
- n. Wood Surface Preparation:
 - a) Replace damaged wood surfaces or repair in a manner acceptable to Engineer prior to start of surface preparation.
 - b) Solvent clean (mineral spirits) knots and other resinous areas and coat with shellac or other knot sealer, prior to painting. Remove pitch by scraping and wipe clean with mineral spirits or turpentine prior to applying knotsealer.
 - c) Round sharp edges by light sanding prior to priming.
 - d) Filler:
 - i. Synthetic-based wood putty approved by paint manufacturer for paint system.
 - ii. For natural finishes, color of wood putty shall match color of finished wood.
 - iii. Fill holes, cracks, and other surface irregularities flush with surrounding surface and sand smooth.
 - iv. Apply putty before or after prime coat, depending on compatibility and putty manufacturer's recommendations.
 - v. Use cellulose type putty for stained wood surfaces.
 - e) Ensure surfaces are clean and dry prior to painting.
- o. Existing Painted Surfaces to be Repainted Surface Preparation:
 - a) Detergent wash and freshwater rinse.

- b) Clean loose, abraded, or damaged coatings to substrate by hand or power tool, SP 2 or SP 3.
 - c) Feather surrounding intact coating.
 - d) Apply one spot coat of specified primer to bare areas, overlapping prepared existing coating.
 - e) Apply one full finish coat of specified primer to entire surface.
 - f) If an aged, plural-component material is to be topcoated, contact coating manufacturer for additional surface preparation requirements.
- p. Application of Cosmetic Coat:
- a) It is assumed that existing coatings have oxidized sufficiently to prevent lifting or peeling when overcoated with paints specified.
 - b) Check compatibility by application to a small area prior to starting painting.
 - c) If lifting or other problems occur, request disposition from Engineer.
- q. Perform blasting as required to restore damaged surfaces. Materials, equipment, procedures shall meet requirements of SSPC.

210-3.5 Surface Cleaning.

210-3.5.1 Brush-Off Blast Cleaning.

1. Equipment, procedure, and degree of cleaning shall meet requirements of SSPC SP 7.
2. Abrasive: Either wet or dry blasting sand, grit, or nutshell.
3. Select various surface preparation parameters, such as size and hardness of abrasive, nozzle size, air pressure, and nozzle distance from surface such that surface is cleaned without pitting, chipping, or other damage.
4. Verify parameter selection by blast cleaning a trial area that will not be exposed to view.
5. Engineer will review acceptable trial blast cleaned area and use area as a representative sample of surface preparation.
6. Repair or replace surface damaged by blast cleaning.

210-3.5.2 Acid Etching.

1. After precleaning, spread the following solution by brush or plastic sprinkling can: One part commercial muriatic acid reduced by two parts water by volume.

Adding acid to water in these proportions gives an approximate 10 percent solution of HCl.

2. Application:
 - a) Rate: Approximately 2 gallons per 100 square feet.
 - b) Work acid solution into surface by hard-bristled brushes or brooms until complete wetting and coverage is obtained.
 - c) Acid will react vigorously for a few minutes, during which time brushing shall be continued.
 - d) After bubbling subsides (10 minutes), hose down remaining slurry with high pressure clean water.
 - e) Rinse immediately to avoid formation on the surface of salts that are difficult to remove
 - f) Thoroughly rinse to remove any residual acid surface condition that may impair adhesion.
3. Ensure surface is completely dry before application of coating.
4. Apply acid etching to obtain a "grit sandpaper" surface profile. If not, repeat treatment.

210-3.5.3 Solvent Cleaning.

1. Consists of removal of foreign matter such as oil, grease, soil, drawing and cutting compounds, and any other surface contaminants by using solvents, emulsions, cleaning compounds, steam cleaning, or similar materials and methods that involve a solvent or cleaning action.
2. Meet requirements of SSPC SP 1.

210-3.6 Application.

210-3.6.1 General.

1. The intention of these Specifications is for new, interior and exterior masonry, concrete, and metal, and submerged metal surfaces to be painted, whether specifically mentioned or not, except as specified otherwise. Do not paint exterior concrete surfaces, unless specifically indicated.
2. Extent of Coating (Immersion): Coatings shall be applied to internal vessel and pipe surfaces, nozzle bores, flange gasket sealing surfaces, carbon steel internals, and stainless steel internals, unless otherwise specified.
3. For coatings subject to immersion, obtain full cure for completed system. Consult coatings manufacturer's written instructions for these requirements. Do not immerse coating until completion of curing cycle.
4. Apply coatings in accordance with these Specifications and paint manufacturers' printed recommendations and special details. The more

stringent requirements shall apply. Allow sufficient time between coats to assure thorough drying of previously applied paint.

5. Sand wood lightly between coats to achieve required finish.
6. Vacuum clean surfaces free of loose particles. Use tack cloth just prior to applying next coat.
7. Fusion Bonded Coatings Method Application: Electrostatic, fluidized bed, or flocking.
8. Coat units or surfaces to be bolted together or joined closely to structures or to one another prior to assembly or installation.
9. On pipelines, terminate coatings along pipe runs to 1 inch inside pipe penetrations.
10. Keep paint materials sealed when not in use.
11. Where more than one coat is applied within a given system, alternate colors to provide a visual reference showing required number of coats have been applied.

210-3.6.2 Galvanized Metal, Copper, And Nonferrous Metal Alloys.

1. Concealed galvanized, copper, and nonferrous metal alloy surfaces (behind building panels or walls) do not require painting, unless specifically indicated herein.
2. Prepare surface and apply primer in accordance with System No. 10 specification.
3. Apply intermediate and finish coats of the coating system appropriate for the exposure.

210-3.6.3 Porous Surfaces Such As Concrete And Masonry.

1. Filler/Surfacers: Use coating manufacturer's recommended product to fill air holes, bug holes, and other surface voids or defects.
2. Prime Coat: May be thinned to provide maximum penetration and adhesion.
 - a) Type and Amount of Thinning: Determined by paint manufacturer and dependent on surface density and type of coating.
3. Surface Specified to Receive Water Base Coating: Damp, but free of running water, just prior to application of coating.

210-3.6.4 Film Thickness And Coverage.

1. Number of Coats:
 - a) Minimum required without regard to coating thickness.
 - b) Additional coats may be required to obtain minimum required paint thickness, depending on method of application, differences in manufacturers' products, and atmospheric conditions.

2. Application Thickness:
 - a) Do not exceed coating manufacturer’s recommendations.
 - b) Measure using a wet film thickness gauge to ensure proper coating thickness during application.
3. Film Thickness Measurements and Electrical Inspection of Coated Surfaces:
 - a) Perform with properly calibrated instruments.
 - b) Recoat and repair as necessary for compliance with specification.
 - c) Coats are subject to inspection by Engineer and coating manufacturer’s representative.
4. Visually inspect concrete, masonry, nonferrous metal, plastic, and wood surfaces to ensure proper and complete coverage has been attained.
 - a) Give particular attention to edges, angles, flanges, and other similar areas, where insufficient film thicknesses are likely to be present, and ensure proper millage in these areas.
 - b) Apply additional coats as required to achieve complete hiding of underlying coats. Hiding shall be so complete that additional coats would not increase the hiding.

210.3.7 Protective Coatings Systems And Application Schedule.

- A. Unless otherwise shown or specified, paint surfaces in accordance with the following application schedule. In the event of discrepancies or omissions in the following, request clarification from Engineer before starting work in question.
- B. System No. 1 Submerged Metal—Potable Water:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 5, White Metal Blast Cleaning	NSF Epoxy	3 coats, 3 MDFTPC

1. Use on the following items or areas:
 - a. Metal surfaces new and existing below a plane 1 foot above the maximum liquid surface; metal surfaces above the maximum liquid surface that are a part of the immersed equipment; surfaces of metallic items, such as wall pipes, pipes, pipe sleeves, access manholes, gate guides and thimbles, and structural steel that are embedded in concrete; and the following specific surfaces:
 - 1) Interior surfaces of steel piping noted in the Piping Schedule.

C. System No. 2 Submerged Metal—Domestic Sewage:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 5, White Metal Blast Cleaning	Prime in accordance with manufacturer's recommendations	
	Coal-Tar Epoxy -OR- High Build Epoxy	2 coats, 16 MDFT 2 coats, 16 MDFT

1. Use on the following items or areas:
 - a. Metal surfaces **new and existing** below a plane 1 foot above maximum liquid surface, metal surfaces above maximum liquid surface that are a part of immersed equipment, concrete embedded surfaces of metallic items, such as wall pipes, pipes, pipe sleeves, access manholes, gate guides and thimbles, and structural steel, and the following specific surfaces:

D. Interior surfaces of steel piping noted in the Piping Schedule. System No. 3 Submerged Metal—Other:

1. Use on the following items or areas:
 - a. Metal surfaces below a plane 1 foot above maximum liquid surface, metal surfaces above maximum liquid surface which are a part of immersed equipment, and the following specific surfaces:
 - 1) Interior surfaces of steel piping noted in the Piping Schedule.

E. System No. 4 Exposed Metal—Highly Corrosive:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 10, Near-White Blast Cleaning	Epoxy Primer— Ferrous Metal	1 coat, 2.5 MDFT
	High Build Epoxy	1 coat, 4 MDFT
	Polyurethane Enamel	1 coat, 3 MDFT

1. Use on the following items or areas:
 - a. Exposed metal surfaces, **new** located inside or outside of structures and exposed to weather.

F. System No. 5 Exposed Metal—Mildly Corrosive:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 10, Near-White Blast Cleaning	Epoxy Primer— Ferrous Metal	1 coat, 2.5 MDFT
	Polyurethane Enamel	1 coat, 3 MDFT

1. Use on the following items or areas:
 - a. Exposed metal surfaces, **new** located inside or outside of structures and exposed to weather or in a highly humid atmosphere, such as pipe galleries and similar areas.

G. System No. 6 Exposed Metal—Atmospheric:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 6, Commercial Blast Cleaning	Rust-Inhibitive Primer	1 coat, 2 MDFT
	Alkyd Enamel	2 coats, 4 MDFT

1. Use on the following items or areas:
 - a. Exposed metal surfaces, located inside or outside of structures or exposed to weather, including metal doors and frames, vents, louvers, exterior metal ductwork, flashing, sheet metalwork and miscellaneous architectural metal trim. Apply surface preparation and primer to surfaces prior to installation. Finish coats need only be applied to surfaces exposed after completion of construction.

H. System No. 7 Concrete Encased Metal:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 6, Commercial Blast Cleaning	Coal-Tar Epoxy	2 coats, 16 MDFT

1. Use on the following items or areas:
 - a. Use on concrete encased ferrous metals including wall pipes, pipe sleeves, access manholes, gate guides, and thimbles; and the following specific surfaces:

I. System No. 8 Buried Metal—General:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 10, Near-White Blast Cleaning	Standard Hot Coal-Tar Enamel -OR- Coal-Tar Epoxy	AWWA C203 2 coats, 16 MDFT
	For Highly Abrasive Soil, Brackish Water: Tape Coat System	AWWA C214 with Double Outer Wrap

1. For steel pipe and fittings, follow AWWA C209 and AWWA C214 with double outer wrap.
2. Use on the following items or areas:
 - a. Buried, below grade portions of steel items, except buried stainless steel or ductile iron.

J. System No. 10 Galvanized Metal, Copper, and Nonferrous Metal Alloy Conditioning:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Galvanized Metal, Copper, and Nonferrous Metal Alloy Surface Preparation	Epoxy Primer—Other	As recommended by coating manufacturer Remaining coats as required for exposure

1. Use on the following items or areas:
 - a. Galvanized surfaces requiring painting.
 - b. After application of System No. 10, apply finish coats as required for exposure.

K. System No. 11 Faying Surfaces of Slip Critical Bolted Connections:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 10, Near-White Blast Cleaning	Organic Zinc Rich Primer	1 coat, 3 MDFT

1. Use on faying surfaces of slip critical joints as specified and as shown on Drawings.

2. Provide primer in accordance with RCSC Specification for Structural Joints using High-Strength Bolts.

L. System No. 14 High Heat-Resistant—700 Degrees F Maximum:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 6, Commercial Blast Cleaning	Inorganic Zinc Primer	1 coat, 2.5 MDFT
	Silicone	1 coat, 2 MDFT

M. System No. 15 Heat-Resistant—425 Degrees F Maximum:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 6, Commercial Blast Cleaning	Inorganic Zinc Primer	1 coat, 2.5 MDFT
	Silicone Acrylic (limited colors)	2 coats, 2 MDFT

N. System No. 16 Elastomeric Coating:

Surface Prep.	Paint Material	Min. Coats, Cover
Concrete: In accordance with Paragraph Concrete Surface Preparation -OR-Masonry: In accordance with Paragraph Masonry Surface Preparation -OR-Steel: SP 5, White Metal Blast Cleaning	Prime in accordance with manufacturer's recommendations	
	Elastomeric Polyurethane	1 coat, 32 SFPG

O. System No. 18 Concrete Tank Lining—Potable Water:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Concrete Surface Preparation	Epoxy Filler/Surfacer (NSF-approved)	As required to fill voids and level surface
	NSF Epoxy	3 coats, 250 SFPGPC

1. Use on the following items or areas:
 - a. Concrete surfaces below a plane 1 foot above maximum liquid surface

P. System No. 18a Concrete Exposed Metal Repair Coating—Potable Water and Non-Submerged:

Surface Prep.	Min. Coats, Cover
Brush blast concrete in accordance with Paragraph Concrete Surface Preparation; blast exposed reinforcing steel to Near White Metal, SSPC SP10. See Note 1	2 coats, 4 MDFTPC, see Note 2.
<p>Note 1. Surface Preparation Alternative: Mechanical abrade concrete surfaces to meet International Concrete Restoration Association standard 37/32, Concrete Surface Profile No. 3. Mechanically abrade exposed ends of reinforcing steel in accordance with SSPC SP-11.</p> <p>Note 2. Brush out surface voids and irregularities to provide a monolithic film.</p>	

1. Use this system:
 - a. On saw-cut concrete surfaces that will not receive new concrete to cover exposed ends of rebar and metal embeds. Or alternately, where approved, over ends of and minimum 2 inches around ends of exposed metal and rebar in lieu of entire surface.

Q. System No. 19 Concrete Tank Lining—Domestic Sewage:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Concrete Surface Preparation	Epoxy Filler/Surfacer	As required to fill voids and level surface
	Epoxy, High Solids	3 coats, 250 SFPGPC

1. Use on the following items or areas:
 - a. Concrete surfaces below a plane 1 foot above maximum liquid surface

R. System No. 19a Concrete Exposed Metal Repair Coating—Wastewater:

Surface Prep.	Paint Material	Min. Coats, Cover
Brush blast concrete in accordance with Paragraph Concrete Surface Preparation; blast exposed reinforcing steel to Near White Metal, SSPC SP10. See Note 1.	Amine-cured epoxy, suitable for exposure to primary wastewater, finish color gray.	2 coats, 8 MDFTPC, see Note 2.
<p>Note 1. Surface Preparation Alternative: Mechanical abrade concrete surfaces to meet International Concrete Restoration Association standard 37/32, Concrete Surface Profile No. 3. Mechanically abrade exposed ends of reinforcing steel in accordance with SSPC SP-11.</p> <p>Note 2. Brush out surface voids and irregularities to provide a monolithic film.</p>		

1. On saw-cut concrete surfaces that will not receive new concrete to cover exposed ends of rebar and metal embeds. Or alternately, where approved, over ends of and minimum two inches around ends of exposed metal and rebar in lieu of entire surface.

S. System No. 20 Concrete Tank Lining—Other:

1. Use on the following items or areas:
 - a. Concrete surfaces below a plane 1 foot above maximum liquid surface

T. System No. 21 Skid-Resistant—Concrete:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Concrete Surface Preparation	Epoxy Nonskid (Aggregated)	1 coat, 160 SFPG

1. Use on the following items or areas:
 - a. Concrete slab on grade / walking surfaces.

U. System No. 22 Chemical-Resistant Wall, Heavy-Duty— Concrete, Masonry:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph for Concrete and Masonry Surface Preparation	Epoxy Filler/Surface	1 coat as required to fill voids and smooth surface; apply to 100 percent of surface.
	High Build Epoxy	1 coat, 160 SFPG
	High Build Epoxy, Gloss	1 coat, 160 SFPG

1. Use on the following items or areas:
 - a. All exposed interior CMU building wall surfaces.

V. System No. 25 Exposed FRP, PVC:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Plastic and FRP Surface Preparation	Acrylic Latex Semigloss	2 coats, 320 SFPGPC

1. Use on the following items or areas:
 - a. All exposed-to-view PVC and CPVC surfaces, and FRP surfaces without integral UV-resistant gel coat.

W. System No. 27 Aluminum and Dissimilar Metal Insulation:

Surface Prep.	Paint Material	Min. Coats, Cover
Solvent Clean (SP 1)	Prime in accordance with manufacturer's recommendations	
	Bituminous Paint	1 coat, 10 MDFT

1. Use on aluminum surfaces embedded or in contact with concrete.

NC MORENA PUMP STATION & PIPELINES

X. System No. 29 Fusion Bonded Coating:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 10, Near-White Blast Cleaning	Fusion Bonded Coating 100% Solids Epoxy	1 or 2 coats, 7 MDFT

1. For steel pipe and fittings, meet all requirements of AWWA C213.

Y. System No. 29A Fusion Bonded, Steel Dowel Coating:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 10, Near-White Blast Cleaning	Fusion Bonded Coating 100% Solids Epoxy	1 or 2 coats, 7 MDFT
TFE Lube, Shop Applied; Grease Lube Alternative, Field Applied Just Prior to Installation	TFE Lube or Grease Lube	1 coat, as required

1. Use on steel expansion joint dowels as specified in the standard specification.

210-3.8 Architectural Paint Systems And Application Schedule.

- A. Unless otherwise shown or specified, paint surfaces in accordance with the following application schedule. In the event of discrepancies or omissions in the following, request clarification from Engineer before starting work in question. Additional requirements may be included in the Piping Schedule.

B. System No. 106 Galvanized Metal:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Galvanized Metal, Copper, and Nonferrous Metal Alloy Surface Preparation	Manufacturer's Recommended Primer	1 coat, as recommended by manufacturer
	Alkyd Enamel (Semigloss)	2 coats, 4 MDFT

1. Use on the following items or areas:
 - a. Hollow metal frames and doors.

C. System No. 107 Metal Trim and Structural Steel:

Surface Prep.	Paint Material	Min. Coats, Cover
SP 6, Commercial Blast Cleaning	Rust-Inhibitive Primer	1 coat, 2 MDFT
	Alkyd Enamel (Semigloss)	2 coats, 4 MDFT

1. Use on the following items or areas:
 - a. All exposed structural steel, flashing, sheet metal.

D. System No. 110 Masonry Sealer:

Surface Prep.	Paint Material	Min. Coats, Cover
In accordance with Paragraph Masonry Surface Preparation	Acrylic Sealer	2 coats, 100 SFFGPC

1. Use on the following items or areas:
 - a. Exterior side of masonry wall.

210-4

TESTING.

210-4.1

Testing Equipment.

1. Provide calibrated electronic type dry film thickness gauge to test coating thickness specified in mils.
2. Provide low-voltage wet sponge electrical holiday detector to test completed coating systems, 20 mils dry film thickness or less, except zinc primer, high-build elastomeric coatings, and galvanizing, for pinholes, holidays, and discontinuities, as manufactured by Tinker and Razor, San Gabriel, CA, Model M-1.

3. Provide high-voltage spark tester to test completed coating systems in excess of 20 mils dry film thickness. Unit as recommended by coating manufacturer.

210-4.2

Testing.

1. Thickness and Continuity Testing:
 - a) Measure coating thickness specified in mils with a magnetic type, dry film thickness gauge, in accordance with SSPC PA 2. Check each coat for correct millage. Do not make measurement before a minimum of 8 hours after application of coating. Holiday detect coatings 20 mils thick or less, except zinc primer and galvanizing, with low voltage wet sponge electrical holiday detector in accordance with NACE SP0188.
 - b) Holiday detect coatings in excess of 20 mils dry with high voltage spark tester as recommended by coating manufacturer and in accordance with NACE SP0188.
 - c) After repaired and recoated areas have dried sufficiently, retest each repaired area. Final tests may also be conducted by Engineer.

210-4.3

Inspection.

Leave staging and lighting in place until Engineer has inspected surface or coating. Replace staging removed prior to approval by Engineer. Provide additional staging and lighting as requested by Engineer.

210-4.4

Unsatisfactory Application.

1. If item has an improper finish color or insufficient film thickness, clean surface and topcoat with specified paint material to obtain specified color and coverage. Obtain specific surface preparation information from coating manufacturer.
2. Evidence of runs, bridges, shiners, laps, or other imperfections is cause for rejection.
3. Repair defects in accordance with written recommendations of coating manufacturer.

210-4.5

Damaged Coatings, Pinholes, And Holidays.

1. Hand or power sand visible areas of chipped, peeled, or abraded paint, and feather edges. Follow with primer and finish coat. Depending on extent of repair and appearance, a finish sanding and topcoat may be required.
2. Remove rust and contaminants from metal surface. Provide surface cleanliness and profile in accordance with surface preparation requirements for specified paint system.
3. Feather edges and repair in accordance with recommendations of paint manufacturer.
4. Apply finish coats, including touchup and damage-repair coats in a manner that will present a uniform texture and color-matched appearance.

SECTION 212 – WATER AND SEWER SYSTEM VALVES AND APPURTENANCES

212-4.4 **Gear Actuators.** To the “GREENBOOK”, DELETE in its entirety and SUBSTITUE with the following:

212-4.4.1 **General.**

212-4.4.1.1 **Summary.**

- A. This section includes materials, installation and testing of electric motor actuators for valves six inches and larger in accordance with AWWA C540, except as modified below. The electric motor actuator shall include any necessary intermediate gearing between the electric actuator and the valve to which it is attached. Refer to Section 212-4.4.2 of this specification for minimum manufacturer requirements.

212-4.4.1.2 **References.**

All work covered in this section shall comply with the following standards;

- A. American Water Works Association: C540 Power Actuating Devices for Valves and Sluice Gates
- B. National Electrical Manufacturers Association
- C. National Fire Protection Agency: 70 National Electrical Code.

212-4.4.1.3 **Submittals.**

- A. Manufacturer’s catalog data showing motor actuator parts and materials of construction referenced by NEMA specification and grade. Show motor actuator dimensions, weights and coatings.
- B. Motor data including nameplate data, insulation type, output torque, voltage, phases, frequency, current at running torque and locked rotor, duty rating, and open/close travel time.
- C. Open/close travel times meeting the valve travel times shall be 15 minutes. The open/close travel time is defined as the time required for the valve to travel, or stroke, from close-to-open or open-to-close. A cycle is defined as close to open and back to close, which is equal to two strokes of the valve. Valve positioning time shall be programmable at the project site at any time. If required, positioning time for different portions of the valve stroke shall be independently programmable.
- D. Electrical schematic drawings and physical wiring diagrams showing all components.
- E. Certified factory performance test records, including written cycle test results as specified herein.
- F. Documentation confirming actuator has a minimum maintenance history of 50 units of the same model and option package as the

proposed actuator, with each unit functioning in a field installation for a period of one year without defect or malfunction in accordance with the requirements of Paragraph C of of this section.

- G. Drawings of the electrical components enclosure, showing physical layout in three dimensions or views.
- H. Electronic measurement of torque. No use of mechanical switches for torque measurement.
- I. Complete specifications and ordering information for replacement motors.
- J. Certified factory performance test report.
- K. Warranty certification from actuator manufacturer. Operation and maintenance manuals containing the following:
 - 1. Complete installation instructions;
 - 2. Operating and maintenance instructions;
 - 3. Complete parts list;
 - 4. Part change out instructions;
 - 5. Theory of operation of the actuator and intermediate gearing;
 - 6. Expanded parts drawings, showing all mechanical and electrical parts.
 - 7. Electrical schematic drawings and physical wiring diagrams showing all components.
 - 8. Drawings of the electrical components enclosure, showing physical layout in three dimensions or views;
 - 9. List of recommended spare parts.
 - 10. List of special tools for installation, maintenance, and adjustments;
 - 11. All software and interface cabling used for maintenance or programming.
 - 12. Lubrication guide with list of recommended lubricants.
- L. Copies of factory training certification, from the actuator manufacturer, for any maintenance or installation technicians. Provide training certifications specific to the model installed. Certificates shall be accepted by the Engineer before technicians are authorized to perform any work on the valve actuators.

212-4.4.2 Products.

212-4.4.2.1 Manufacturers.

- A. Actuators designated in the Contract Documents as "intelligent electric motor actuators" shall be AUMA - Group Non-Intrusive, or approved equal.

- B. Actuator manufacturers shall have experience manufacturing and installing valve actuators.
- C. Actuator shall have a minimum maintenance history of 50 units, of the same model and option package as the proposed actuator, which have each functioned in a field installation for a period of one year without defect or malfunction. Valve actuator manufacturer shall provide complete documentation to meet this requirement, including contact names, telephone numbers, and fax numbers, to verify the field installations. Acceptance of the validity of submitted maintenance history is solely at the discretion of the Engineer.

212-4.4.2.2 Actuator Identification.

- A. Identify electric motor actuators by model number and serial number shown cast or molded onto the actuator body or on a permanently attached plate in raised letters.

212-4.4.2.3 Geared Operators.

- A. Geared valve operators shall conform to AWWA C-504
- B. Intermediate Geared Operators.
 - 1. Provide intermediate operators of spur, helical, or bevel gears, between the new electric motor actuator and the new or existing geared valve operators, if needed to provide the specified open/close time, and to provide proper operation of the valve. Design the intermediate geared operators with bearings suitable for adapting to an electric actuator. Do not provide operators designed with bushings.
 - 2. Intermediate geared operators shall be enclosed, oil or grease lubricated, with seals provided on shafts to prevent entry of dirt and water into the operator. Intermediate geared operators do not need a dial indicating the position of the valve.
 - 3. Provide intermediate geared operators of the totally enclosed design, proportioned to permit operation of the valve under full differential pressure equal to the pressure rating of the valve, with a maximum input of 150 foot-pounds on the operating shaft. Orient intermediate geared operators to operate with valve stem and electric actuator as directed by the Engineer.
 - 4. Support gear shaft at each end by ball or tapered roller bearings. Provide reduction gearing to meet maximum torque and pull design requirement. The reduction gearing shall run in a proper lubricant.
 - 5. Intermediate geared operators shall open valves by turning counterclockwise.

212-4.4.2.4 Motors For Electric Actuators.

- A. Provide a 120 V single phase electrical connection to the power available at the Project site. The motor shall be operated by an integrated frequency converter and be three phase, non-ventilated, totally enclosed. The electric motors must be rated for continuous duty.
- B. Provide motors with Class F or H insulation, specifically designed for valve actuation service, and 100 start/stops per hour without overheating. Heat rise after 100 start/stops in an hour shall be less than 50 degrees C. Heat rise after three full consecutive valve cycles shall be less than 50 degrees C. If travel time requirements would cause the three-cycle test to extend beyond 60 minutes, limit the test to 60 continuous minutes.
- C. Provide motor output capacity sufficient to open or close the valve against the maximum differential pressure when the voltage is 10 percent above or below normal at the specified service conditions.
- D. Motor bearings shall be of the anti-friction type, and permanently lubricated.
- E. Provide overload protection by integrated electronic surveillance of the motor with the use of a linear positive temperature coefficient, PTC, sensor with monitoring by the control unit.
- F. For ease of motor or gear replacement, the motor shall be an independent sub-assembly of the actuator power unit, so the power gearing shall not be an integral part of the motor assembly. The wiring shall be easily disconnected during replacement.
- G. If replacement motors or motor assemblies for use in the electric actuator are not available to the Public Utilities Department directly from a motor manufacturer, supply spare electric motors or motor assemblies so the Public Utilities Department has immediate access to spare motors. At the time electric actuators are delivered to the Project site, provide the Engineer with one spare motor or motor assembly for each size or style of motor supplied for this Project.

212-4.4.2.5 Actuator Torque Requirements.

- A. Provide actuator with rated output torque at least one and one half times the maximum torque required to operate the valve at any position, including seating and unseating conditions, and neglecting hammer-blow effect.
- B. Maximum torque requirement is defined as the torque required at the most severe operating conditions, including maximum differential pressure across the valve, and maximum mechanical friction or other restrictive conditions inherent in the valve assembly.
- C. The differential pressure across the valve is defined as the pressure rating of the valve, or as specified herein.

- D. Actuator maximum torque shall be calculated with the applied voltage 25 percent below the nominal motor voltage rating. The actuator shall produce no more than the nominal maximum torque in overvoltage conditions.
- E. Coordinate with the valve manufacturer to ensure that the motor actuator stall torque output does not exceed the torque limits of the valve operating stem or shaft.
- F. Except as specified otherwise, base the maximum line velocity for torque calculations on the maximum design flow rate as indicated on the Plans.
- G. The line fluid temperature range shall be 40 degrees F to 100 degrees F.

212-4.4.2.6 Electrical Characteristics.

- A. Operating Speed and Indication
 - 1. Design the actuator to move a valve from fully closed to fully open, or one stroke, in a time of 15 minutes for each valve, with a tolerance of plus or minus two percent. Actuator shall maintain specified travel times during a plus or minus 25 percent fluctuation in voltage. Travel times shall be variable after commissioning without mechanical changes of the actuator.
 - 2. Design valve actuators for modulating service of the plunger valve to regulate flows. Actuator control shall be performed by an outside control source, unless specifically stated to the contrary elsewhere in this section. Any movement, control, or functionality that is done by the actuator without an outside control source shall be disabled, allowing full and exclusive control from the outside control source.
 - 3. The integrated electronics of the actuator shall provide a soft start and stop of the valve movement. Torque reserves shall be sufficient to move the valve out of the end positions.
- B. Actuator Housing
 - 1. The housing for the actuator motor and electrical components shall be NEMA 6.
 - 2. The housing shall have double-sealed dust and water protection at electrical connection compartment.
 - 3. Removal of fuses and switch adjustments shall be accomplished without necessitating removal of other components within the enclosure for ready access.
 - 4. Enclosures shall have at least one 1-1/4 - inch minimum and one to 1 ¼ inch NPT threaded hubs for conduit entry.
- C. Power Transmission
 - 1. Provide the actuator with an internal, multiple reduction power gearing unit, consisting of spur or helical gears and worm gearing.

2. Provide a self-locking worm gear set in the drive train to maintain valve position.
3. Provide the spur or helical gearing and worm of hardened alloy steel, and the worm gear of alloy bronze. Manufacture all power gearing accurately.
4. Do not use non-metallic, aluminum, or cast gearing.
5. Use anti-friction bearings with caged balls or roller throughout.
6. All rotating power train components shall operate immersed in grease or oil with provisions for inspection and re-lubrication without disassembly.
7. Lubricants shall be suitable for ambient conditions of minus 20 degrees F to ISO degrees F. Provide adequate seals on all shafting.
8. Noise generated by the actuator shall not exceed 72 dBA at all times within a three-foot radius.
9. The design shall permit the gear case to be opened for inspection or disassembled without releasing the stem thrust or taking the valve out of service.

212-4.4.2.7 Intelligent (Non-Intrusive) Electric Motor Actuators.

A. General Design

1. The actuator shall be of a modular design, allowing rapid replacement of faulty modules or sub-sections. Include as one integral assembly the motor, internal reduction gearing, electronic position and torque detection and push button controls.
2. The actuator shall be an intelligent, microprocessor-based design, with Bluetooth wireless interface as an option. All wireless functionality shall be password protected and disabled when not in use.
3. All calibration and set-up features shall be available from a non-intrusive front panel, accessible without requiring the removal of any covers or the use of special tools. Include password protection preventing any changes to the setup as a feature.
4. Actuator shall be suitable for service within the temperature range from minus 20 degrees C to plus 60 degrees C.
5. The electric motor shall be electrically connected to the actuator through use of a plug-in electrical connector. The motor shall be removable without draining oil or grease from the gearbox.

B. Communication with Actuator

1. Actuator shall be configurable for remote step-mode control, using 120 VAC control power, as specified on the Plans.

2. Actuator shall supply 120 VAC control power for remote control, and shall accept external 120 VAC control power for remote control. Internal actuator power supplies shall be automatically protected against overcurrent or short circuit conditions.
3. Actuator shall allow manual programming of all programmable features via front-panel switches and local display and laptop programming as detailed in Item 4 of this section.
4. Actuator shall allow access to all programmable features via a laptop computer connected to the actuator. If software other than a terminal emulator is required for access, then the software, the interface, and a cable shall be provided to the Engineer at the time of delivery of each actuator.
5. The programming port access shall be by Bluetooth, or other means that does not require the actuator to be opened in any way to connect a laptop to the actuator and gain access to the programming features.

C. Local/Remote Interface

1. Actuator shall have a local interface/display screen capable of displaying at least 32 alphanumeric characters and a 0 percent to 100 percent bar graph display for valve position readout. All text messages or displays shall be in English.
2. Actuator shall have local push buttons (open, close, stop/enter and remote/local). The remote/local (LOR) push button or selector switch shall be lockable in any position by using a standard padlock.
3. Local and remote programming interface shall be protected by user-selectable password protection for all programmable features.
4. The local control pushbuttons shall not penetrate the actuator enclosure, and shall electrically isolate the operator from any internal voltages.
5. The push buttons for open and close shall have jog switch functionality.
6. Four contacts shall be provided for remote indication of valve open/close limit indication. These contacts shall be I-NO and 1-NC for open or closed limit indication. These contacts shall be programmable for operation at any position between full open and full closed positions, or shall be programmable to indicate any of the

following: mid-travel, local mode, over torque, motor over temperature, manual operation, remote mode, valve moving, close torque switch, open torque switch, hardware failure, or valve jammed. These contacts shall be rated 250 VAC/30 VDC, three A.

B. Position/Limit/Torque Sensors

1. Actuators shall use non-contact type absolute position encoders, capable of at least 32-bit resolution. Position encoders shall sense actual valve position at all times, during electrical or handwheel operation, with or without applied electrical power, and without the use of batteries. The encoder maximum error shall be less than one percent and shall provide the same repeatability, linearity, and positional accuracy throughout the entire range of motion. Actuators that rely on batteries to retain position, limit settings, or any other programmable feature during a power outage are not acceptable.
2. Open and close valve travel-limit positions shall be a function of an absolute position encoder, stored in permanent, non-volatile memory, and be easily adjustable from the local or remote interface.
3. Torque shall be measured with a non-mechanical, purely electronic sensor. The motor-torque limit shall be adjustable over 50 percent to 100 percent of design torque in 10 percent increments.
4. The motor shall automatically de-energize if an over-torque condition is sensed. Torque limit protection shall automatically adjust for initial valve un-seating, or for programmed torque seating of valves. The actuator shall provide a remove blocking functionality.

C. Intelligent Control Module

1. The actuator control module shall be of a modular design, with replaceable circuit boards for troubleshooting. The control module shall be entirely housed within the actuator, and easily accessible for maintenance.
2. The control circuit boards or modules shall be connected with plug-in card connectors or wiring plugs.
3. The control module shall include an integrated frequency converter for motor operation. The control module shall include any necessary internal protection fuses. No external or accessory fuses shall be required for full protection of the motor or control electronics package.
4. The control module shall include a feature to reduce speed as it nears open or close limits based on valve percentage. This feature shall be able to be turned off and adjusted as needed.

5. The control module shall incorporate an automatic phase-correction circuit to correct motor rotation errors due to incorrect Project site wiring.
6. The control module shall include an automatic phase-failure detection circuit that shall disable motor rotation if a phase-loss is detected.
7. The control module shall allow step-mode control of the actuator.
8. The control module shall offer two additional non-latching NO relay outputs, and one additional NC relay output. All relay outputs shall be rated at 120 VAC, three Amps. These relay outputs shall be user-configurable to offer indications of any of the following conditions: pre-programmed valve position, over-torque, HAND-OFF-AUTOMATIC in local mode, HAND-MODE-AUTOMATIC in off mode, hand wheel operation, motor over-temperature, open torque switches, closed torque switches, hardware failure and valve moving.
9. Terminals shall be included within the actuator control wiring compartment to power the control module from an external 24 VDC source.
10. Design the control module to prevent undesired valve operation in the event of an internal fault or erratic command signal. Fault detection by the control module, or failure of the control module. Shall not energize the motor.
11. Actuator calibration shall be possible without removing any covers, does not require any special tools, and be accomplished by answering simple questions displayed on the operator display.
12. The control module shall accumulate and store diagnostic information about the performance of the actuator. This information shall include motor, position encoder, and contractor performance, cycle time, hand wheel operations, actuator identification, output turns, and a torque profile of the valve baseline stroke and the last valve stroke for comparison. All diagnostic information shall be displayed on the local operator interface panel, and shall be available over the digital communication link.

D. Power/Control Wiring

1. Locate all connections in a compartment that is separate from the control circuits and other internal spaces. Accessing the wiring compartment shall not require opening any other actuator compartments.
2. The wiring connections compartment shall contain a suitable number of screw-type terminals to allow connection of step-mode controls or digital communication control wiring, and the control wiring shall be

physically separated from the power wiring. The terminals shall be easily accessible without removing components or the use of special tools.

212-4.4.2.8 Drive Sleeve.

- A. Provide a drop-in stem nut held in place with a snap ring, torque bushing, or threaded locknut and keyway which couples the actuator to the intermediate geared operator or valve stem and provides a versatile means of disassembling the actuator from the operator or valve.

212-4.4.2.9 Factory Testing Of Motor Actuator.

- A. Test each actuator before shipment to the Project site. Submit certified test reports of performance. The application torque used during the testing shall be the maximum torque required to open or close the valve at any position including seating and unseating conditions.

212-4.4.2.10 Manual Actuators.

- A. Provide lever or wrench actuators for exposed valves three inches and smaller.
- B. Provide enclosed gear actuators on butterfly, ball, and plug valves four inches and larger. Gear actuators shall be worm and gear type.
- C. Design gear actuators assuming that the differential pressure across the plug or disc is equal to the pressure rating valve.
- D. Gear actuators shall be enclosed, lubricated with oil or grease, and provided with seals on shafts to prevent entry of dirt and water into the actuator. Gear actuators for valves located in vaults and structures shall have as shown on the Plans, either hand wheels or operating nuts or extension stems to valve boxes at grade level. The actuators for valves exposed service shall contain a dial indicating the position of the valve disc or plug. Attach two-inch operating nut to the input shaft with a keyway and Allen screw.
- E. Worm and gear actuators shall be of the totally enclosed design so proportioned as to permit operation of the valve under full differential pressure rating of the valve with a maximum pull of 80 pounds on the hand wheel and a maximum input of 150 feet-pounds on the operating nut. Provide stop limiting devices in the actuators in the open and closed positions. Actuators shall be of the self-locking type to prevent the disc or plug from creeping. Design actuator components between the input and the stop-limiting devices to withstand without damage a pull of 200 pounds for hand wheel actuators, and an input torque of 300 foot-pounds for operating nuts when operating against stops. Actuators shall be oriented to operate with valve stem extensions as shown on the plans.
- F. Self- locking worm gear shall be a one-piece design of gear bronze material (ASTM B427), accurately machine cut. Actuators for lubricated plug valves may use high strength steel gearing. The worm shall be hardened alloy steel (ASTM

A322, Grade G41500; or ASTM A 148, Grade 105-85), with thread ground and polished. Helix angle of worm and gear shall be designed and cut at 3.5 degrees or less to prevent creep, unless other means to prevent creep are employed and are approved by the engineer. The actuator shall prevent creeping of the valve under all flow conditions. Support worm gear shaft at each end by ball or tapered roller bearings. Provide reduction gearing to meet maximum torque and pull design requirement. The reduction gearing shall run in a proper lubricant. Worm gear actuators shall be Lumitorque Model HBC, EIM Type WO, or approved equal.

- G. Actuators or levers shall open valves by turning counterclockwise.
- H. Provide open and close limit switches with one normally open and normally closed contact for mainline isolation valves within the flow control facility. Mount switches on the valve such that the corresponding switch transfers when the valve is fully open and closed. Limit switches shall be Square D Class 9007, HA 1 arm, C54B2 switch.

212-4.4.3 Execution.

212-4.4.3.1 Attaching Electric Actuators.

- A. Actuators shall be maintained and protected from damage according to the manufacturer's recommendations at all times before commissioning. Electrical enclosures and electrical components found with condensation or condensation related damage shall be rejected and replaced at no cost to the Public Utilities Department before acceptance of the Work. Any Project delays or additional costs caused by actuators being rejected are solely the responsibility of the Contractor. The Work shall not be accepted until all actuators are installed and in operational condition that fully meets the requirements of this section.
- B. For new installations, the valve manufacturer shall mount the electric motor actuator and accessories on each valve and stroke the valve before shipment to the Project site. Adjust limit switch positions, valve position transmitter and torque switches. Measure and record voltage, current, torque, timing, and other operational parameters and combine with factory test data for comparison during startup testing.
- C. For new valve and actuator installations, the valve manufacturer shall provide, install and calibrate each valve actuator on the specified valve(s). The valve manufacturer shall only employ skilled workers that are factory certified by the actuator manufacturer to install and calibrate each valve actuator. Actuator mounting arrangements shall facilitate operation and maintenance and shall be determined by the valve manufacturer, unless indicated otherwise on the Plans or directed by the Engineer. Provide certification that the valve actuators have been installed and adjusted by the valve manufacturer. The actuator access cover, if present, shall be orientated

to prevent the cover from falling into the workspace, causing injury to personnel.

- D. For existing installations where a new actuator is replacing an existing actuator, the actuator manufacturer or supplier shall have the responsibilities set forth in Paragraphs A, B and C of this section of this section.

212-4.4.3.2 Painting And Coating.

- A. Coat exterior metal surfaces of electric motor actuators and intermediate geared operators. Provide rust inhibiting inorganic zinc-rich primer and intermediate and finish coats of high-build epoxy recommended by the manufacturer of the equipment.

212-4.4.3.3 Field Testing Of Electric Motor Actuators.

- A. Only maintenance technicians that are certified by the actuator manufacturer shall be employed to perform any field-testing, adjustment, or set-up of the valve actuator. The factory test reports and factory recorded data shall be at the Project site before the actuator is setup and tested.
- B. The motor temperature shall be recorded before the actuator is energized and after the actuator is setup and stroked three times or 60-minutes of continuous operation. After three strokes or 60 minutes of operation, if the temperature difference is greater than 50 degrees C the actuator shall be rejected and replaced with an actuator that meets the requirements of this section.
- C. Test motor actuators as installed by measuring the current drawn (in amperes) by each motor for unseating, seating, and running conditions. The measured current shall not exceed the current measurement recorded during the factory performance test by more than five percent.
- D. If the measured current drawn exceeds the value identified in Paragraph C of this section, provide a larger motor of the same type or a gear drive or adjust the actuator so that the measured amperage does not exceed the value.
- E. Ensure that limit switches are placed at their correct settings. Open and close valves twice and ensure that limit switches function. Verify the position transmitters and any other information being developed in the actuator complies with requirements contained in the Contract Documents.
- F. The electric motor actuator manufacturer shall be available at the Project site to check the installation, supervise the startup, and conduct field-testing and adjustment of the equipment.

Provide factory-authorized formal training in the operation and maintenance of the equipment to Public Utilities Department personnel, so the Public Utilities Department personnel are qualified by the submitted equipment manufacturer to maintain the equipment. Identical training shall be provided on two separate days to allow for splitting of crews. Documentation of this qualification shall be provided as part of the training package.

- G. All electric actuator digital communication shall be verified to be correct and without errors before acceptance. Re-occurring error or warning messages shall not be allowed on the displays or in the communications.

212-4.4.3.4 Electric Motor Actuator Warranty.

- A. The electric motor actuator manufacturer shall warrant its product to be free from defects in materials, workmanship and performance for actuators incorporated in the Work for a period of five years from the date of recording of the Notice of Completion. Upon notice by the Public Utilities Department personnel, any damage or defect found during the warranty period shall be promptly repaired or replaced by the manufacturer at no additional cost to the Public Utilities Department personnel.
- B. In emergency situations, if warranty service is not immediately available from the vendor, supplier or the manufacturer, the Public Utilities Department personnel will perform repairs to re-establish proper operation of the actuator and valve. All defective parts returned by the Public Utilities Department personnel shall be replaced with new parts. If the Public Utilities Department personnel replaces the entire actuator for cause, the vendor, supplier or manufacturer shall repair or replace the entire actuator.
- C. Maintenance or repair work performed by the Public Utilities Department personnel during the warranty period shall not be cause for voiding the warranty.
- D. If any periodic maintenance is required during the term of the warranty, include that maintenance for the duration of the warranty.

212-5 VALVES. To the "WHITEBOOK", DELETE item 5 in its entirety and ADD the following:

- 5. External bolts and nuts for buried or submerged Class 150 or 250 flanges or valve fittings shall be hexagonal, Type 316 stainless steel conforming to ASTM A193, Grade B8M for bolts and ASTM A194, Grade 8M for nuts.

212-5.2 Butterfly Valves. To the "WHITEBOOK", DELETE item 7 in its entirety and ADD the following:

- 7. Bolts and nuts for butterfly valves end flanges shall be hexagonal, Type 316 stainless steel conforming to ASTM A193, Grade B8M for bolts and ASTM A194, Grade 8M for nuts.

212-5.3 Plug Valves. To the GREENBOOK ADD the following:

- a) Minimum valve pressure rating shall be 300 psi.
- b) Line and coat valves with fusion bonded epoxy per SSP.

212-5.6 Air Release, Air/Vacuum, and Combination Air Valves. To the "GREENBOOK", DELETE in its entirety and SUBSTITUE with the following:

212-5.6.1 General.

212-5.6.1.1 Description.

This section includes materials and installation of slow-closing combination air-release and vacuum relief valves for sewage service.

212-5.6.1.2 Submittals.

- A. Submit shop drawings in accordance with the General Provisions.
- B. Submit manufacturer's catalog data and detail drawings showing all valve parts and described by material of construction, specification (such as AISI, ASTM, SAE, or CDA), and grade or type. Show linings and coatings.

212-5.6.2 Products.

212-5.6.2.1 Valve Design And Operation.

- A. Two chambers, where the primary screened chamber prevents any solids above 2mm from entering the float/seal chamber.
- B. This primary chamber to incorporate a vertical tubular screen to facilitate the ejection of trash back to the main.
- C. This primary chamber to automatically hold compressed air at the ambient pressure within the main to facilitate anti-hammer.
- D. This primary chamber to have a removable lid to allow quick interchange of the filter screen from above and without removal of the valve body from the valve vault.
- E. The flow of air and filtered water to the secondary float/seal chamber to be at a low cross-over point to guarantee anti-hammer air always in the primary chamber.
- F. The secondary chamber, holding air and filtered water, to have sufficient float buoyancy and seal integrity to seal at atmospheric pressure.
- G. This float/seal mechanism must include a combination of primary and secondary seals to allow vacuum break.
- H. Air/water flow between the primary and secondary chamber to be horizontal in direction to firstly prevent premature closing of the air valve and secondly to backflush the screen at times of negative pressure in the main.

- I. The air/vac should have an extended service interval and be easily serviced on-site, from above, with no heavy lifting in and out of pits.
- J. Provide a 1/4-inch NPT test/bleed cock.

212-5.6.2.2 Materials Of Construction.

- A. Materials of construction for air-release valves/air and vacuum-relief valves for sewage service shall be as follows:
 - 1. All metal components and including any attachments to be in ANSI 316 stainless steel
 - 2. All welds to be purge welded and fully passivated to maintain best practice durability
 - 3. Seals to be Buna-N (BNR).
 - 4. Slides and floats polycarbonate/acetal.
 - 5. ANSI 316 stainless steel 4" ANSI Flange.

212-5.6.2.3 Valve End Connections.

- A. Valves 3 inches and larger shall have flanged ends.
- B. Flanges for Class 300 valves shall comply with ASME B16.1, Class 250.

212-5.6.2.4 Valves.

Custom Combination Sewage Air Valves, 2 Through 8 Inches, Class 300: Valve system shall allow unrestricted venting or reentry of air during filling or draining of pipelines and to vent small pockets of air which collect in the pipeline. Air/vacuum valve shall incorporate two floats or a float and plug connected by a common float guide to maintain an air gap between the two.

212-5.6.3 Execution.

212-5.6.3.1 Service Connections.

Valves shall seat drip tight at the specified seating pressure.

212-5.6.3.2 Factory Testing.

- A. Test each valve per AWWA C512, Section 5 and the following.
- B. Hydrostatically test the pressure-containing parts at the factory with water for 30 minutes minimum at a pressure of 1.5 times the rated pressure but not less than 20 psig. Test shall show zero leakage. If leaks are observed, repair the valve and retest. If dismantling is necessary to correct valve deficiencies, provide an additional operational test per AWWA C512, Section 5 for each affected valve.

- C. The chloride content of liquids used to test austenitic stainless steel materials shall not exceed 50 ppm. To prevent deposition of chlorides as a result of evaporative drying, remove residual liquid from tested parts at the conclusion of the test.

212-5.6.3.3 Painting And Coating.

Line and coat valves with fusion-bonded epoxy per the SSP. Do not coat seating areas and plastic, bronze, stainless steel, or other high alloy parts.

212-5.6.3.4 Shipment And Storage.

- A. Identify the equipment with item and serial numbers. Material shipped separately shall be identified with securely affixed, corrosion-resistant metal tags indicating the item and serial number of the equipment for which it is intended. In addition, ship crated equipment with duplicate packing lists, one inside and one on the outside of the shipping container.
- B. Pack and ship one copy of the manufacturer's standard installation instructions with the equipment. Provide the instructions necessary to preserve the integrity of the storage preparation after the equipment arrives at the jobsite and before start-up.
- C. Provide flanged openings with metal closures at least 3/16-inch thick, with elastomer gaskets and at least four full-diameter bolts. Provide closures at the place of pump manufacture prior to shipping. For studded openings, use all the nuts needed for the intended service to secure closures.
- D. Provide threaded openings with steel caps or solid-shank steel plugs. Do not use nonmetallic (such as plastic) plugs or caps. Provide caps or plugs at the place of pump manufacture prior to shipping.
- E. Clearly identify lifting points and lifting lugs on the valves. Identify the recommended lifting arrangement on boxed equipment.

212-5.6.3.5 Installation.

- A. Clean flanges by wire brushing before installing flanged valves. Clean flange bolts and nuts by wire brushing, lubricate threads with oil and graphite, and tighten nuts uniformly and progressively. If flanges leak under pressure testing, loosen or remove the nuts and bolts, reseal or replace the gasket, reinstall or retighten the bolts and nuts, and retest the joints. Joints shall be watertight.
- B. Clean threaded joints by wire brushing or swabbing. Apply Teflon® joint compound or Teflon® tape to pipe threads before installing threaded valves. Joints shall be watertight.

- C. Do not use duct tape and plastic for covering the ends of pipe flanges. Use a solid metal cover with rubber gasket to cover flange openings during installation. These metal covers shall remain in place until the piping is connected to the valves.
- D. Do not spring flanges of connecting piping into position. Separately work connecting piping systems into position to bring the piping flanges into alignment with the matching valve flanges. Do not move valves to achieve piping alignment. Do not use electrical heating stress relieving to achieve piping alignment.
- E. Line up pipe flange bolt holes with valve nozzle bolt holes within 1/16 inch maximum offset from the center of the bolt hole to permit insertion of bolts without applying any external force to the piping.
- F. Flange face separation shall be within the gasket spacing $\pm 1/16$ inch. Use only one gasket per flanged connection.

212-5.6.3.6 Valve Field Pressure Testing.

Test valves at the same time that the connecting pipelines are pressure tested. Protect or isolate any parts of valves, operators, or control and instrumentation systems whose pressure rating is less than the test pressure.

SECTION 301 – SUBGRADE PREPARATION, TREATED MATERIALS, AND PLACEMENT OF BASE MATERIALS

301-1.6 Preparatory Repair Work. To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

- 1. Prior to the placement of any asphalt concrete or application of slurry, you shall complete all necessary preparation and repair Work and shall obtain approval by the Resident Engineer.

ADD the following:

- 13. Asphalt concrete shall be Type III and shall not exceed 15% RAP in accordance with 203-6.3.1, "General".

301-1.7 Payment. To the "WHITEBOOK", ADD Item 8.

- 8. The Contractor shall construct pavement Repairs consisting of full dig out and removal of existing pavement and replacement with Schedule J Pavement per SDG 113 along the alignment as identified by the Engineer. Payment will be paid as lump sum amount for Bid Item "Asphalt Pavement Repair (EOC Type 1"

SECTION 302 – ROADWAY SURFACING

302-4.5 Scheduling, Public Convenience and Traffic Control. To the “GREENBOOK”, paragraphs (1) and (2), DELETE in their entirety and SUBSTITUTE with the following:

1. In addition to the requirements of Part 6, you shall comply with the following:
 - a) At least 5 Working Days prior to commencing the Work, you shall submit your proposed Schedule to the Engineer for approval.
 - b) Based upon the approved schedule, you shall notify residents and businesses of the Work and post temporary “No Parking” signs 72 hours in advance.
 - c) Requests for changes in the approved Schedule shall be submitted to the Engineer for approval at least 3 Working Days before the street is scheduled to be sealed.

302-4.12.2 Application. To the “WHITEBOOK”, item 1, ADD the following:

2. RPMS shall only be placed when ambient temperature is 50° F or higher.

302-4.12.4 Measurement and Payment. To the “WHITEBOOK”, item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. RPMS shall be paid on the square footage applied of RMS applied and include crack sealing work as defined by section 302-15 of the “WHITEBOOK”. The measurement of RPMS applied shall be calculated by dividing the weight obtained from Certified Weighmaster Certificates by the spread rate for the type specified. You shall present Weighmaster Certificates for the amount of unused material remaining at the completion of the work at no cost to the City. The payment shall be determined by deducting the amount of unused material from the total amount of material delivered. Payment for crack sealing shall be included in the unit price for RPMS.

SECTION 303 – CONCRETE AND MASONRY CONSTRUCTION

303-5.1.1 General. To the “WHITEBOOK”, ADD the following:

7. For the purposes of this section, the terms “walk” and “access ramp” shall be synonymous with “sidewalk” and “curb ramp and pedestrian ramp”, respectively.

303-5.9 Measurement and Payment. To the “WHITEBOOK”, DELETE Item 4 in its entirety and SUBSTITUTE with the following:

4. Additional median curb and gutter and curb and gutter removal, disposal and replacement adjacent to the Work, shall be required as directed by the Engineer. The payment for the additional removal, disposal and replacement

of median curb and gutter and curb and gutter shall be included in the Bid Item "Additional Curb and Gutter Removal and Replacement".

303-5.10.2 Payment. To the "WHITEBOOK", ADD the following:

5. The payment for completely removing and replacing the existing concrete spandrel of a cross gutter associated with curb ramp installations, in accordance with SDG-131 - General Curb Ramp Notes, and as identified on the Plans, shall be included in the payment for the curb ramp. No additional costs shall be incurred when separate Bid items for cross gutters has been provided.
6. The payment for completely removing and replacing the existing concrete alley apron associated with curb ramp installations, in accordance with SDG-131 - General Curb Ramp Notes, and as identified on the Plans, shall be included in the payment for the Curb Ramp installation. No additional costs shall be incurred when separate Bid items for alley aprons has been provided.
7. Curb ramps may require modifications from the design to account for and accommodate the latest regulations. As directed by the Engineer, Contractor shall construct the modified curb ramp as directed by the Engineer. Payment is made for this item from the allowance for "Modified Curb Ramps per New ADA Requirements" and shall be inclusive of all work to construct the new design for the curb ramp subtracted by the Bid Item for the designed curb ramp. Payment under this bid item shall be made from the allowance amount named in the Bid Schedule.

SECTION 306 – OPEN TRENCH CONDUIT CONSTRUCTION

ADD:

306-1.1 High-line Phasing.

Build the Project in accordance with the water high-lining phasing shown on the Plans and in seven (7) phases.

ADD:

306-1.2 Phased Paving.

1. You shall implement phased paving, when directed and approved by the Engineer.
2. The Engineer will notify you when you can proceed with phased paving Work. Each phase shall be completed within **90 Calendar Days** after the Engineer's notification. Plan and schedule your Work accordingly to ensure each phase is complete.
3. When Phased Paving is initiated, the following Work shall be completed within the determined areas:
 - a) Installation of mains and appurtenances.
 - b) Operational checks and testing.

- c) Mains are in service.
 - d) Trench restoration.
 - e) Road surface preparatory Work.
 - f) Installation of concrete sidewalks and curb ramps.
 - g) Adjustments of gate valves and manholes, survey monuments and utility boxes.
4. You may propose to change the limits of the determined phasing, in writing, for the Engineer's review and approval. If approved, there shall be no additional costs to the City. No additional Working Days will be granted for delays due to the City's review and approval of your proposed change and due to the implementation of that proposed change.
 5. You may use multiple crews to complete each phase of paving.
 6. Phase paving should include permanent striping and temporary transition striping over non improved roadway sections between existing and permanent striping to the satisfaction of the Engineer.

ADD:

306-1.2.1 Payment.

The payment for all Work associated with Phased Paving shall be included in the Bid item for each "Phased Paving" area. This payment shall include the costs for all mobilization and demobilization for resurfacing and striping associated with each paving phase regardless of the paving operation. No additional payment shall be made regardless of the number of mobilizations and demobilizations required to complete that phase.

306-2.8 Advance Preparation before Connecting to Existing Pipelines. To the "GREENBOOK", ADD the following:

Prior to making any connections to existing pipes for relocation or conflicting utilities, the Contractor shall coordinate with City staff to coordinate connection activities. Contractor to verify that the existing conditions are adequate for the proposed relocation drawings prior to ordering materials or laying any pipe or conduit.

306-3.4 Minimum and Maximum Pipe Zone Trench Width. To the "GREENBOOK", ADD the following:

Where pipe trench width or depth shown on the drawing is not wide or deep enough to accommodate welding procedures, Contractor shall widen or deepen trench as needed at the joint to accomplish the work.

306-6.5.1 General. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. For PVC water pipes:
 - a) Bedding material shall:
 - i. Either be sand, crushed aggregate, or native free-draining granular material.
 - ii. 100% of the bedding material shall pass the no. 4 sieve and shall have an expansion when saturated with water of not more than 0.5%.
 - iii. Have a sand equivalent of SE 50. SE 30 or higher may be substituted for SE 50 as bedding material if all of the following requirements are met:
 - The top of the pipe and haunch areas are mechanically compacted by means of tamping, vibrating roller, or other mechanical tamper.
 - Equipment is of size and type approved by the Engineer.
 - 90% relative compaction or better is achieved.
 - b) When jetting, care shall be exercised to avoid floating of the pipe.

ADD:

306-6.6 CLSM As Directed by Engineer. CLSM shall be used for bedding and backfilling as directed by the Engineer. CLSM shall conform with 201-6 "Controlled Low Strength Material (CLSM)" and the following concrete classes or as designated in the Contract Bis Item or shown on the Plans:

- a) 190-E-400 in residential and local streets.
- b) 380-E-800 in major and arterial streets.

306-6.6.1 Payment. The payment for Controlled Low Strength Material (CLSM) for bedding and backfill for pipe and fittings, as directed by the Engineer is included in the Bid item for "Controlled Low Strength Material (CLSM)."

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.

ADD:

306-8.5.4 High Deflection Coupling.

1. High deflection couplings shall be constructed in accordance with the Plans and Reference Specifications. Working Drawings prepared by a Civil or Structural Engineer registered in the State of California shall be submitted in accordance with 3-8.2, "Working Drawings" for any proposed additional high deflection couplings not indicated on the Plans and Reference Specifications.

306-8.8.3 Thrust Blocks and Anchor Blocks. To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. Thrust blocks shall be installed at all bends, tees, dead-ends and reducers. The use of restrained joints requires approval from the Engineer. The thrust blocks shall be constructed as follows:
 - a) Thrust blocks shall be constructed of concrete conforming to 201-1, "PORTLAND CEMENT CONCRETE".
 - b) Unless otherwise shown on the Plans, concrete thrust blocks shall be constructed in accordance with SECTION 303 - CONCRETE AND MASONRY CONSTRUCTION and the Standard Drawings.
 - c) Concrete blocks shall be constructed between undisturbed ground and fittings to be anchored.
 - d) Unless otherwise shown on the Plans, the quantity of concrete and the bearing area of the pipe against undisturbed soil shall be as shown on the Standard Drawings.
 - e) Unless otherwise shown on the Plans, concrete shall be placed so pipe joints and fittings remain accessible to repairs

306-8.9.2.3 Allowable Leakage. To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. For prefabricated pressure pipe testing requirements, refer to prefabricated gravity pipe pressure testing requirements in 306-7.8.2, "Pressure Testing and Leakage Inspection".

306-8.9.4.5 Dechlorination and Flushing. To the "GREENBOOK", ADD the following:

1. When you are required to flush water mains using a 4-inch or larger meter, you shall provide a submittal to the Engineer for review of the proposed connection point of the meter and a plan demonstrating how flushed water will be captured or delivered down the storm drain or sewer system.
2. Once the submittal has been approved, you shall be responsible for coordinating the payment for this meter at Development Services Department

by filling out the DSD form for the need for a construction meter for flushing purposes. Once paid by you, call Public Utilities Department Coordination Number at 619-527-7424 to coordinate the delivery and use of the meter in accordance to the approved submittal.

3. You shall return the meter to the City at the completion of work.
4. All other costs associated with the purchase of the meter shall be included in the contract price. Costs associated with flushing operations shall be included under the costs for the pipeline installation.

306-15.1 General. To the "WHITEBOOK", Item 1, sub-items o) and p), DELETE in their entirety and SUBSTITUTE with the following:

- o) Shoring and Bracing including engineered shoring and preparation of engineered shoring plans.
- p) all other work necessary to install the pipe or conduit, complete in-place.

To the "WHITEBOOK", Item (1), ADD the following:

- q) temporary resurfacing and use of steel plates.

To the "WHITEBOOK", Item (2), DELETE in its entirety and SUBSTITUTE with the following:

Unit price shall include all pipe installation up to 20 feet of cover based on the force main elevation. Pipe length includes carrier pipes through manways and vaults. No separate payment shall be made for additional bedding or a higher strength of pipe necessitated by exceeding the standard trench width shown on the drawings.

All work within Tecolote Creek shall be paid per the Contract Unit Price for the Pipeline.

306-15.5 Valves. To the "WHITEBOOK", ADD the following:

2. The payment for sewer plug valve with bypass shall be included under the Bid items for the following:
 - a) "Sewer Plug Valve with Bypass (48 Inch, Class 250)" per Detail 5 on Sheet 40067-195-D Southern and Middle Pkgs
 - b) "Sewer Plug Valve with Bypass (30 Inch, Class 250)" per Detail 5 on Sheet 40067-195-D Southern and Middle Pkgs

306-15.6 Hydrants. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. The payment for fire hydrant assembly and marker, fire service connection, assembly and backflow preventer, and fire service connection and assembly, shall be included in the Bid items for the following:
 - a) Fire Hydrant Assembly and Marker

- b) Fire Service Connection, Assembly, and Backflow Preventer for City Property
 - c) Fire Service Connection and Assembly
2. Removal of existing fire hydrants within the trench limits and all appurtenant Work shall be included in the Bid item for "Fire Hydrant Assembly and Marker".
 3. Payment for fire hydrant discs shall be included in the Bid item for "Fire Hydrant Assembly and Marker"

306-15.8 Pipeline Appurtenances. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. Payment for water meter boxes and meter box lids shall be included in the Bid item for "Water Services" unless a Bid item for each "Meter Box" has been provided. Payment shall include any additional adjustment to place the box around the meter to ensure the valve is accessible and operating properly (including adjusting the water service pipe beyond the meter box).

To the "WHITEBOOK", ADD the following:

9. The Contractor shall have additional fittings readily available to mitigate unforeseen conflicts discovered while trenching. Upon discovering a conflict that can be mitigated with the use of additional fittings that are not originally identified in the Contractor's approved pipe lay sheets, or as shown on the plans, the Contractor shall immediately notify the Resident Engineer and obtain their approval for use. Upon completion of the contract, additional fittings that are not used, shall be delivered to a location as directed by the Owner.

Fittings	Quantity	Unit
48" Steel Pipe (3/8" thick) & 1/4 inch thick – interior lined, without mortar coating	40	LF
48" Steel High Deflection Coupling – Female x Female	2	EA
48" Butt Straps	4	EA
48" 45 Degree Bend 3/8" thick	2	EA
48" 22.5 Degree Bend 3/8" thick	2	EA
30" Steel Pipe (3/8" thick) & 1/4 inch thick – interior lined, without mortar coating	40	LF
30" Steel High Deflection Coupling – Female x Female	2	EA
30" Butt Straps	4	EA
30" 45 Degree Bend 3/8" thick	2	EA
30" 22.5 Degree Bend 3/8" thick	2	EA

The payment for these additional fittings shall be covered by the bid item, "Additional Pipeline Appurtenances(Diameter)". Payment shall include but is not limited to labor related to furnishing, delivery and storage of these materials. The labor cost involved with installation of each fitting that is approved for use, complete in place, shall be included in this bid item.

306-15.9 Temporary Resurfacing, To the "GREENBOOK", DELETE in its entirety and SUBSTITUTE with the following:

Payment for temporary resurfacing shall be included in the cost of pipe as per section 306-15.1.

306-16.6 Payment. To the "WHITEBOOK", ADD the following:

6. The lump sum payment for Access Manways is included in the Bid item for "**Access Manway/Manhole (DWG. C-187, C-190)**" and shall be constructed in accordance with the Drawing Sheet 40067-199-D and associated and referenced Drawings, Reference Specifications and Standard Drawings; and shall include, but not be limited to, the structure, interior and exterior piping and appurtenances, liners, coatings, and surface improvements.
7. The lump sum payment for Blow Off Vault Combined FM/Vent Assembly is included in the Bid item for "**Blow Off Vault Combined FM/Vent Assembly (DWG C-178)**" and shall include the structure, interior and exterior piping and appurtenances, sewer laterals, cleanouts, connections to existing mains, construction of reconfiguration of sewer manholes, liners, coatings, and surface improvements.
8. The lump sum payment for Air/Vac Valve Vault/Vent Assembly are included in the Bid item for "**Air/Vac Valve Vault/Vent Assembly (C-179, C-180, C-197)**" and shall include the structure, interior and exterior piping and appurtenances, sewer laterals, cleanouts, connections to existing mains, construction of reconfiguration of sewer manholes, liners, coatings, and surface improvements.
9. The payment for the Pressure Reducing Valves and Vault are included in the bid item for "**Sewer Pressure Reducing Valve Station**". The contract unit price for this work shall constitute full compensation for furnishing and installing pressure reducing valve (PRV) vaults, plug valves, welded steel pipe as shown on PRV Sheets 40067-212-D, 40067-213-D, 40067-214-D, 40067-215-D. Payment includes all material, labor, valves, actuators, access vaults, pipe, reducers, connections and bypass as shown on the plans. Payment shall be made at the contract lump sum price and include excavation, backfill and pavement replacement.

306-18.7 Payment. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

The payment for cleaning and video inspection of the existing sanitary and storm sewage pipeline and laterals in potential conflict with the proposed wastewater force

main and brine pipeline shall be included in the Bid Item for "CCTV of Existing Sewer Systems with Lateral Capability." This item shall be performed as directed by the Engineer and paid for per Day, upon agreement of the work plan per the Contractor and the Engineer.

SECTION 310 - PAINTING

ADD:

310-6 TESTING.

310-6.1 Testing Equipment.

1. Provide calibrated electronic type dry film thickness gauge to test coating thickness specified in mils.
2. Provide low-voltage wet sponge electrical holiday detector to test completed coating systems, 20 mils dry film thickness or less, except zinc primer, high-build elastomeric coatings, and galvanizing, for pinholes, holidays, and discontinuities, as manufactured by Tinker and Razor, San Gabriel, CA, Model M-1.
3. Provide high-voltage spark tester to test completed coating systems in excess of 20 mils dry film thickness. Unit as recommended by coating manufacturer.

310-6.2 Testing.

Thickness and Continuity Testing.

Measure coating thickness specified in mils with a magnetic type, dry film thickness gauge, in accordance with SSPC PA 2. Check each coat for correct millage. Do not make measurement before a minimum of 8 hours after application of coating. Holiday detect coatings 20 mils thick or less, except zinc primer and galvanizing, with low voltage wet sponge electrical holiday detector in accordance with NACE SP0188.

Holiday detect coatings in excess of 20 mils dry with high voltage spark tester as recommended by coating manufacturer and in accordance with NACE SP0188.

After repaired and recoated areas have dried sufficiently, retest each repaired area. Final tests may also be conducted by Engineer.

310-6.3 Inspection.

Leave staging and lighting in place until Engineer has inspected surface or coating. Replace staging removed prior to approval by Engineer. Provide additional staging and lighting as requested by Engineer.

310-6.4 Unsatisfactory Application.

If item has an improper finish color or insufficient film thickness, clean surface and topcoat with specified paint material to obtain specified color and coverage. Obtain specific surface preparation information from coating manufacturer. Evidence of runs, bridges, shiners, laps, or other imperfections is cause for rejection. Repair defects in accordance with written recommendations of coating manufacturer.

310-6.5 Damaged Coatings, Pinholes, And Holidays.

Hand or power sand visible areas of chipped, peeled, or abraded paint, and feather edges. Follow with primer and finish coat. Depending on extent of repair and appearance, a finish sanding and topcoat may be required.

Remove rust and contaminants from metal surface. Provide surface cleanliness and profile in accordance with surface preparation requirements for specified paint system.

Feather edges and repair in accordance with recommendations of paint manufacturer.

Apply finish coats, including touchup and damage-repair coats in a manner that will present a uniform texture and color-matched appearance.

SECTION 314 – TRAFFIC STRIPING, CURB AND PAVEMENT MARKINGS, AND PAVEMENT MARKERS

314-4.4.5 Measurement. To the “WHITEBOOK”, item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. Thermoplastic traffic striping for continental crosswalks and Green Treatment (Paint) shall be measured by the square foot for the actual area covered with thermoplastic or paint.

SECTION 402 – UTILITIES

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

- g) Refer to **Appendix L - 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 30 Working Days prior to excavating within 10 feet of SDG&E Underground High Voltage Transmission Power Lines (69 KV and higher).

402-8 PAYMENT. To the “WHITEBOOK”, ADD the following:

6. Contractor shall perform Ground Penetrating Radar at Intersections and along the pipeline alignment to confirm locations of unknown or known existing utilities as directed by the Engineer and shall be included in the Bid Item “Ground Penetrating Radar as Directed by Engineer”. This item shall be performed as directed by the Engineer and paid for per Day, upon agreement of the work plan per the Contractor and the Engineer.

402-7.2

Pipe Separations. To the "WHITEBOOK", item 1, subsection "a", DELETE in its entirety and SUBSTITUTE with the following:

- a) You shall notify the Engineer immediately if:
 - i. 1 foot (0.3 m) vertical separation as measured from the outside of pipe wall to the outside of pipe wall between sewer and water mains cannot be maintained.
 - ii. 10 feet (3.0 m) horizontal separation as measured from the outside of pipe wall to the outside of pipe wall between sewer and water mains cannot be maintained.
 - iii. 6 inches (152.4 mm) vertical separation as measured from the outside of pipe wall to the outside of pipe wall between utilities other than sewer and water mains cannot be maintained.
 - iv. 3 feet (0.9 m) or more of cover over the top of the water main cannot be maintained.
 - v. 5 feet (1.5 m) or more of cover over the top of the recycled water main cannot be maintained.

402-8

Payment. To the "WHITEBOOK", Item 3 DELETE in its entirety and SUBSTITUTE with the following:

3. The Contractor shall be compensated for each existing utility pothole, with prior Engineer approval, that is not shown on the Plans but marked out by USA via the bid items, "Potholing Existing Utilities Not Shown on Plans (Depth < 5- ft)" and Potholing Existing Utilities Not Shown on Plans (Depth > 5- ft)". Potholing for existing utilities that are shown on the Plans and marked out by USA shall be included in the Contract Price.

SECTION 600 - ACCESS**600-1**

GENERAL. To the "WHITEBOOK", item 5, DELETE in its entirety and SUBSTITUTE with the following:

5. You shall notify Environmental Services Department via email (trash@sandiego.gov) of street closures affecting the regular scheduled solid waste collection at least 3 Working Days prior to the street closure. Include your business name and phone number, days of closure, time of scheduled closure, and date of anticipated street reopening in the notification.
 - a) You shall verify waste collection schedules via the Environmental Services website at:
<http://www.sandiego.gov/environmental-services/collection/index.shtml>
 - b) You shall comply with the following requirements for trash, recycling, and yard waste collection:
 - i. Provide advance written notice to every property affected by blocked public right of way.

- ii. Coordinate the relocation of trash, recycling, and yard waste containers to an accessible public street for the City's waste collection crews on collection day.
 - iii. When necessary, relocate the containers from the blocked streets to the accessible public right of way before the City's collection vehicles arrive to assist with collection on existing schedules. Return the containers to their point of origin to ensure the accuracy of inventory assignment by address.
- c) If the City's crews are unable to provide the citizens with the mandated services due to your failure to comply with these specifications, you shall collect trash, recyclables, and yard waste on the City's schedule and deliver to the City's designated locations. If you fail to perform this Work, you shall incur additional costs for the City to reschedule pick up of an area.

SECTION 601 - TEMPORARY TRAFFIC CONTROL FOR CONSTRUCTION AND MAINTENANCE WORK ZONES

601-2.1.2 Engineered Traffic Control Plans (TCP). To the "WHITEBOOK", ADD the following:

- 5. Engineered TCP (2 foot x 3 foot size) shall be required for all areas of work associated with Morena Conveyance South.
- 6. Morena Conveyance South TCP with red marks will be available for REFERENCE ONLY in the link below.

https://drive.google.com/drive/folders/1wF1kllKJoL1ZRrbQ7uoXNxSa_eRgl4sn?usp=sharing

601-2.1.4 Traffic Control for Resurfacing and Slurry Sealing. To the "WHITEBOOK", item 3, subsection "d", DELETE in its entirety and SUBSTITUTE with the following:

- d) Place "NO PARKING - TOW-AWAY ZONE" signs 72 hours in advance of the scheduled slurry sealing. Reschedule street block segments which are not completed by the last posted Working Day. If a Work delay of 48 hours or more occurs from the originally scheduled Work date, remove the "NO PARKING - TOW-AWAY ZONE" signs for a minimum of 24 hours, then reset and re-post for the appropriate Work date.
- e) TCP with red marks will be available for REFERENCE ONLY in the link below.

https://drive.google.com/drive/folders/1wF1kllKJoL1ZRrbQ7uoXNxSa_eRgl4sn?usp=sharing

601-3.5.1 General. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

- 3. Temporary "No Parking" and "No Stopping" signs shall be installed 72 hours before enforcement. Temporary "No Parking" and "No Stopping" signs shall be installed and removed as specified in the Special Provisions. Signs shall indicate specific days, dates, and times of restrictions. If violations occur, call Police Dispatch 619-531-2000 to enforce the Tow-Away notice.

601-3.6 Channelizing Devices. To the "WHITEBOOK", item 4, Barricades, ADD the following:

- h) You shall place "OPEN TRENCH" signs (C27(CA)) on Type 3 Barricade within the construction Work zone, ahead of any Work areas with open trenches that are greater than 3 inches in depth, in accordance with California MUTCD SECTION 6F.103 (CA). The barricades shall be placed in a continuous manner and shall prevent pedestrian, vehicular, and biker access to the open trench area.

601-3.6.7 Payment. To the "WHITEBOOK", ADD the following:

- 1. The payment for Bid item "Shur UFlex curb and post" shall include installation, materials and other incidentals necessary to complete the work.
- 2. The payment for Bid item "Shur UFlex post and base" shall include installation, materials and other incidentals necessary to complete the work.

601-5.4 Temporary Traffic Detection Systems. To the "GREENBOOK", ADD the following:

Prior to traffic loops being impacted from any trench work, the contractor shall plan ahead and have in-place the temporary traffic detection systems. The Contractor shall install temporary detection systems for affected approaches, to be video, compatible with the existing system. Systems must be able to interface to a Caltrans 332 cabinet and provide presence detection for a minimum of 12 discrete zones per approach. Temporary detection systems shall be approved by the City prior to installation. The Contractor shall install all necessary cables, mountings, etc. to ensure correct operation of the temporary system. The Contractor shall calibrate and clean equipment (including, but not limited to, lenses) monthly, or as needed, and adjust zones whenever lane shifting occurs. In the event that insufficient space is available with the signal system conduits for additional cables, cable may be routed overhead in which appropriate clearances to ground shall be maintained. Overhead cabling shall not be used if space exists in the conduit system. Temporary detection systems shall be removed at contractor's expense once permanent detection has been restored.

601-7 PAYMENT. To the "WHITEBOOK", item 2, DELETE in its entirety and SUBSTITUTE with the following:

- 1. The payment for Engineered Traffic Control Plans, traffic control Work, and permits shall be included in the Bid item for "Traffic Control and Engineered Traffic Control Plans". Engineered Traffic Control Plans shall be developed and permitted for Contractor's proposed activities as well as City Forces proposed activities described in Bid Items; "Traffic Control During Construction Survey Stake-out" and "Traffic Control During Operational Valve Checks".

To item 5, DELETE subitem d) in its entirety and SUBSTITUTE with the following:

- d) The Contractor shall be required no more than twelve (12) PCMS on-site at one time, as directed by the City, and shall be paid via the Bid item for "Portable Changeable Message Signs," for signs in use. All other costs associated with placing, operating, programming, maintaining, repairing, replacing, transporting from location to location, and removing each PCMS shall be

included in this bid item. The quantity, as provided in the bid list, accounts for twelve (12) PCMS multiplied by thirty-five (35) months for a total quantity of four hundred and twenty (420) PCMS. The Contractor shall be compensated each month by applying the unit cost to each PCMS used in that month.

To item 5, ADD the following:

- f) The payment for traffic control Work, and permits related to the Contractor providing traffic control for the City to perform Construction Survey Staking shall be included in the Bid item for "Traffic Control During Construction Survey Stake-out".
- g) The payment for traffic control Work, and permits related to the Contractor providing traffic control for the City to perform Operational Valve Checks shall be included in the Bid item for "Traffic Control During Operational Valve Checks".

SECTION 700 – MATERIALS

700-3.1 Controller Assemblies. To the "WHITEBOOK", item 1, table 700-3.1, "Controller Assembly", DELETE in its entirety and SUBSTITUTE with the following:

TABLE 700-3.1 Controller Assembly

Model 332L Cabinet	Model 336 Cabinet	Model 337 Cabinet	Description
1	1	1	Model 170E controller unit* with Model 412C system memory module and Power Distribution Assembly #2 (PDA #2)
1	1	1	Aluminum cabinet wired for and including the necessary accessories for full operation except as noted
1	1	1	2010ECLip Conflict Monitor Unit
4	2	2	Model 242 two-channel isolator
12	12	6	Model 200 switch pack
1	1	1	Model 27256 programming chip (blank)
1	1	1	Model 404 Modem w/harness
16	8	4	Model 222 two-channel loop detector sensor unit

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

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.

700-9.1 To the "Whitebook", Add item 4. Payment will be made for each installed barricade system.

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 and pipes), 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 and pipe materials for your connection, cut and plug, and cut-in Work shall be included in the separate Bid items for each valve and pipe.

SECTION 901 – INSTALLATION AND CONNECTION

901-1.1 General. To the "WHITEBOOK", item 2, DELETE in its entirety and SUBSTITUTE with the following:

2. The Engineer will coordinate all interactions between you and the City Water Operations Division, the City Water Quality Laboratory, and other City organizations. Upon your request, the Engineer shall notify the City's Public Utilities Department's staff as noted below which shall be required at least 20 Working Days prior to the beginning of Work that involves shutting down pipelines, high-lining, cutting and plugging of, or making connection to the existing water mains. Unless otherwise specified on the Plans, contact the below:
 - a) Transmission Mains (16 inches and larger) – Jesus Ramos (619-527-7438)
 - b) Distribution Mains (less than 16 inches) – (619-527-7539)
 - c) Water Facilities – Tatyana Fikhman (619-527-7465)

901-1.1.2.2 Start-up Procedures. To the “WHITEBOOK”, item 2, subsection “j”, DELETE in its entirety and SUBSTITUTE with the following:

- j) In the event that the high-line piping system fails to pass the required bacteriological testing, you will be expected to help investigate and perform corrective actions if warranted by the findings and you shall re-flush and re-disinfect the lines for re-testing at no additional cost to the City. Disposal of chlorinated water for retesting shall be in accordance with the City standards and regulations. Indiscriminate disposal of chlorinated water shall not be permitted.

901-2.1.2 Utility Verification for Connection Location.

- 1. You shall provide information about the condition of the pipes & valves prior to connections.
- 2. You shall pothole the location and depth of all utilities to verify there are no utility Conflicts prior to excavation
- 3. You shall locate & confirm vertical & horizontal locations, size, conditions, materials, types of fittings, and joints of existing water mains to which connections are to be made

901-2.2.1 General. To the “WHITEBOOK”, item 5, DELETE in its entirety and SUBSTITUTE with the following:

- 5. The Engineer will coordinate all interactions between you and the City Water Operations Division, the City Water Quality Laboratory, and other City organizations. Upon your request, the Engineer shall notify the City's Public Utilities Department as noted below which shall be required at least 20 Working Days prior to the beginning of Work that involves shutting down pipelines, high-lining, cutting and plugging of, or making connection to the existing water mains. Unless otherwise specified on the Plans, contact the below:
 - a) Transmission Mains (16 inches and larger) – Jesus Ramos (619-527-7438)
 - b) Distribution Mains (less than 16 inches) – (619-527-7539)
 - c) Water Facilities – Tatyana Fikhman (619-527-7465) and Jesus Ramos (619-527-7438)

901-2.2.4 Preparation for Connection. To the “WHITEBOOK”, item 7 and 8, DELETE in their entirety and SUBSTITUTE with the following:

- 7. Upon receiving notification of a shutdown date by City Water Operations Division for your planned connection, you shall trench and steel plate the pit(s)

necessary to make the connection(s) prior to the start of the scheduled shutdown to facilitate an expedient connection to the existing main. Shutdown of the water main and connection shall be completed within the timeline agreed upon and as specified by City Water Operations staff so that water is restored in accordance with the shutdown notification and as needed for operation of the water system.

8. If you anticipate connection operations exceed the time as identified in the notification, causes health and safety risks, or disrupts water services to the consumers, you shall notify the Engineer and the City's Station 38 at (619) 527-7500 as soon as possible for assistance to provide potable water and temporary high-lines to restore water to the affected consumers.

To the "WHITEBOOK", ADD the following:

12. After the connection operation (for mains or services), you shall request the Engineer notify City Water Laboratory take water samples for bacteriological tests in accordance with Section 7 of the AWWA C651. If the test does not pass, you will be expected to help investigate and perform corrective actions if warranted by the findings.
13. Bacteriological Testing (Bac-T) sample results are valid only for 14 Calendar Days from the date the results are first made available. If any system is not placed into service within the 14 Calendar Days, then bacteriological testing shall be reinitiated.

901-2.3.4.1 Quality Control. To the "WHITEBOOK", item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. After the cut and plug operation, the water main and its appurtenances shall be disinfected and field tested by you in accordance with the latest edition of AWWA C651. You shall also request the Engineer to notify the City Water Laboratory to take water samples for bacteriological tests in accordance with Section 7 of the AWWA C651. If the test does not pass, you will be expected to help investigate and perform corrective actions if warranted by the findings.

901-2.5 Payment. To the "WHITEBOOK", DELETE in its entirety and SUBSTITUTE with the following:

1. Your Work for connecting to the existing system (cut-in or tie-in Work), excluding new main interconnections between various phases, shall be paid under the Bid items for the connection (cut-in or tie-in Work) and shall include the following:
 - a) Trenching, furnishing, and installing all materials and labor to complete the Work, including up to 10 feet of new water pipe

- b) Potholing
 - c) Protecting the water main while performing the Work
 - d) Coordinating your Work with the City Forces
 - e) Coordinating with the community (community outreach)
 - f) Traffic control and construction BMPs
 - g) Pavement Restoration
 - h) Replacing existing loop detectors
2. Cut and plug Work of the existing system by you shall be paid under the Bid item for "Cut and Plug by the Contractor" and shall include coordination of Work with City Forces, any scheduling impact costs, community outreach, furnishing and installing of materials, and traffic control. Potholing and protecting the water main while performing the Work shall be included in this payment.
 3. Traffic control, saw cutting the trench area, trench caps, and other spot repairs in the vicinity of the disturbed area at each restored connection shall be included in the "Contract Price". Asphalt overlay and slurry seal Work shall be paid for under separate Bid items.
 4. Interconnections between various phases of newly installed watermains shall be included in the associated pipeline bid items.

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 **SWPPP RISK LEVEL 1.**

1001-1.8 Permit Registration Documents (PRDs). To the "WHITEBOOK" ADD the following:

10. A Preamble and exhibit will be provided to the CONTRACTOR by the Legally Responsible Party (LRP) providing context of the Project within the larger Pure Water Program. CONTRACTOR to request preamble and exhibit prior to Pre-con Meeting. The Contractor shall utilize the start date of the Pure Water Program, May 27, 2019, when determining the Risk Level of the Project.

1001-2.10 BMP Inspection, Maintenance, and Repair. To the "WHITEBOOK", ADD the following:

5. Maintenance activities shall be documented by the QSP or QSD in the Construction BMP Maintenance Log for projects subject to SWPPP

requirements. See **Appendix K - SWPPP Construction BMP Maintenance Log**.

1001-3.7 **Payment.** To the "WHITEBOOK", item 3, subsection "g", DELETE in its entirety and SUBSTITUTE with the following:

- g) BMP Inspection, Maintenance, Repair, and Construction
-

TECHNICALS

PWP MORENA CONVEYANCE SOUTH AND MIDDLE
TECHNICAL SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

- 01 12 01 Partnering
- 01 29 00 Payment Procedures
- 01 32 00 Construction Progress Documentation
- 01 33 00 Submittal Procedures
- 01 33 22 Web Based Construction Document Management
- 01 77 00 Closeout Procedures
- 01 78 23 Operation and Maintenance Data
- 01 91 14 Testing, Integration and Startup

DIVISION 26 – ELECTRICAL

- 26 05 33 Raceway and Boxes

DIVISION 30 – EARTHWORK METHODS

- 31 45 20 Compaction Grouting

DIVISION 40 – PROCESS INTEGRATION

- 40 05 67 Pressure Relief Valve
- 40 95 34 Fiber Optics and Installation

SECTION 01 12 01
PARTNERING

PART 1 GENERAL

1.01 PARTNERING

- A. The Owner intends to encourage the foundation of a cohesive partnership with the Contractor. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The general objectives are effective and efficient contract performance to achieve completion within budget, on schedule, and in accordance with the intent of the Contract Documents.

- B. Project partnering recognizes that the Owner, Contractor, Construction Manager and Engineer all hold in common the goal of successful completion of this Project, including the following specific goals:
 - 1. Construction of a facility that meets the project performance standards as defined in the Specifications.
 - 2. Completion of the project on schedule in order to correctly interface with other concurrent and related projects and provide operational success of the Morena Pump Station (MPS) and the other Pure Water Program Projects.
 - 3. Conformance to budgetary requirements and limitations.
 - 4. Promote organizational efficiency for all parties.

- C. In addition, it is recognized that safety, liability limitation, avoidance of litigation, reputation, good will, and other factors are of significant importance to all parties involved in the Project.

- D. Through partnering, the four parties will agree among themselves regarding the primary goals for the Project and the methods that will be used to accomplish them. This will require development of a cooperative open relationship among the Contractor, Owner, Construction Manager, and Engineer. The parties will mutually develop a communication framework and a conflict resolution system to be used throughout the Project.

- E. Partnering will include an initial 8-hour workshop in which the basic requirements for the partnering relationship will be established. The following persons will be expected to attend the workshop, at a minimum.
 - 1. Contractor:
 - a. Project Sponsor (Principal-in-Charge).
 - b. Project Manager.
 - c. Safety Representative.
 - d. Startup Manager.

PARTNERING
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- e. Superintendents.
- f. Subcontractors.
- g. Key Manufacturers.
- 2. Owner:
 - a. Director of Utility Services (Principal).
 - b. Manager of Technical Services.
 - c. Project Manager.
 - d. Construction Manager.
- 3. Construction Manager:
 - a. Principals.
 - b. Construction Manager.
 - c. Project Coordinator.
 - d. Startup Manager.
 - e. Resident Engineers.
 - f. Inspectors.
- 4. Engineer:
 - a. Principals.
 - b. Project Manager.
 - c. Resident Engineer.

- F. The partnering workshop will be conducted by an independent partnering facilitator within 30 days of the limited Notice to Proceed at a time and date agreed upon by all parties and at a neutral location away from each entity's home office and/or field facilities. The facilitator will prepare the workshop agenda after conducting telephone interviews with key individuals from each party to assess their needs and concerns.
- G. Additional partnering sessions will be held quarterly on an as needed basis, and will include an 8-hour workshop, with the same attendees as the initial partnering workshop. The purpose of these follow-up sessions will be to confirm the relationship and assure the partnering effort continues to be successful throughout the Project.
- H. A partnering facilitator will be employed by the Owner who will help establish and monitor the partnering relationship. Payment and Partnering shall be per Section 3-14.1 of the Whitebook.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 01 29 00
PAYMENT PROCEDURES**

PART 1 GENERAL

1.1 WORK REQUIRED OF THIS SECTION

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor and services, operations, and incidentals appurtenant to the items of Work being described here and within the plans, specifications, and Contract Documents, as necessary to complete the various items of the Work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the Contract Price.

1.2 SUBMITTALS

- A. Informational Submittals:
 - 1. Schedule of Values: Submit on Schedule of Estimated Progress Payments:
 - a. Submit with initially acceptable Schedule of Values.
 - b. Submit adjustments thereto with Application for Payment.
 - 2. Application for Payment: Submit on Owner's form.
 - 3. Final Application for Payment.

1.3 SCHEDULE OF VALUES

- A. Prepare a separate Schedule of Values for each schedule of the Work under the Agreement.
- B. Upon request of Engineer, provide documentation to support the accuracy of the Schedule of Values.
- C. Unit Price Work: Reflect unit price quantity and price breakdown from conformed Bid Form.

PAYMENT PROCEDURES
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- D. Lump Sum Work:
 - 1. List bonds and insurance premiums, mobilization, demobilization, preliminary and detailed progress schedule preparation, equipment testing, facility startup, and contract closeout separately.
 - a. Include item(s) for monthly progress schedule update.
- E. An unbalanced or front-end loaded schedule will not be acceptable.
- F. Summation of the complete Schedule of Values representing all the Work shall equal the Contract Price.
- G. Submit Schedule of Values on a USB Flash Drive in a spreadsheet format compatible with latest version of MS Excel.

1.4 SCHEDULE OF ESTIMATED PROGRESS PAYMENTS

- A. Show estimated payment requests throughout Contract Times aggregating initial Contract Price.
- B. Base estimated progress payments on initially acceptable progress schedule. Adjust to reflect subsequent adjustments in progress schedule and Contract Price as reflected by modifications to the Contract Documents.

1.5 ALLOWANCES

- A. Allowances will be administered in accordance with the Contract requirements and as described below under 1.14 Bid Items.
- B. Submit, with application for payment, invoice showing the date of purchase, labor costs, expenses, and the total price for all allowance items.
- C. Allowances shall be paid based on actual work performed up to the amount listed in the Bid Schedule. The Owner shall authorize the use of the cash allowances on an as needed basis.

1.6 APPLICATION FOR PAYMENT

- A. Transmittal Summary Form: Attach one Summary Form with each detailed Application for Payment for each schedule and include Request for Payment of Materials and Equipment on Hand as applicable. Execute certification by authorized officer of Contractor.
- B. Use detailed Application for Payment Form provided by Owner.

PAYMENT PROCEDURES

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- C. Provide separate form for each schedule as applicable.
- D. Include accepted Schedule of Values for each schedule or portion of lump sum Work and the unit price breakdown for the Work to be paid on a unit priced basis.
- E. Include separate line item for each Change Order and Work Change Directive executed prior to date of submission. Provide further breakdown of such as requested by Engineer.
- F. Preparation:
 - 1. Round values to nearest dollar.
 - 2. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form(s) for each schedule as applicable, a listing of materials on hand for each schedule as applicable, and such supporting data as may be requested by Engineer.

1.7 MEASUREMENT—GENERAL

- A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and specifications as specified in National Institute of Standards and Technology, Handbook 44.
- B. Whenever pay quantities of material are determined by weight, weigh material on scales furnished by Contractor and certified accurate by the appropriate state agency responsible for certifying measurement. Obtain weight or load slip from weigher and deliver to Owner's representative at point of delivery of material.
- C. If material is shipped by rail, car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff and provided further that car weights will not be acceptable for material to be passed through mixing plants.
- D. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by Engineer. Each vehicle shall bear a plainly legible identification mark.
- E. Haul materials that are specified for measurement by the cubic yard measured in the vehicle in transport vehicles of such type and size that actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its water level capacity. Load vehicles to at least their water level capacity. Loads hauled in vehicles not meeting above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to

PAYMENT PROCEDURES

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rejection, and no compensation will be allowed for such material.

- F. Quantities Based on Profile Elevations: Existing ground profiles shown on Drawings were taken from a topographic map drawn with contour intervals of 1 foot with supplementary spot elevations to nearest half foot.
- G. Quantities will be based on ground profiles shown. Field surveys will not be made to confirm accuracy of elevations shown.
- H. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings. Variations of 1 foot or less will be ignored, and profiles shown on Drawings will be used for determining quantities.
- I. Units of measure shown on Bid Form shall be as follows, unless specified otherwise.

Item	Method of Measurement
AC	Acre—Field Measure by Engineer
CY	Cubic Yard—Field Measure by Engineer within limits specified or shown
CY-VM	Cubic Yard—Measured in Vehicle by Volume

Item	Method of Measurement
EA	Each—Field Count by Engineer
GAL	Gallon—Field Measure by Engineer
HR	Hour
LB	Pound(s)—Weight Measure by Scale
LF	Linear Foot—Field Measure by Engineer
MFBM	Thousand Foot Board Measure—[Delivery Invoice][Field Measure by Engineer]
SF	Square Foot
SY	Square Yard
TON	Ton—Weight Measure by Scale (2,000 pounds)

1.8 PAYMENT - GENERAL

- A. Payment for all Lump Sum Work shown or specified in Contract Documents is included in the Contract Price. Payment will be based on a

PAYMENT PROCEDURES

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percentage complete basis for each line item of the accepted Schedule of Values.

- B. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor and services, operations, and incidentals appurtenant to items of Work being described here and within the plans, specifications, and Contract Documents, as necessary to complete the various items of the Work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the contract price.

1.9 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- A. Payment will not be made for following:
 - 1. Loading, hauling, and disposing of rejected material.
 - 2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
 - 3. Rejected loads of material, including material rejected after it has been placed by reason of failure of Contractor to conform to provisions of Contract Documents.
 - 4. Material not unloaded from transporting vehicle.
 - 5. Defective Work not accepted by Owner.
 - 6. Material remaining on hand after completion of Work.

1.10 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

- A. Partial Payment: No partial payments will be made for materials and equipment delivered or stored unless Shop Drawings and preliminary operation and maintenance data is acceptable to Engineer.
- B. Final Payment: Will be made only for products incorporated in Work; remaining products, for which partial payments have been made, shall revert to Contractor unless otherwise agreed, and partial payments made for those items will be deducted from final payment.

1.11 PARTIAL PAYMENT FOR UNDELIVERED, PROJECT-SPECIFIC MANUFACTURED OR FABRICATED EQUIPMENT

- A. Notwithstanding above provisions, partial payments for undelivered (not yet

PAYMENT PROCEDURES

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delivered to Site or not stored in the vicinity of Site) products specifically manufactured for this Project, excluding off the shelf or catalog items, will be made for products listed below when all following conditions exist:

1. Partial payment request is supported by written acknowledgment from Suppliers that invoice requirements have been met.
 2. Equipment is adequately insured, maintained, stored, and protected by appropriate security measures.
 3. Each equipment item is clearly marked and segregated from other items to permit inventory and accountability.
 4. Authorization has been provided for access to storage Site for Engineer and Owner.
 5. Equipment meets applicable Specifications of these Contract Documents.
- B. Payment of 15 percent of manufacturer's quoted price for undelivered, Project-specific manufactured equipment will be made following Shop Drawing approval. Thereafter, monthly payments will be made based on progress of fabrication as determined by Engineer, but in no case will total of payments prior to delivery exceed 75 percent of manufacturer's quoted price.
- C. Failure of Contractor to continue compliance with above requirements shall give cause for Owner to withhold payments made for such equipment from future partial payments.

1.12 RETENTION

- A. The Owner shall retain a percentage of each progress payment in accordance with Greenbook/ Whitebook Section 7-3.2 Partial and Final Payment. The retained amount is available for the protection and payment of the person(s), mechanics, subcontractors, or materialmen who perform labor upon the Contract or Work thereunder, and the persons who supply such person(s), or subcontractors with components and supplies for carrying on such Work.

1.13 PHASE FUNDING

- A. See Attachment B of contract documents.

1.14 BID ITEMS

- A. FIBER OPTIC CABLE, CONDUIT, APPURTANANCES, INNERDUCT, AND FIBER PULL BOXES AND PATCH PANELS – LUMP SUM

1. No measurement shall be made for this item.

PAYMENT PROCEDURES

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2. Payment is made for this item for the construction of:
 - a. The fiber optic conduit including trenching, backfill, warning tape, pull boxes, panels and panel support pedestals, pull rope, connections to existing conduit, terminations, and all other appurtenances necessary for the complete fiber optic conduit installation as shown on Contract Plans and specified in the Contract Documents and more specifically in Section 26 05 33.
 - b. The fiber optic cable including cable, connections to existing cable, terminations, testing and all other appurtenant work necessary for the complete fiber optic cable installation shown on Contract Plans and specified in Contract Documents and more specifically in Section 40 95 34.
3. Payment under this bid item shall be made as a Lump Sum price named in the Bid Schedule.

B. CATHODIC PROTECTION – LUMP SUM

1. No measurement shall be made for this item.
2. Payment is made for this item for the construction of the cathodic protection system:
 - a. Installation of deep well anode beds, rectifiers, traffic control plans, all permits, and all other appurtenant work necessary for the complete and operational cathodic protection system as shown on the Contract Plans and specified in the Contract Documents and more specifically in Supplementary Special Provisions Section 209-9.
 - b. Installation of pipe bonding wires to provide electrical continuity and cathodic protection test stations for pipeline testing including bond wires and 2 and 4 wire test stations, including flanges, and all other appurtenant work necessary for pipe bonding and cathodic protection test stations as shown on the Contract Plans and specified in the Contract Documents and more specifically in Supplementary Special Provisions Section 209-9.
3. Payment under this bid item shall be made as a Lump Sum price named in the Bid Schedule.

PAYMENT PROCEDURES

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C. HIGH PURITY OXYGEN SENSOR AND CONNECTION – LUMP SUM

1. No measurement shall be made for this item.
2. Payment is made for this item for the construction of four off-gas sensors with the ability to detect oxygen levels within the Wastewater Force main AVAR Vault and vent pipe indicated as AV#1 on Drawing 40067-12-D. The off-gas sensors shall have the following properties:
 - a. Ability to detect oxygen levels as noted below:
 - 20 to 23% by volume (“Safe Level” per OSHA)
 - Above 23% by volume (“Unsafe level Over-oxygenated”)
 - Below 20% by volume (“Unsafe Level Under-oxygenated”)
 - b. Two off-gas sensors shall be placed at the air vent in a duty and standby relationship.
 - c. Two off-gas sensors shall be placed within the vault in a duty and standby relationship.
 - d. All four off-gas sensors shall be connected to the fiber optic system and tied to the DCS control system at Morena Pump Station with a local controller
 - e. All equipment shall be supplied power from a new SDG&E service.
3. Payment for this item shall be made as a Lump Sum amount named in the Bid Schedule.

D. INTEGRATION PERIOD SUPPORT – LUMP SUM

4. No measurement shall be made for this item.
5. Payment for this item shall be made as a Lump Sum amount named in the Bid Schedule in accordance with Specification 01 91 14 TESTING, INTEGRATION AND STARTUP.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PAYMENT PROCEDURES

01 29 00 - 8

SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The Contractor shall expressly understand and agree that the rate of progress and the time of completion of the work are of the essence for this contract. The work shall be executed with such progress as required to prevent any delay to this contract and to other projects or contractors working at the site. Compliance includes, but is not limited to, meeting contract milestone dates, compliance to scheduling submittals, working within any constraints and completion of all contract work within the allotted time.
- B. The work specified in this section includes the preparation, submittal, and acceptance of a Baseline Schedule, construction progress schedules, schedule updates, recovery schedules, Time Impact Analysis (TIA) and revisions to the construction progress schedule. The construction schedule shall conform to the time provisions specified in the special provisions of the contract documents and the requirements of all other specified work sequence constraints set forth in the contract documents.
- C. The Contractor shall prepare and submit a Baseline Construction Schedule in accordance with the requirements of this section. By preparing and submitting the Baseline Construction Schedule and monthly schedule updates, the Contractor represents that it can and intends to safely execute the contracted work and all portions thereof including all activities of subcontractors, equipment vendors, and suppliers including submittals and re-submittals within the specified times and constraints. The Contractor also represents that the bid price covers all costs associated with the execution of the Work in accordance with the construction schedule and contract documents.
- D. This specification includes the cost loaded schedule requirements, consistent with the PAYMENT PROCEDURES Section 01 29 00, which shall form the basis for the pay application report and all monthly payment requests. These referenced sections shall be correlated and linked when preparing the monthly progress payment. The Schedule of Values shall be generated from the Oracle Primavera P6 current accepted schedule.
- E. The City will review the schedule, and any updates or revisions, and any other schedule data for conformance to the Contract. Review and acceptance of the Baseline Construction Schedule and associated documents does not relieve the contractor of responsibility for the feasibility of the schedule, performance of any omitted work and completion of the work and milestones within the contract time.

1.2 DEFINITIONS

- A. **ACTIVITY:** A discrete work element of a project that can be identified for planning,

scheduling, and controlling the construction project. Activities included in a construction schedule consume time and resources.

- B. PREDECESSOR ACTIVITY: An activity that precedes another activity in the network.
- C. SUCCESSOR ACTIVITY: An activity that follows another activity in the network.
- D. CODE OF ACCOUNTS: A unique lettering or numbering system in which letters or numbers are assigned to each unique component of the work breakdown structure.
- E. HARD LOGIC: Relationships with mandatory dependencies where the nature of the work itself dictates the order in which the activities should be performed. Construction of the walls before starting painting work is an example of mandatory dependency.
- F. SOFT LOGIC: Also known as Discretionary Dependencies or Preferential Logic. Preferential logic that controls the critical path using constraints and lags will not be allowed.
- G. HARD CONSTRAINTS: Override logical relationships and thereby prevent activities from being scheduled according to the logic. Hard Constraints include Mandatory Start, Mandatory Finish, Start On and Finish On.
- H. CRITICAL PATH METHOD (CPM): A method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the Project.
- I. CRITICAL ACTIVITIES: Activities on the critical path. To avoid project delays, work must start and finish on the planned early start and finish dates.
- J. CRITICAL PATH: The longest connected chain of interdependent activities through the network schedule that establishes the maximum overall project duration or completion. There can only be one critical path for a project duration or a project milestone.
- K. NEAR CRITICAL PATH: The Near Critical Path shall be defined as the “longest path” plus 15 working days total float.
- L. FLOAT:
 - 1. The measure of leeway in starting and completing an activity. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 2. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned project completion date or contract milestone.
- M. FRAGNET: A partial or fragmentary network that breaks down activities into smaller

activities for greater detail.

- N. WORK AREA: An area of construction, a separate facility, or a similar significant construction element.
- O. CONTRACT MILESTONE: An activity or event that must be completed by a specific date and to which liquidated damages may apply. Contract start and completion dates are considered Contract Milestones.
- P. NETWORK DIAGRAM: A graphic diagram of a network schedule, showing activities and activity relationships.
- Q. SCHEDULE OF VALUES: A realistic statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment. The Schedule of Values should be produced from P6 and match the Cost Loading in the Schedule.
- R. COST-LOADING: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total contract amount, unless otherwise approved by the City.
- S. RESOURCE LOADING: The allocation of manpower necessary for the completion of an activity as scheduled.
- T. WORK BREAKDOWN STRUCTURE (WBS): The WBS is a hierarchical structure of the Work to be performed under the contract.
- U. CALENDAR DAY: All days in a calendar year including weekends and holidays. Contract duration is measured in calendar days against contract milestones.
- V. PACING: An intentional slowing of work activities during a delay, or alleged delay, to project completion.
- W. INSTALLED MAJOR EQUIPMENT: All major equipment installed as part of the final constructed facility. See PAYMENT PROCEDURES Section 01 29 00 for definition of Major Equipment.
- X. CONSTRUCTION EQUIPMENT: All equipment utilized by the contractor to construct the facility but is not a part of the final constructed facility.
- Y. BLACKOUT CALENDAR: An activity calendar that applies the non-work option in Primavera P6 Activity Calendars to create non-working days, weeks, and/or months when work is restricted from occurring. The City requires the use of blackout calendars for restricted activities rather than adjusted logic and durations.

13 SCHEDULER QUALIFICATIONS

- A. The Contractor shall employ or retain the services of a full-time, onsite Senior Project

Scheduler who shall have verifiable experience in construction work sequencing, productivity, and scheduling as well as preparing and maintaining detailed construction schedules using the most current version of Oracle Primavera P6 software. Contractor's scheduler shall have experience on projects similar in size and total construction cost. Within seven (7) calendar days after Notice to Proceed, the Contractor shall submit to the City Representative for review and acceptance, in accordance with the SUBMITTAL PROCEDURES Section 01 33 00 and the WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT Section 01 33 22, the Project Scheduler's resume, including personal references from at least two (2) owner-representatives familiar with the Project Scheduler's work on previous water or wastewater treatment projects. The City reserves the right to reject the proposed scheduler based on the lack of qualifications as defined in this section. The Contractor's scheduler shall attend all schedule related meetings, including progress meetings, job walks when necessary to verify schedule progress, schedule review meetings and special meetings pertaining to scheduling of the Work. This person, along with the Contractor's management team, is expected to work closely with the City Representative to deliver acceptable products outlined in this section and comply with the Reports requirements of this section.

- B. If the Senior Construction Scheduler leaves the employment or retainage of the Contractor, the Contractor will be required to notify the City Representative in advance of the intended departure and fulfill the requirements of this subsection within thirty (30) calendar days of the departure of the Contractor's Senior Construction Scheduler. The City reserves the right to disapprove any candidate proposed for the Project. The City reserves the right to remove any member of the Contractor scheduling staff that is, in the City's opinion, not performing scheduling work in accordance with the scheduling requirements.

1.4 SCHEDULING CONFERENCES

A. PRE-CONSTRUCTION SCHEDULING CONFERENCE:

- 1. Within thirty (30) calendar days after Notice to Proceed, the City Representative shall schedule and conduct a pre-construction scheduling conference to commence development of the required construction schedule. Attendance by the Contractor's Senior Construction Scheduler is mandatory. At the meeting, the requirements of this section will be reviewed with the Contractor; the Contractor shall present their proposed methodology for the Baseline Construction Schedule, sequence of operations, and resource and cost/quantity loading methodology. The Contractor shall submit to the City Representative a written copy of its proposed WBS structure at this meeting. The City shall review the WBS structure within ten (10) calendar days after submission by the Contractor. The Contractor shall make all modifications to the proposed WBS structure that are requested by the City. The WBS shall be correlated with the Contractor's Schedule of Values and the cost loaded schedule. The Senior Scheduler shall develop other activity codes and values needed to comply with the reporting requirements listed herewith, subject to acceptance by the City. The Contractor shall bring to the Pre-Construction Scheduling Conference the

Network Logic Diagram used in bid preparation. This will be used as a basis of discussion for the construction plan.

15 FLOAT

- A. Pursuant to the float sharing requirements of the Contract, use of float suppression techniques such as preferential sequencing, special lead/lag logic restraints, hard constraints, Start on or After and Start on or Before constraints, adding and/or removing working or non-working days from an accepted activity calendar, extended activity durations, or imposed dates, shall be cause for rejection of the Baseline Construction Schedule and any revisions or updates. The use of float time disclosed or implied using alternative float suppression techniques shall be shared as directed by the City.
- B. Float time is not for the exclusive use or benefit of either the City or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and the contract completion date. Contractor's use of float shall be pre-approved by the City prior to use.
- C. No time extensions will be granted nor delay damages paid unless a City-caused delay occurs which impacts the Project's critical path and the Contractor has complied with all related contract requirements. Other delays will be evaluated by the Contractor for concurrency to issues and be included as part of the Contractor's analysis.
- D. Submittal of an early completion schedule shall not provide a basis for the Contractor to claim an excusable delay for any time earlier than the contract completion date. Any early completion schedule shall be approved by a contract change order.

16 LOGIC AND LEVEL OF DETAIL

- A. The project schedule shall include activities of sufficient detail to accurately represent and clearly convey the Contractor's feasible plan for the timely completion of the full scope of the work. Activities performed on site shall have maximum durations of 20 days and a value of \$50,000. The Contractor shall be responsible for developing the logic of the Baseline Schedule and for updating the logic each month to accurately reflect the progress of the work to date and the Contractor's current plan for the timely completion of the work. The schedule logic for each activity shall be constructed by determining which activities must be completed before any subsequent activity can start, which activities can occur simultaneously with the predecessor activity, which activities cannot start until another activity is complete, and the impact of all resource limitations on activity sequencing, activity durations, and activity dates. Every activity, except the project start and finish milestones, shall have a minimum of one predecessor and one successor. All paths through the project schedule shall proceed in the direction representing the progression of time; start to finish logic is disallowed. Activity lags shall not have a negative value. The use of lags shall be kept to a minimum and shall be subject to acceptance by the City. Redundant ties to preceding activities in a sequential series of activities will not be permitted.

- B. The activity descriptions shall be specific and discrete such that it cannot be confused with any other activity description. For example, "Form Concrete Wall" is too broad; there must be a description of the unique location of the wall. Similarly, activities that are discrete should not be combined.
- C. Finish to start logical relationships shall be predominantly used for schedule activities. The use of logical relationships with negative lags will not be allowed in the baseline schedule, in proposed revised schedules, or in the monthly updates.
- D. Milestones. Separately identify each Project milestone, conforming to the scheduling requirements as set forth in the Contract Documents, and assign a "finish no later than" constraint date. For Completion Deadlines, the activity description shall reference the appropriate Contract clause.
- E. No unspecified milestone constraints, other constraints, Float suppression techniques, or use of Project activity durations, logic ties, and/or sequences deemed unreasonable by the City, will be used in the Project Schedule.
- F. Any schedule showing an early completion date must show the time between the scheduled completion date(s) and the applicable Completion Deadline(s) as Float.

1.7 SCHEDULE SOFTWARE SETTINGS AND RESTRICTIONS

- A. Contractor shall use the most current version of Oracle Primavera P6 software to produce the contract schedules and reports as specified herein. In accordance with the SUBMITTAL PROCEDURES Section (01 33 00), the Contractor shall submit all schedules and associated documentation directly into the City-furnished, web-based, document control system in accordance with the WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT Section (01 33 22). The schedule files shall be submitted in Primavera's Proprietary Exchange (XER) format until such time as Primavera recommends transferring to their Extensible Markup Language (XML) format. Reports shall be in Adobe Portable Document Format (PDF).
- B. ACTIVITY CONSTRAINTS:
 - 1. Date/time constraint(s), other than those required by the contract, will not be allowed unless accepted by the City. Identify any constraints proposed and provide an explanation of the purpose of the constraint in the Narrative Report. Any finish constraints for City required milestones must use a 'Finish on or Before' type designation and have logic ties. Start on or After and Start on or Before constraints are discouraged. All Start on or After and Start on or Before constraints are subject to approval by the City representative. No hard constraints, which include Start on, Finish on, Mandatory Start, and Mandatory Finish, are allowed. The contractor shall not use any manual date entries that override schedule driven dates based on duration and network logic.

C. LAGS:

1. Lags will not be used when the creation of an activity will perform the same function (e.g., concrete cure time), instead an activity representing the gap between the completion of one activity and the start of another will describe the time gap.

D. DEFAULT PROGRESS DATA DISALLOWED:

1. Actual Start and Actual Finish dates on the CPM schedule shall match the dates provided from Contractor Quality Control Production Reports, Contractor daily reports and other contemporaneous project documentation.

E. SOFTWARE SETTINGS:

1. Schedule calculations and Out-of-Sequence progress (if applicable) shall be handled through Retained Logic, not Progress Override. All activity durations and float values will be shown in days. Activity progress will be shown using Remaining Duration. Default activity type set to "Task Dependent." User preference settings shall be set to hours with the show unit label box checked and zero decimal places. The "Durations Format" shall be set to days with the show durations label box checked, and zero decimal places.
2. The critical path shall be calculated by selecting the Longest Path as opposed to Total Float.

F. Activities unless otherwise approved will be "physical percent complete" type. Duration percent complete will only be used on City-related activities such as submittal reviews.

G. Duration Type shall be set to Fixed Duration and Units.

H. The "Automatically Level resources when scheduling" box shall not be checked. All schedule submittals, and schedule related data of any kind, shall not be resource leveled and shall be the basis for rejection if submitted with resource leveling.

I. The project critical path shall be displayed using both the 'Critical' and 'Longest Path' filters in P6.

18 COST LOADING

A. The activities contained within the schedules shall be cost loaded, and they shall equal the Contract Total Price with Sub-Totals that match the Schedule of Values within the PAYMENT PROCEDURES Section 01 29 00. Contractor is required to cost load the construction schedule using price per unit. Equipment shall include installed and construction equipment specified as price of equipment that is worth over \$100,000. For example, the labor unit would be \$ per hour; the material unit would be material cost per unit installed. The non-labor resources shall be used exclusively on activities containing equipment. Equipment shall include installed and construction equipment specified as price of equipment. The resource coding and name shall distinguish

between installed and construction equipment. An example of price per unit cost loading is shown below:

1. One (1) labor unit = \$1 of labor
2. Material unit of \$1 for 1 unit
3. Equipment unit of \$1 for 1 unit

- B. Procured items, including installed equipment, should be budgeted as part of separate procurement activities such that the installation activity is not statused as started when the procured material is onsite and installation has not begun. Refer to the PAYMENT PROCEDURES Section 01 29 00 for more details. O&M and Training activities shall be their own cost-loaded schedule activities. Project record documentation (as-builts) shall also be a separate cost-loaded schedule activity.
- C. Overhead and profit shall be prorated evenly on all cost loaded activities. Alternatively, overhead may be treated as a Level of Effort activity or activities. The Contractor shall not unbalance the activity cost loading, nor shall the Contractor utilize Resource Leveling as a technique for extending activity durations. The approved Schedule of Values, as generated from the Cost Loading becomes the basis for the Payment Application.
- D. Every construction activity that contains labor shall be cost loaded.
- E. Fabricate and Deliver activities shall be cost loaded to cover the material or equipment costs. The Fabrication activities shall utilize a material or equipment resource.
- F. Commissioning activities shall be cost loaded using a labor resource.
- G. The cost loading and progress payments for long lead procurement items will be discussed at the pre-construction scheduling conference.
- H. Once the Schedule of Values is accepted with the Baseline Construction Schedule, requests for changes to the Baseline Schedule of Values will not be approved unless approved in writing by the City Representative.
- I. The Contractor shall submit with the Baseline Schedule the detailed budget documents reflecting the costs used as the basis of the cost loading contained therein.
- J. In Oracle Primavera P6, for actual monthly costs to store correctly, the Contractor must setup the financial period to equal the first and last date of the calendar month, regardless of the actual monthly cutoff date. Financial periods cannot bridge 2 months and must equal the full month. Financial dates table will be provided at the Preliminary Schedule meeting.
- K. Work Restrictions in Supplementary Special Provision 6-2.2 indicating activities that cannot be performed during specific periods of time due to operational or other City

requirements shall be accommodated in the Baseline and Progress Schedules using blackout calendars. These Blackout Calendars must be developed incorporating the specific durations when work cannot be performed, according to the terms of each work restriction, and applied to the applicable activities. These Blackout Calendars will prevent work from extending into these restricted periods by shifting it until after the completion of the restriction.

19 RESOURCE LOADING

- A. Schedules shall include resource loading, also known as manpower loading, showing at a minimum, the composite crew, the classification (e.g., foreman, journeyman, etc.) of the individual craftsman comprising the crew, materials or equipment associated with each construction and commissioning activity shown on the schedule, plus any other information required by the City. Manpower shall be expressed as manhours.
- B. Manpower resources shall be listed in the Resource Library of the Primavera Software and the Contractor shall assign manpower resource loading by trade for each work activity of the schedule.
- C. The Contractor warrants that it will allocate resources and costs based upon Early Date curves and Late Date curves as well as all area between these two curves. The Contractor also warrants that the cost of performing the work, based upon both curves, is included within its bid price.
- D. The Contractor shall submit with the Baseline Schedule the detailed budget documents reflecting labor hours used as the basis of the resource loading contained therein. The budget documents used to resource load the Baseline Construction Schedule shall be based upon the escrowed bid documents and reconcile thereto.
- E. Work performed by the prime contractor and all subcontractors with a contract value greater than or equal to two (2) percent of the Prime Contract Value shall use the following resources:
 - 1. Labor
 - 2. Materials
 - 3. Installed Major Equipment (refer to Section 1.02 Definitions)
 - 4. Construction Equipment (refer to Section 1.02 Definitions)
 - 5. Manhours
- F. The Prime Contractor, and each of the subcontractors with a contract value greater than or equal to two (2) percent of the Prime Contract Value, shall create separate Labor, Material and Nonlabor (Equipment) resources for the Prime Contractor and each subcontractor. The resources shall be titled with the name and/or trade of the Prime Contractor and subcontractors and shall match the responsibility activity code assigned

to each activity.

1.10 ACTIVITY CALENDARS

- A. All calendars shall be given specific project names and defined clearly in Oracle Primavera P6. For example, "MCN Standard 5-day with Holidays," "MCN 6-day with Holidays," Calendars for different trades if used, should be specified. All calendars and activity coding within the schedule shall be "Global" rather than "Project" level and shall have a unique prefix of the City contract number.
- B. The Contractor shall utilize Blackout Calendars and apply the calendars to activities that may be impacted by the work restrictions stated in Section 6-2.2 of the Supplementary Special Provisions.

PART 2 - PRODUCTS

2.1 180-DAY SCHEDULE

- A. Within thirty (30) calendar days after Notice to Proceed, the Contractor shall submit to the City the Preliminary Construction Schedule for all work in the first One Hundred Eighty (180) calendar days following NTP, as well as a general approach for the remainder of the Work.
- B. Within sixty (60) days after Notice to Proceed, the Contractor shall submit to the Preliminary Construction Schedule cost and resource loaded. The remaining portion of the work may be summary activities assigned to the Contractor's planned baseline WBS structure and shall be cost-loaded to equal the full contract amount.
- C. The City Representative, Contractor and its Senior Project Scheduler shall meet within fourteen calendar days (14) of the submittal of the One Hundred Eighty (180) calendar day Construction Schedule to review and make any necessary adjustments or revisions. The Contractor shall submit the revised One Hundred Eighty (180) calendar day Construction Schedule within fourteen (14) calendar days after receiving comments. Such re-submittal shall be reviewed by the City Representative within seven calendar days (7) of receiving such re-submittal. The One Hundred Eighty (180) calendar day Construction Schedule, when revised, will represent the Contractor's planned means, methods, and sequences for performance of the Work required in the One Hundred Eighty (180) calendar days following NTP and is to be incorporated as the first One Hundred Eighty (180) days of the Contractor's Baseline Construction Schedule. The One Hundred Eighty (180) day schedule will include, but not be limited to work tasks that will or may be critical to performance within the Contract Time including, but not limited to, the following:
 - 1. Planning.
 - 2. Mobilization.

3. Key shop drawing and sample submittals.
 4. Fabrication and delivery of key and long-lead procurement elements.
 5. Contractor and Subcontractor Activities
 6. Activities for the City, other contractors, utility providers, tenants, or other third parties.
 7. Specific phasing as required by Contract.
 8. Summary activities for the remaining duration of the contract.
- D. The 180-day schedule shall be cost loaded as described in the Cost Loading Section of this specification.
- E. The Contractor shall include a Schedule Narrative with the 180-Day Schedule submittal.

22 BASELINE CONSTRUCTION SCHEDULE

- A. The Baseline Construction Schedule shall be constructed to show sequence and duration of the activities the Contractor proposes to carry out the Work. The schedule shall be resource (manpower) and cost loaded and should indicate any restrictions on the availability of work areas. The Contractor shall utilize the Baseline Construction Schedule in planning, scheduling, coordinating, and performing the work under the Contract (including all activities of Subcontractors, equipment vendors, and Suppliers). The Baseline Construction Schedule is the basis of the Schedule of Values and 4-week look-ahead schedules. The approved 180-Day Schedule shall be incorporated into the Baseline Schedule without any changes or progress. The Baseline Schedule shall demonstrate the feasibility of the Contractor's Civil and Concrete plans. Among other elements, this plan shall demonstrate the ability to meet concrete pour, cure and strip requirements including restrictions on adjacent pours, the ability of the crane and concrete pumping equipment to reach all areas of the concrete work, and a logical plan for completing and exiting the work. The plan shall demonstrate all work including Mechanical and Electrical work and Commissioning phases.
- B. Within one hundred eighty (180) days after Notice to Proceed, the Contractor shall submit the Baseline Construction Schedule to the City, including a written narrative to further explain the plan as set forth in its CPM logic network and schedule. The Contractor shall schedule a workshop prior to submittal of the Baseline Construction Schedule to present the schedule plan. Within 5 working days from Baseline Schedule submittal, the Contractor shall conduct a Baseline Schedule presentation describing the schedule in detail and the Contractor's means & methods for construction. The City Representative shall accept or reject, in writing, the Contractor's Baseline Schedule within thirty (30) Calendar Days after receipt of all required information. If rejected, the Contractor shall make necessary modification to the Baseline Schedule and resubmit to the City within fourteen (14) Calendar Days. The City Representative shall accept or

reject, in writing, the revised Baseline Construction Schedule within 14 calendar days of resubmittal. Once accepted, the Baseline Construction Schedule shall be used for monitoring and evaluating Contract performance, including, but not limited to progress, progress payments, changes, and delays.

- C. The Baseline Construction Schedule will be the Performance Measurement Baseline (PMB) for the project. This requires that the PMB will be maintained with any structural schedule changes in the Current schedule. This includes expansion and contraction in WBS and/or activities, detailing out summary cost items, and anything else that makes the PMB non-measurable.
- D. There shall be at least one continuous Critical Path in the Baseline Schedule, using the longest path definition that starts at the earliest occurring schedule activity in the network (i.e., NTP1) and ends at the latest occurring schedule activity in the network. No more than 20 percent of the activities may be critical or near critical. The Near Critical path shall be defined as within 15 working days of the critical path. If 20% of the activities become critical, present a plan to reduce the number of near-Critical Path activities to the client.
- E. The Baseline Construction Schedule shall demonstrate the final level of detail for each activity and shall contain the required relationships completely identified and the durations of each activity correctly depicted. The Baseline Construction Schedule shall be developed as follows:
 - 1. The Baseline Construction Schedule shall contain no contract changes or delays which may have been incurred during the interim schedule development period. These changes will be entered at the first update after the baseline schedule has been accepted and a change to the contract time or duration was made via an approved change order.
 - 2. The Baseline Construction Schedule submitted for review and acceptance by the City shall contain no status and the data date shall be the contract notice to proceed date.
 - 3. The Baseline Construction Schedule shall clearly indicate the longest critical path of activities from notice to proceed to the contract completion date or contract milestone.
 - 4. The Baseline Construction Schedule will contain all cost information assigned to each of the specific activities at the final level of detail. Every construction activity that contains labor, construction equipment or permanent equipment shall be cost and resource loaded to permit initial generation of a cash flow curve and resource curve.
- F. The Baseline Schedule shall include summary activities and milestones for startup as defined in Part 1.5 of Section 01 91 14 TESTING, INTEGRATION AND STARTUP. The detailed Startup Schedule will be submitted and updated separately as described in Section 01 91 14 TESTING, INTEGRATION AND STARTUP, with links to the

accepted Baseline Schedule summary activities and milestones for startup. 100 working days prior to the start of Pre-Commissioning, the Contractor shall submit detailed Startup Schedule which will link to the accepted Baseline Schedule summary activities and milestones for startup.

- G. The Comments made by the City Representative on the Baseline Construction Schedule, during review, will not relieve the Contractor from compliance with requirements of the Contract Documents. To the extent that there are any conflicts between the accepted schedule and the requirements of the Contract Documents, the Contract Documents shall govern. The Baseline Schedule shall show the sequence and interdependence of activities required for complete performance of the Work, beginning with the date of the Contractor's Notice to Proceed date and concluding with the Contract Completion.
- H. The Baseline Construction Schedule shall reflect the Contractor's true plans for progressing and performing the work. The Contractor shall be responsible for the means, methods, and duration and certifies that the schedule duration and contract period is achievable and Contractor's estimate/bid, and/or budgets, are based upon sequences shown in the schedule.
- I. The Baseline Schedule shall provide the Contractor and the City with a tool to monitor and follow the progress of all phases of the Work. The Baseline Schedule submitted to the City shall comply with all limits imposed by the Scope of Work, with all contractually specified intermediate milestone and completion dates, and with all constraints, restraints or sequences included in the Contract. The Contractor shall obtain subcontractor written concurrence with its Baseline Construction Schedule for all subcontracts with a contract value of 2 percent or greater of the prime contract value.
- J. The Baseline Construction Schedule shall incorporate and include:
 - 1. Appropriate administrative activities and contract specified review periods (including the City and third parties) for all and phases and components of work.
 - 2. Required cost, resource and activity codes.
 - 3. Project milestones dates and overall construction activities and project completion dates.
 - 4. Project budget, schedule of values and the cost basis for progress payments.
 - 5. Commissioning activities.
 - 6. Punch list and final completion activities.
- K. Failure to include in the schedule any element of Work required for performance of Contract shall not excuse Contractor from completing all Work required within applicable time constraints, notwithstanding the City's acceptance of Contractor's Baseline Construction Schedule.

- L. Nothing in these requirements shall be deemed to negate or diminish Contractor's authority and responsibility to plan and schedule Work as required, subject to requirements of Contract Documents.
- M. No construction activity shall be more than 20 working days duration. Exceptions may be approved by the City.
- N. SUBMITTAL REVIEW TIME:
 - 1. Include in the schedule the review times indicated in the SUBMITTAL PROCEDURES Section 01 33 00. Coordinate submittal review times in contractor's baseline construction schedule with submittal schedule. The schedule shall include a schedule activity for all submittals required by these specifications. Rejected submissions will require the contractor to add activities that start a second submission and review process.

23 SCHEDULE NAMING REQUIREMENTS

- A. To assist the City in consolidating the schedules from all the projects, a standard naming convention has been adopted. The Project name in P6 and the schedule file name should be the same as the following example:

MCN Baseline 01 Dec18 DD123118

Where:

MCN = the code for the project, in this case Morena Conveyance North
 Baseline = the type of schedule submittal, which can also be Update,
 Recovery or Time Impact Analysis
 01 = the submittal number or version
 Dec18 = the month and year of the schedule submittal
 DD = the Data Date, in this example Dec 31, 2018

The exported P6 data (XER) file shall use the same name as the Schedule ID

24 ACTIVITY CODES

- A. The project schedule shall utilize the following activity codes and code values. Unless otherwise specified, a value for each code shall be assigned to each activity. In the event it is unclear which code value assignment should be made for an activity, the City Representative will make the final decision. The Project ID (City Contract Number) shall be the prefix for all Activity Codes. All District-required Activity Codes should be global. Final configuration will be presented at the Pre-Construction scheduling meeting.

Activity Code	Description
(Project ID) Phase	Phase of Work, Examples include Submit, Review & Approve, Fabrication, Deliver, Mobilization, Construction, Commissioning etc.
(Project ID) Work Area	Assign Area code to activities based upon the work area in which the activity occurs. Define work areas based on resource constraints or space constraints that would preclude a resource, such as a particular trade or craft work crew, from working in more than one work area at a time due to restraints on resources of space. Examples of Area code include different areas within a floor of a building, different floors within a building, and different buildings within a complex of buildings. Activities shall not have more than one Area code. Not all activities are required to be work area coded.
(Project ID) Responsibility	Assign a Responsibility code to all activities indicating who is responsible for performing the activity. Examples include Electrical, Mechanical, Plumbing, Fire Protection, the City, General Contractor Etc. Responsibility code may be named to the company performing the work.
(Project ID) System	Assign System code to the group of activities that comprise a system that will be Commissioned during the commissioning phase. Examples of a System are: Chemical Treatment System, Sprinkler System, HRSG System, SCADA System, Switchgear etc.
(Project ID) CSI	All procurement and submittal activities shall be assigned a 6 digit CSI code identifying Submittals, Purchase Orders, Fabrication and Delivery activities. The City uses CSI's Master Format 50 numbering system.
(Project ID) Cost ID	All cost loaded activities shall be assigned a cost code for the purpose of categorizing costs into accounts.
(Project ID) Change Orders	The Contractor shall use a City-provided change order code structure containing the change order number and a description of the change order.
CITY Project Code	The Contractor shall add the City's Project code to all activities. For MCN, for example, use the Code Value of "MCN" with a Description of "Morena Conveyance North (MCN)"
(Project ID) 180-Day Schedule	Assign an activity code to all activities to be reviewed and approved as part of the 180-Day Schedule, which includes all activities within the 180-day window
(Project ID) Major Equipment	Assign an activity code to all activities related to procurement of Major Equipment as defined in the Definitions and Terms found in the PAYMENT PROCEDURES Section (01 29 00)

CITY Access Requests	Assign an AR Code to all access request activities.
(Project ID) Milestones	The Contractor shall add a Milestones code to all milestones in the schedule.
(Project ID) Weather Sensitivity	Code (WS or NWS). Assign Category of Work Code to all Activities based upon Weather Sensitive Installation or Non-Weather Sensitive Installation.

25 ACTIVITY ID

- A. Every Activity ID in the baseline and updated schedules shall be preceded by a 3 or 4 letter prefix code followed by a dash. All suffix coding to the right of the dash is at the discretion of the Contractor. The prefix code for the Morena Conveyance North project is 'MCN-'.
- B. If for any reason an Activity ID is deleted or removed from the schedule, it may not be reused for another activity. Similarly, once the baseline construction schedule is accepted, activity descriptions may not be changed without the permission of the City Representative.

26 SCHEDULE SUBMITTALS

- A. In accordance with the SUBMITTAL PROCEDURES Section 01 33 00 and the WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT Section 01 33 22, submit all required schedule submittals in the following format:
 - 1. One (1) electronic copy of the Oracle Primavera P6 XER file including all project layouts.
 - 2. One (1) PDF copy of all reports, bar-charts, time-scaled diagrams, histograms, s-curves and narrative.
- B. VARIANCE REPORT:
 - 1. With each updated schedule submission, provide a computer-generated Log Report listing all changes made between the previous schedule and current updated schedule. Identify the name of the previous schedule and name of the current schedule being compared showing all changes to the Schedule. This report will as a minimum show changes for: Added & Deleted Activities, Original Durations, Calendars, Descriptions, Constraints (added, deleted or changed), Added/Deleted Resources, Costs, Added/Deleted Relationships, Changed Relationship Lags, a Critical Path Analysis, Float Analysis, Open Ended Activity Analysis. A narrative shall be included in the variance report stating the reason for the changes listed above.
- C. CPM REPORTS: Concurrent with the CPM schedule, submit in PDF format the reports

listed below. The specific format of the required reports will be discussed at the Preconstruction Scheduling Conference.

1. Critical Path Gantt Chart as further described in Section 2.02.A
2. Critical and Near Critical Path Gantt Chart as further described in Section 2.02.A
3. Activity ID Report: List of all activities sorted by activity number.
4. Activity Schedule Bar-chart: Sorted by phase, area, start and finish.
5. Logic Report: List of preceding and succeeding activities for all activities, sorted by phase, area, start and finish.
6. Total Float Report: List of all activities sorted by phase in descending order of total float, then descending finish.
7. Schedule of Values Report generated from the Oracle Primavera P6 schedule grouped by the Cost ID activity code and filtered by “budgeted total cost is not equal to \$0.” Sort by Activity ID with the following columns:
 - a. Activity ID
 - b. Activity Name
 - c. Remaining Duration
 - d. Start
 - e. Finish
 - f. Cost Percent Complete
 - g. Physical Percent Complete
 - h. Previous Physical Percent Complete
 - i. Budgeted Total Cost
 - j. Actual Total Cost
 - k. Actual This Period Total Cost
 - l. Previous Applications Total Cost
 - m. Remaining Total Cost

n. At Completion Total Cost

8. PROJECT CASH FLOW S-CURVE: Show the monthly budgeted costs, actual costs and estimate at completion. Include cash curves for early and late start and finish dates.
9. MANPOWER HISTOGRAMS: Showing project overall labor hours per month and trade labor hours per month (carpenters, masons, electricians, laborers, foremen, etc.)
10. MATERIAL AND EQUIPMENT STATUS REPORT: Showing the status of materials and equipment stored on-site and materials and equipment stored in bonded warehouse(s).

2.7 BASELINE NARRATIVE

- A. The Contractor shall provide a written narrative accompanying the electronic version of the Contractor's Baseline Schedule submission. This narrative shall explain the Contractor's approach for meeting all milestones and project completion dates. It shall also include a clear description of the critical path activities from beginning to end and describe anticipated crew sizes, production rate and anticipated problems of major activities along the critical path.
- B. In the written narrative, the contractor shall include the basis and assumptions used to develop the Contractor's Baseline Schedule. The contractor shall include crew sizes, equipment requirements, and anticipated delivery dates; restraints; critical path activities; activities requiring overtime or additional shifts; activities that contain time contingencies for impacts to be expected from normal rainfall; holidays and other non-work days; potential problem areas; permits; coordination required with the City and third party agencies; and long lead delivery items requiring more than 60 calendar days from order to delivery. The narrative shall also include a description of winterization activities necessary for work to continue through normally inclement weather periods.

2.8 PAYMENTS DURING THE 180 DAY AND BASELINE SCHEDULE PROCESSING

- A. The City will only process the Contractor's payment applications for Mobilization, Bonds and Insurance prior to the acceptance of the 180-Day Schedule. The accepted 180-Day Schedule shall be the basis for progress payment request until the duration of the 180-Day Schedule is exceeded, at which time the Contractor shall have an accepted Baseline Schedule in effect. Should the Contractor not have an accepted Baseline Schedule at the end of the 180-Day Schedule duration, the City will be unable to process payments until a Baseline schedule is accepted and stasured. This paragraph remains in effect in addition to any payment deductions or withholds determined per paragraph 3.04.

- B. The City places a high value on the timely acceptance of the 180-Day and Baseline Schedules, and their usefulness to the City diminishes with late acceptance of these schedules. Accordingly, for every month that acceptance of the 180-Day Schedule is delayed beyond 95 calendar days after NTP, the payment amount for the 180-Day Schedule, as specified in the PAYMENTS PROCEDURES Section 01 29 00 Subsection 1.8 Item A, will be reduced by 10% of the specified amount. For every month beyond 180 calendar days after NTP that an accepted Baseline Schedule is delayed, the payment amount for the Baseline Schedule, as specified in the PAYMENTS PROCEDURES Section 01 29 00, will be reduced by 10% of the specified amount.

29 SCHEDULE UPDATE PROCESS AND PAYMENTS

- A. Contractor to monthly update the approved Baseline Schedule to reflect the current status of the Project. The update shall include all information available and status of the Project as of the cut-off date established in the Preliminary Schedule Meeting. All Monthly Progress Schedules shall incorporate all schedule Revisions and changes previously approved by the City.
- B. Each Monthly Progress Schedule shall reflect all as-built activities performed as of the effective data date of the update schedule. The Monthly Progress Schedule shall include the period from the last update to the effective data date and for the remainder of the Project. The current period's activities shall be reported as they actually took place. In the updated schedule, Contractor shall indicate the actual dates that activities were started, completed, or split. Ongoing activities shall have an indication of the percent complete based on the amount of actual work performed, and the estimated remaining duration to complete such activities.
- C. Contractor shall certify that the progress shown on the schedule update accurately represents Work completed through the cutoff date of the Submittal.
- D. If Work was performed out of sequence, implement changes to the schedule so that it correctly reflects the actual sequence of work. In the case of repairing logic for Work performed out of sequence, the City may consider the use of negative lags. Any such schedule corrections for out of sequence work shall be considered a Revision, and Contractor shall obtain written approval from the City prior to implementing those revisions to the Monthly Progress Schedule or any other type of schedule.
- E. The physical percentage completion status (and remaining duration) of activities shall be statused in the schedule Updates and the Monthly Progress Schedule independently from the status of the dollar amount assigned to the activity for cost (price) and progress payment purposes. For example, the status of an activity can be 50% complete (based on time of performance) and may have a remaining duration of 5 days of the original 10-day duration, but the cost assigned to that activity may have a different completion status, and the earned dollars could be more or less than 50% of the at-completion dollars assigned to that activity. Contractor shall set up the scheduling software to calculate the physical completion status of each activity related to time separately from the statusing

of the value of dollars earned for progress payment purposes.

- F. The earned-to-date dollar amount must reflect the value of the work completed (which may not be directly proportional to the activity remaining duration or physical completion status), and consideration must be given to: 1) materials stored at the site or off site, but not incorporated into the work when payment prerequisites are met by Contractor, 2) reductions for non-compliant work, 3) reductions for failure to provide material testing or required certifications, 4) reductions for other reasons described by the Contract Documents, 5) when the value of the work remaining is naturally disproportionate to the performance time remaining. When the physical percentage complete of an activity is disproportionate to the earned-to-date dollar amount, the reasons for the variance shall be described in a Log field as part of the Monthly Progress Schedule data, and those Log field notations shall be displayed as a column in the APPLICATION FOR PAYMENT DETAIL.
- G. In addition to what is required for a schedule Update of work progress, the submission shall include a separate tabular report of all schedule activities that are cost loaded, and shall include the at-completion Total Cost, the proposed earned-this-period Cost amount, and the proposed earned-to-date Cost. The format and group subtotaling of the cost and payment accounting tabular report shall be submitted for review and acceptance by the City prior to the first Monthly Progress Schedule submission, and the City can request and Contractor shall implement revisions to the formatting and data displayed in the tabular report at any time thereafter to better serve the City's cost accounting system. The tabular report shall serve as the line item detail of the earned-to-date dollars assigned to each activity through the schedule's data date, will be referred to as the APPLICATION FOR PAYMENT DETAIL document, and once approved by the City, will be an attachment to the Contractor SUMMARY OF TASKS submitted by Contractor as part of the monthly INVOICE AND INVOICE CERTIFICATE package.
- H. Two days prior to the Monthly Progress Schedule data date, submit draft Monthly Progress Schedule for review by the City. Review will be done during a meeting to go over the claimed amounts. During the meeting the City Representative will respond to Contractor's estimated earned-to-date dollar amounts, and any variances between Contractor's proposed earned-to-date dollars and the City's estimate will be discussed and resolved. A marked up copy of the tabular report of the resolution of any variances will be copied for each party. Those changes to the draft Monthly Progress Schedule earned-to-date dollars will be made to the schedule before the Monthly Progress Schedule is formally submitted. If follow-up is required to further a discussion or to present proof in order to resolve the earned-to-date dollar amount for an activity, it shall occur within two working days after the Meeting, and a resolution shall be reached before formal submission of the Monthly Progress Schedule. If there is a disagreement between City's and Contractor's estimated earned-to-date dollar amounts, Contractor shall use the City's earned-to-date figure.
- I. If at any time, Contractor or the City discovers an at-completion dollar amount (budget)

assigned to an activity that is unreasonable or incorrect, either party can request that an adjustment be made. Such proposed adjustment shall be presented at the next Weekly Progress Meeting and discussed and treated like any other proposed schedule revision. Adjustments to the at-completion dollar amount for any activity will naturally require an equal adjustment to another activity such that the total Contract value does not change. Any proposed Revision to the at-completion dollar amount for any activity must be accepted by the City in writing prior to the change being made to the Monthly Progress Schedule. Contractor will maintain and make available to the City a record of all approved revisions to at-completion dollar amounts that displays each approved revision, and the adjustments to all activities affected by a revision.

- J. Contractor's monthly payment applications shall not be accepted and processed for payment by the City Representative without Baseline Schedule progress updates submitted in the time and manner required by this specification which accurately reflect the allowable costs due under the Contract Documents and are accepted by the City. Should the Baseline Schedule progress updates not be accepted due to the Contractor's failure to address all City provided comments, payment withholds and deducts will be applied as specified in paragraph 3.04 of this section.
- K. Please see the PAYMENT PROCEDURES Section 01 29 00 for the Schedule of Values approval process and coordination with invoice payment.
- L. The Schedule Update Submittal shall include:
 - 1. A detailed Gantt chart showing all activities organized by Work Breakdown Structure. The activity columns shall include Activity ID, Activity Name, Original Duration, Remaining Duration, Duration Percent Complete, Physical Percent Complete, Start, Finish, and Total Float. The critical path shall be clearly shown.
 - 2. A Critical Path Gantt chart showing Longest Path grouped by WBS to level 1 only. The activity columns shall include Activity ID, Activity Name, Remaining Duration, Start, Finish, and Total Float. The critical path and relationship lines (logic) shall be clearly shown and based upon the critical and longest path.
 - 3. A Critical and Near Critical Path Gantt using the "calculate multiple float paths" option in P6 with the "display multiple float paths ending with activity" set to each of the contract milestones. Set the number of float paths to thirty (30). Group the report by "Float Path" and filter for float value 15 days from the float value showing on each contract milestone. The activity columns on the tabular data portion of the schedule shall include Activity ID, Activity Name, Remaining Duration, Start, Finish, and Total Float. The critical path and relationship lines (logic) shall be clearly shown.
 - 4. A Schedule Variance Report shall be submitted comparing the current schedule submittal with the previously accepted schedule. Display the baseline project bars and milestones in the Gantt Chart. Include the following categories:

- a. Activity ID
 - b. Activity Name
 - c. Original Duration
 - d. BL Project Duration
 - e. Variance – BL Project Duration
 - f. Start
 - g. Finish
 - h. BL Project Start
 - i. BL Project Finish
 - j. Variance – BL Project Finish Date
5. Schedule of Values Report generated from the Oracle Primavera P6 schedule grouped by the Cost ID activity code and filtered by “budgeted total cost is not equal to \$0.” Sort by Activity ID with the following columns:
- a. Activity ID
 - b. Activity Name
 - c. Remaining Duration
 - d. Start
 - e. Finish
 - f. Cost Percent Complete
 - g. Physical Percent Complete
 - h. Previous Physical Percent Complete
 - i. Budgeted Total Cost
 - j. Actual Total Cost
 - k. Actual This Period Total Cost
 - l. Previous Applications Total Cost

- m. Remaining Total Cost
 - n. At Completion Total Cost
6. A Cashflow curve plotting actual invoicing against Baseline forecast cashflow and the update forecast to project completion. The cashflow shall include Show the monthly budgeted costs, actual costs and estimate at completion. Include cash curves for early and late start and finish dates.
 7. A manpower histogram plotting actual labor hours against Baseline forecast labor hours over the entire project.
 8. Material and Equipment Histograms: Showing the status of materials and equipment stored on-site and materials and equipment stored in bonded warehouse(s).
 9. Construction Equipment Histograms: Show project overall equipment count per month by major equipment category count per month (cranes, excavators, etc.).
- M. All changes to Schedule Updates must be accepted by the City Representative. If the Contractor desires to make a change to the current accepted Progress Update Schedule, the Contractor shall request permission from the City in writing, stating the reasons for the change as well as the specifics, such as revisions to activities, logic, durations, calendars, etc. Pending changes will be discussed at the Monthly Schedule Review (two days prior to last Friday) where the City may authorize their inclusion in the schedule without any determination of merit or responsibility.
- N. Out of sequence logic must be corrected before the Progress Update Schedule is submitted.
- O. Pending Changes shall have a City assigned Potential Change (PC) number. The Contractor shall incorporate PC activities into the schedule as Level of Effort (LOE) activities, with a zero-dollar value cost, in the update period in which the Contractor knew, or should have known of the change. The LOE shall be linked to the impacted base contract schedule activities. The change activity shall not be cost loaded until an agreement is reached between the Contractor and City as to cost. Should the PC impact the critical path, the Contractor shall submit a Time Impact Analysis (TIA) per the TIA provisions of these specifications. Upon acceptance of a TIA by the City Representative, the Contractor shall incorporate the detailed TIA schedule activities into the next Schedule Update retaining the original LOE activity. All Potential Change Activities shall be assigned a WBS and coding structure to distinguish said activities from base contract schedule activities. Upon PCs being incorporated into a Contract Change Order (CCO), the Contractor shall assign a WBS and Activity Code for each CCO, with its subset of PC numbers, with the sum cost loading of said PC activities equal to the value of the CCO. The sum of the base contract activities shall total the original contract value. The sum of the change activities shall total CCOs issued to date, plus remaining PCs

pending CCO. In the case of deductive change, the base contract activity shall be broken into two activities with the same logic ties consisting of the original activity with the remaining base contract amount and second activity with the amount to be deducted, the sum of the two totaling the originally scheduled value. Add an offsetting deduct (negative cost) as a PC change activity. The deduct amount activity on the base contract section shall have the successor logic removed, with a “deduct” note in parenthesis added to the end of the activity description. The deduct activity shall remain open until the actual deduct activity in the change section is statused as complete upon the CCO being issued. Upon the CCO being issued, both activities shall be statused with the CCO issue date.

- P. Failure to include in the schedule any element of Work required for performance of Contract shall not excuse Contractor from completing all Work required within applicable time constraints, notwithstanding the City's acceptance of Contractor's Construction Schedule.
- Q. Contractor shall address City review comments and resubmit within 7 Calendar Days from receipt of review comments. Should the Contractor fail to timely incorporate the City schedule review comments prior to the due date for the next month's update, the Contractor shall proceed with the update and the outstanding schedule review comments from the prior month will be included in the current schedule update's review comments. The Contractor is responsible for including the City schedule review comments into all affected schedules.
- R. Schedule updates forecasting contract milestones 30 or more days late are subject to rejection.

2.10 NARRATIVE PROGRESS REPORTS

- A. A Cost Activity Report shall be prepared and submitted with each progress payment. The cost information shall be updated by activity and summarized for each month. The sum of all monthly costs shall be equal to the contract amount plus approved change orders.
- B. The Narrative Report shall be submitted with the monthly progress update and include:
 - 1. The Contractor's transmittal letter.
 - 2. Schedule report indicating each activity on the CPM Schedule that has been:
 - a. Completed during this reporting period.
 - b. In progress during this reporting period.
 - 3. Scheduled for the next reporting period.
 - 4. Analysis, by critical path. (Note: critical path is longest path as described above.)
 - a. A listing of the current critical path.

- b. Progress made on critical path activities in current CPM schedule
 - c. Explanations for any lack of Work on critical path activities planned to be performed during the last month.
 - d. Impact on other activities, milestones, and completion dates.
5. Current and anticipated delays:
 - a. Cause of the delay.
 - b. Corrective action and schedule adjustments taken or to be taken to correct the delay.
 - c. Impact of the delay on other activities, milestones, and completion dates.
 - d. Recommendations for recovery of the delays.
 6. Any change in construction sequence, logic changes, relationship changes, or duration changes and the rationale associated with each change for City review and acceptance.
 7. Any corrective actions taken by the Contractor to address delays or potential delays
 8. Value of materials and equipment properly stored at the site but not yet incorporated in the Work.
 9. Identify interface items of work with another contract or with existing facilities or where third-party action or coordination is required.
 10. Pending issues and status of other items such as:
 - a. Permits.
 - b. Contract modifications.
 - c. Time extension requests.
 - d. Long-lead procurement items.
 11. Contract complete date status.
 12. Ahead of schedule and number of days.
 13. Behind schedule and number of days.
 14. Summary of project status including cumulative information to date, variance, and forecast at completion.

15. Other project or scheduling concerns.

2.11 WEEKLY 4-WEEK LOOK-AHEAD SCHEDULE

- A. The weekly bar chart “Four Week Look-Ahead Schedule” submittal shall comply with the following requirements:
1. Be produced using the latest version of Oracle Primavera P6 software and generated from the latest Monthly Schedule Update.
 2. Updated weekly with a Monday Data Date.
 3. The filter for the bar chart will be all activities that have started but not finished, plus all activities with a start or finish within minus 1 week and plus 4 weeks. Total float and the critical path shall clearly be shown.
 4. Submit as a printed bar chart on 11-inch by 17-inch paper 24 hours prior to the weekly project meeting.
 5. Identify any shutdowns/cutovers that may potentially impact stakeholders.
 6. Be prepared to discuss the status of activities on the Four Week Look Ahead Schedule, including any key issues or delays at the weekly project meetings. The Contractor’s Superintendent in charge of the work areas in the schedule shall review and sign off on the Four Week Look Ahead Schedule. The Superintendent shall be prepared to review the activities in the Four Week Look Ahead Schedule and discuss any foreseeable issues.
 7. The Contractor may provide supplemental detail to elaborate on any schedule activity and must clearly represent this supplemental detail as supplemental task information separate from the Oracle Primavera P6 generated schedule. The Contractor shall not in any way change the Activity ID and description in the schedule. For each activity on the Four Week Rolling Schedule, the Contractor shall list the corresponding schedule activity identification number from the current Monthly Progress Schedule Update.

2.12 RECOVERY SCHEDULE

A. When a periodic update indicates the project completion, or any intermediate contract milestone, is 1 to 15 days behind the current accepted schedule, the City reserves the right to request a recovery schedule. If the work falls more than 15 days behind the current accepted schedule, the Contractor is required to submit a Recovery Schedule taking steps necessary to improve progress at no additional cost to the City.

Recovery schedules may be submitted independently or included in the next Monthly Progress Update. Indicate changes to working hours per shift, labor per shift, shifts per working day, working days per week, or amount of construction equipment, or any combination of foregoing, sufficiently to achieve the contractual milestones in accordance with the current Contract requirements. If the Contractor chooses to include the recovery schedule with the next Monthly Progress Update, the City Representative may reject the Monthly Progress Update or require revisions to be made to the recovery schedule before the Monthly Progress Schedule is accepted. Recovery Schedules shall be prepared by the Contractor regardless of the underlying cause for the delay and responsibility for the time.

B. The Recovery Schedule shall have the same data date as the submitted Monthly Progress Schedule, and the data prior to the data date shall be the same in both.

Concurrent with the submittal of the Monthly Progress Schedule for review by the City, Contractor shall submit the proposed Recovery Schedule. The Submittal shall also include a written, narrative format document detailing proposed changes to the Project Schedule and including reasons for the changes. This narrative document shall include at a minimum, the following:

1. Detailed description of the changes in the means and methods that Contractor intends to implement to recover from schedule delay; such as additional design staff, additional construction crews, additional equipment, extended working hours, additional shifts per day, or other means;
2. Detailed description of proposed changes in work activity sequences that will permit previously scheduled sequential work to be performed concurrently, or other scheduling changes, which will result in recovery of the schedule delay;
3. Identification of changes to specific activity original durations;
4. Identification of changes to activity relationships and/or schedule logic;
5. Identification of activities that have been added, deleted, or modified; and/or
6. Identification of changes to the Project Schedule's Critical Path.

2.13 TIME IMPACT ANALYSIS (TIA)

- A. When the Contractor asserts it has been or will be delayed, and as a result is requesting a time extension, the Contractor shall notify the City Representative of a potential delay and prepare and submit a TIA within fourteen (14) calendar days after the impact is known or should have been known.
- B. The TIA shall be submitted separately and based upon the current accepted schedule with a data date closest to and prior to the date when the Contractor knew, or should have known, of the impact. The current accepted schedule can be the Initial 180 Day Schedule, Baseline Schedule, or Monthly Schedule Update.

- C. If the Contractor is submitting time related costs of any kind and/or is requesting time due to a schedule delay, the submittal of a TIA is required.
- D. The Contractor shall submit to the City a written TIA illustrating the influence of each change or delay on any specified intermediate milestone date and the current projected completion date. Each TIA shall include a CPM schedule network (fragnet) indicating all necessary added activities, logic, duration and demonstrating how the Contractor proposes to incorporate the change or delay into the Schedule and any additional supporting evidence that the City deems necessary.
- E. The TIA submittal shall include a PDF fragnet comparing the current accepted schedule against the Contractor's claimed delay, showing the impact on the critical path. The fragnet must show all impacts leading up and including the contract milestones.
- F. The TIA shall include a narrative addressing entitlement including a description of the scope of the change as well as addressing compliance with all contract requirements for requesting a time extension. The schedule narrative at a minimum shall address the chronology of events (impact activities), compliance with notice requirements, schedule update used as the basis of analysis (or baseline schedule if applicable), critical path, identification of CPM schedule activities impacted, logic ties between impact activities and CPM schedule activities, fragnet, concurrency, and compensability if applicable.
- G. The Contractor shall submit one (1) electronic copy of the Oracle Primavera P6 schedule files in XER format, PDF copies of the fragments, and the narrative. Each TIA should be identified with a discrete ID number and description.
- H. Should the Contractor fail to request time and submit a contract compliant TIA per these specifications, the Contractor will have irrevocably waived its contract right to a time extension and time-related costs and will be responsible for all costs associated with mitigating said delay to complete the work within the contract time.
- I. It is expressly agreed and understood that the Contractor shall not be entitled to any time or compensation for potential delays, or delays, which:
 - 1. Can be avoided by re-sequencing work activities;
 - 2. Applying additional resources;
 - 3. Do not delay the project completion date or a project milestone; or
 - 4. Result from any method used to sequester float.
- J. Pacing is defined as an intentional slowing of work activities during a delay, or alleged delay, to project completion. Absent contemporaneous notice of intent to pace, including the contractor's rationale to pace and the City's concurrence, pacing of work activities will be construed as a concurrent delay for the purposes of assessing time extensions and delay costs."

- K. The Contractor shall incorporate City review comments and resubmit the TIA within 7 calendar days of receiving them.
- L. Upon acceptance of the TIA by the City Representative, the Contractor shall incorporate the TIA fragnet into the next monthly progress schedule update.

PART 3 - WEATHER

3.1 ANTICIPATED WEATHER DAYS

A. TIME ALLOWANCE FOR INCLEMENT WEATHER:

- 1. Time allowance for inclement weather: "Inclement weather" is a lost workday, caused by inclement weather conditions, and is defined as a day in which the Contractor's workforce cannot work 50 percent or more of the day thereby resulting in a delay to the critical path. The number of inclement weather days will be reflected in a schedule activity titled "Inclement Weather". The Contractor shall allow thirteen (13) working days per year within the Baseline Construction Schedule for inclement weather, the unused portion shall be considered as Float to be used by either party. The inclement weather activity's successor shall be the Substantial Completion milestone. The predecessor activities shall be the last project activities that occur before Substantial Completion. The Contractor shall notify the Resident Project Representative in writing when a lost workday has occurred due to inclement weather in accordance with the Baseline Construction Schedule update requirements. Any delays beyond the thirteen (13) working days per year shall not entitle the Contractor to any additional compensation. The sole remedy of the Contractor shall be to seek a non-compensable extension of time.

3.2 WEATHER CALENDAR AND ACCOUNTING OF DAYS

- A. The accounting of weather days shall occur once monthly corresponding to the Monthly Schedule Update. The City granted non-working days affecting the critical path attributable to weather shall be accounted for in the Weekly Statement of Contract Time, as prepared by the City, independent of the weather allowance. City granted weather days shall be added to the schedule monthly as a one work day Non-work days in the calendars with an actual date equal to the non-working day as reflected in the Weekly Statement of Contract Time. A monthly reconciliation will occur between the inclement weather allowance and actual weather impact, as reflected in the Weekly Statement of Contract Time. Should the Contractor meet all contract requirements for demonstrating unavoidable delay, the Contractor shall be granted a time extension for weather impact days, beyond the weather allowance days for the same time period, for activities on the critical path.
- B. No contract time adjustment shall be made if actual non-working days attributable to weather affecting the critical path DOES NOT exceed the allowance. Unused weather

allowance shall become project float.

33 COMPLIANCE AND FAILURE TO SUBMIT TIMELY SCHEDULES

- A. Because the City places a high value on the importance and use of project scheduling information as a management tool in achieving the completion of Work as planned, the City will deduct ten percent (10%) of the monthly Progress Payment, but not more than three percent (3%) of the contract value, for failure by the Contractor to submit accepted Baseline Schedules or the monthly Progress Update Schedules as required by these specifications. These deductions shall apply should the Contractor fail to address within the specified time frame schedule review comments, TIA review comments, recovery schedule requirements, and address any other requirements of these specifications and/or the City. These deductions are cumulative and will be made for each and every month that the Contractor fails to provide the required information. The Progress Update Schedules and narratives shall be accurate, reflect actual events on the project, and meet all requirements of these specifications. If the Contractor does not correct the deficiency by providing an acceptable schedule within the specified time frame from receiving the City's review comments, the deduction will become permanent via a deductive change order.

PART 4 -- PROJECT RECORD SCHEDULE

4.1 FINAL PROGRESS SCHEDULE

- A. The last monthly update of the project schedule shall be the project record (as-built) schedule. The project record schedule shall accurately show the completion of all work required by the contract and shall have a data date equivalent to the day after the actual date of the Contract Completion milestone. All project schedule activities shall be statused at one hundred percent (100%) complete and have actual start and actual finish dates. The project budgeted cost reflected in the project record schedule shall be the contract price, inclusive of all adjustments due to executed change orders. The project record schedule submittal shall meet all monthly update requirements and include an actual cost statement. The City's acceptance of the project record schedule shall be a condition precedent to acceptance of the contract by the City's Board of Directors and to the release of final payment and bonds by the City.
- B. This schedule submission shall be accompanied by a certification, signed by an officer of the company and the Contractor's Project Manager and Project Scheduler, stating "To the best of our knowledge, the enclosed final update of the Construction Progress Schedule accurately reflects the actual start and completion dates and logical relationships of all activities contained herein and represents an accurate depiction of the way in which the project was constructed."

****END OF SECTION****

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 DEFINITIONS

- A. Action Submittal: Written and graphic information submitted by Contractor that requires Engineer's approval.
- B. Deferred Submittal: Information submitted by Contractor for portions of design that are to be submitted to permitting agency for approval prior to installation of that portion of the Work, along with Engineer's review documentation that submittal has been found to be in general conformance with Project's design.
- C. Informational Submittal: Information submitted by Contractor that requires Engineer's review and determination that submitted information is in accordance with the Conditions of the Contract.

1.02 PROCEDURES

- A. Direct submittals as described in Section 01 33 22, Web Based Construction Document Management, unless specified otherwise.
 - 1. Via Construction Manager.
- B. Electronic Submittals: Submittals shall, unless specifically accepted, be made in electronic format.
 - 1. Each submittal shall be an electronic file in Adobe Acrobat Portable Document Format (PDF). Use the latest version available at time of execution of the Agreement.
 - 2. Electronic files that contain more than 10 pages in PDF format shall contain internal bookmarking from an index page to major sections of the document.
 - 3. PDF files shall be set to open "Bookmarks and Page" view. Magnification shall be set to "fit page".
 - 4. Add general information to each PDF file, including title, subject, author, and keywords.
 - 5. PDF files shall be set up to print legibly at 8.5-inch by 11-inch, 11-inch by 17-inch, or 22-inch by 34-inch. No other paper sizes will be accepted.
 - 6. Submit new electronic files for each resubmittal.
 - 7. Include a copy of the Transmittal of Contractor's Submittal form, located at end of section, with each electronic file.
 - 8. Owner will reject submittal that is not electronically submitted, unless specifically accepted.

9. Provide Construction Manager with authorization to reproduce and distribute each file as many times as necessary for Project documentation. Provide file password if security settings are used.
10. Detailed procedures for handling electronic submittals will be discussed at the preconstruction conference and shall be as required by Section 01 33 22, Web Based Construction Document Management.

C. Transmittal of Submittal:

1. Contractor shall:
 - a. Review each submittal and check for compliance with Contract Documents.
 - b. Stamp each submittal with uniform approval stamp before submitting to Construction Manager.
 - 1) Stamp to include Project name, submittal number, Specification number, Contractor's reviewer name, date of Contractor's approval, and statement certifying submittal has been reviewed, checked, and approved for compliance with Contract Documents.
 - 2) Construction Manager will not review submittals that do not bear Contractor's approval stamp and will return them without action.
2. Complete, sign, and transmit with each submittal package, one Transmittal of Contractor's Submittal form in format approved by Construction Manager.
3. Identify each submittal with the following:
 - a. Numbering and Tracking System:
 - 1) Sequentially number each submittal.
 - 2) Resubmission of submittal shall have original number with sequential alphabetic suffix.
 - b. Specification section and paragraph to which submittal applies.
 - c. Project title and Owner's project number.
 - d. Date of transmittal.
 - e. Names of Contractor, Subcontractor or Supplier, and manufacturer as appropriate.
4. Identify and describe each deviation or variation from Contract Documents.
5. All submittals shall be in the English language.

D. Format:

1. Do not base Shop Drawings on reproductions of Contract Documents.
2. Package submittal information by individual specification section. Do not combine different specification sections together in submittal package, unless otherwise directed in specification.
3. Present in a clear and thorough manner and in sufficient detail to show kind, size, arrangement, and function of components, materials, and devices, and compliance with Contract Documents.

4. Index with labeled tab dividers in orderly manner.
 5. Submit all text in the English language.
- E. Timeliness: Schedule and submit in accordance Schedule of Submittals, and requirements of individual specification sections.
- F. Processing Time:
1. Time for review shall commence on Construction Manager's receipt of submittal.
 2. Construction Manager will act upon Contractor's submittal and transmit response to Contractor not later than 20 working days after receipt, unless otherwise specified.
 3. Allow 30 working days for the review of deferred submittals by the Agency Having Jurisdiction (AHJ) after approval by the Design Engineer.
 4. Resubmittals will be subject to same review time.
 5. No adjustment of Contract Times or Price will be allowed as a result of delays in progress of Work caused by rejection and subsequent resubmittals.
- G. Resubmittals: Clearly identify each correction or change made.
- H. Incomplete Submittals:
1. Construction Manager will return entire submittal for Contractor's revision if preliminary review deems it incomplete.
 2. When any of the following are missing, submittal will be deemed incomplete:
 - a. Contractor's review stamp; completed and signed.
 - b. Transmittal of Contractor's Submittal; completed and signed.
 - c. Insufficient number of copies.
- I. Submittals not required by Contract Documents:
1. Will not be reviewed and will be returned stamped "Not Subject to Review."
 2. Construction Manager will keep one copy and return submittal to Contractor.
- J. Approved Materials List (AML):
1. See Section 4-3.6, "Preapproved Material" in The WHITEBOOK and as amended in the SSP for submittal requirements of materials in the City's AML.
- K. Working Drawings:

1. Submit Working Drawings listed in TABLE 3-8.2 of The WHITEBOOK in accordance with the requirements of The WHITEBOOK and The GREENBOOK.

1.03 ACTION SUBMITTALS

- A. Prepare and submit Action Submittals required by individual specification sections.
- B. Shop Drawings:
 1. Copies: Five copies of closed submittals as required under Section 01 33 22, Web Based Construction Document Management.
 2. Identify and Indicate:
 - a. Applicable Contract Drawing and Detail number, products, units and assemblies, and system or equipment identification or tag numbers.
 - b. Equipment and Component Title: Identical to title shown on Drawings.
 - c. Critical field dimensions and relationships to other critical features of Work. Note dimensions established by field measurement.
 - d. Project-specific information drawn accurately to scale.
 3. Manufacturer's standard schematic drawings and diagrams as follows:
 - a. Modify to delete information that is not applicable to the Work.
 - b. Supplement standard information to provide information specifically applicable to the Work.
 4. Product Data: Provide as specified in individual specifications.
 5. Deferred Submittal: See Drawings for list of deferred submittals.
 - a. Contractor-design drawings and product data related to permanent construction.
 - 1) Written and graphic information.
 - 2) Drawings.
 - 3) Cut sheets.
 - 4) Data sheets.
 - 5) Action item submittals requested in individual specification section.
 - b. Prior to installation of indicated structural or nonstructural element, equipment, distribution system, or component or its anchorage, submit required supporting data and drawings for review and acceptance by Engineer. Documentation of review and approval provided on Engineer's comment form, along with completed submittal, shall be filed with permitting agency by Contractor and approved by permitting agency prior to installation.
 6. Foreign Manufacturers: When proposed, include names and addresses of at least two companies that maintain technical service representatives close to Project.

C. Samples:

1. Copies: Two, unless otherwise specified in individual specifications.
2. Preparation:
 - a. Mount, display, or package Samples in manner specified to facilitate review of quality. Attach label on unexposed side that includes the following:
 - 1) Manufacturer name.
 - 2) Model number.
 - 3) Material.
 - 4) Sample source.
3. Manufacturer's Color Chart: Units or sections of units showing full range of colors, textures, and patterns available.
4. Full-size Samples:
 - a. Size as indicated in individual specification section.
 - b. Prepared from same materials to be used for the Work.
 - c. Cured and finished in manner specified.
 - d. Physically identical with product proposed for use.

D. Action Submittal Dispositions: Engineer will review, comment, stamp, and distribute as noted:

1. Approved:
 - a. Contractor may incorporate product(s) or implement Work covered by submittal.
 - b. Distribution: Electronic.
 - 1) One copy of closed submittal furnished to the Construction Manager.
2. Approved as Noted:
 - a. Contractor may incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
 - b. Distribution: Electronic.
3. Partial Approval, Resubmit as Noted:
 - a. Make corrections or obtain missing portions, and resubmit.
 - b. Except for portions indicated, Contractor may begin to incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
 - c. Distribution: Electronic.
4. Revise and Resubmit:
 - a. Contractor may not incorporate product(s) or implement Work covered by submittal.
 - b. Distribution: Electronic.

E. Trade Names or Equals

1. All proprietary materials, equipment and manufacturers identified in the Technicals are intended to establish the type, function, and quality required. Where one (1) or more proprietary name is provided, "or approved equal" shall also be included in that list. Submittals for trade

name equals shall follow the procedures identified in Section 4-6 of the Whitebook and Supplementary Special Provisions (SSP).

2. All “equal” products as stated in the Technicals shall mean “approved equal” products.

1.04 INFORMATIONAL SUBMITTALS

A. General:

1. Copies: Electronic.
2. Refer to individual specification sections for specific submittal requirements.
3. Construction Manager will review each submittal. If submittal meets conditions of the Contract, Construction Manager will forward copy to appropriate parties. If Construction Manager determines submittal does not meet conditions of the Contract and is therefore considered unacceptable, Construction Manager will provide review comments to Contractor, and require that submittal be corrected and resubmitted.

- B. Equipment Procured Overseas: Within 60 Calendar Days of Notice to Proceed, submit a list of equipment that will require overseas shipping for project delivery. List shall include the value of shipped items.

C. Certificates:

1. General:
 - a. Provide notarized statement that includes signature of entity responsible for preparing certification.
 - b. Signed by officer or other individual authorized to sign documents on behalf of that entity.
2. Welding: In accordance with individual specification sections.
3. Installer: Prepare written statements on manufacturer’s letterhead certifying installer complies with requirements as specified in individual specification section.
4. Material Test: Prepared by qualified testing agency, on testing agency’s standard form, indicating and interpreting test results of material for compliance with requirements.
5. Certificates of Successful Testing or Inspection: Submit when testing or inspection is required by Laws and Regulations or governing agency or specified in individual specification sections.

- D. Closeout Submittals: In accordance with Section 01 77 00, Closeout Procedures.

E. Contractor-design Data (related to temporary construction):

1. Written and graphic information.
2. List of assumptions.

3. List of performance and design criteria.
 4. Summary of loads or load diagram, if applicable.
 5. Calculations.
 6. List of applicable codes and regulations.
 7. Name and version of software.
 8. Information requested in individual specification section.
- F. Deferred Submittals: See Drawings for list of deferred submittals.
1. Contractor-design data related to permanent construction:
 - a. List of assumptions.
 - b. List of performance and design criteria.
 - c. Summary of loads or load diagram, if applicable.
 - d. Calculations.
 - e. List of applicable codes and regulations.
 - f. Name and version of design software.
 - g. Factory test results.
 - h. Informational submittals requested in individual specification section.
 2. Prior to installation of indicated structural or nonstructural element, equipment, distribution system, or component or its anchorage, submit calculations and test results of Contractor-designed components for review by Engineer. Documentation of review and indication of compliance with general design intent and project criteria provided on Engineer's comment form as meets conditions of the Contract, along with completed submittal, shall be filed with permitting agency by Contractor and approved by permitting agency prior to installation.
- G. Manufacturer's Instructions: Written or published information that documents manufacturer's recommendations, guidelines, and procedures in accordance with individual specification section.
- H. Operation and Maintenance Data: As required in Section 01 78 23, Operation and Maintenance Data.
- I. Payment:
1. Application for Payment: In accordance with Section 01 29 00, Payment Procedures.
 2. Schedule of Values: In accordance with Section 01 29 00, Payment Procedures.
 3. Schedule of Estimated Progress Payments: In accordance with Section 01 29 00, Payment Procedures.
- J. Schedules:
1. Schedule of Submittals: Prepare separately or in combination with Progress Schedule as specified in Section 01 32 00, Construction Progress Documentation.

- 1) Specification section number.
 - 2) Identification by numbering and tracking system as specified under Paragraph Transmittal of Submittal.
 - 3) Estimated date of submission to Construction Manager, including reviewing and processing time.
 - b. On a monthly basis, submit updated Schedule of Submittals to Construction Manager if changes have occurred or resubmittals are required.
 2. Progress Schedules: In accordance with Section 01 32 00, Construction Progress Documentation.
- K. Special Guarantee: Supplier's written guarantee as required in individual specification sections.
- L. Submittals Required by Laws, Regulations, and Governing Agencies:
1. Promptly submit promptly notifications, reports, certifications, payrolls, and otherwise as may be required, directly to the applicable federal, state, or local governing agency or their representative.
 2. Transmit to Engineer for Owner's records one copy of correspondence and transmittals (to include enclosures and attachments) between Contractor and governing agency.
- M. Test, Evaluation, and Inspection Reports:
1. General: Shall contain signature of person responsible for test or report.
 2. Factory:
 - a. Identification of product and specification section, type of inspection or test with referenced standard or code.
 - b. Date of test, Project title and number, and name and signature of authorized person.
 - c. Test results.
 - d. If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.
 - e. Provide interpretation of test results, when requested by Construction Manager.
 - f. Other items as identified in individual specification sections.
 3. Field:
 - a. As a minimum, include the following:
 - 1) Project title and number.
 - 2) Date and time.
 - 3) Record of temperature and weather conditions.
 - 4) Identification of product and specification section.
 - 5) Type and location of test, Sample, or inspection, including referenced standard or code.

- 6) Date issued, testing laboratory name, address, and telephone number, and name and signature of laboratory inspector.
- 7) If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.
- 8) Provide interpretation of test results, when requested by Construction Manager.
- 9) Other items as identified in individual specification sections.

N. Testing and Startup Data: In accordance with Section 01 91 14, Testing, Integration, and Startup.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 33 22
WEB BASED CONSTRUCTION DOCUMENT MANAGEMENT

PART 1 GENERAL

1.01 SUMMARY

- A. The Owner, Construction Manager, Engineer, and Contractor shall utilize PMWeb (PMWeb is a registered trademark of PMWeb, Inc.), for submission of all data and documents (unless specified otherwise herein) throughout the duration of the Contract.
1. PMWeb is a web-based electronic media site.
 2. PMWeb is paid for by the Owner.
 3. PMWeb will be made available to all Contractor's personnel, subcontractor personnel, suppliers, consultants, Construction Manager, and Engineer.
 4. The joint use of this system is to facilitate electronic exchange of information, automation of key processes, and overall management of Construction Phase Documentation.
 5. PMWeb shall be the primary official means of project information submission and management.
- B. User Access Limitations: The Construction Manager will initially manage the Contractor's access to PMWeb by allowing access and assigning user profiles to accepted Contractor personnel. User profiles will define levels of access into the system; determine assigned function based authorizations and user privileges. Subcontractors and suppliers will be given access to PMWeb by and through the Contractor. Entry of information exchanged and transferred between the Contractor and its subcontractors and suppliers on PMWeb shall be the responsibility of the Contractor.
- C. Joint Ownership of Data: Data entered in a collaborative mode (entered with the intent to share as determined by permissions and workflows within the PMWeb system) by the Owner, Construction Manager, Engineer, and Contractor will be jointly owned.
- D. Automated System Notification and Audit Log Tracking: Review comments made (or lack thereof) by the Owner on Contractor submitted documentation shall not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for managing, tracking, and documenting the Work to comply with the requirements of the Contract Documents. Owner's acceptance via automated system notifications or audit logs extends only to the face value of the submitted documentation and does not constitute validation of the Contractor's submitted information.
- E. Submittals:

1. See Section 01 33 00, Submittal Procedures.
2. Preconstruction Submittals List of Contractor's key PMWeb personnel. Include descriptions of key personnel's roles and responsibilities for this Project. Contractor should also identify their organizations administrator on the list.

F. Computer Requirements:

1. The Contractor shall use computer hardware and software that meets the requirements of the PMWeb system as required to access and utilize PMWeb. As recommendations are modified by PMWeb, the Contractor will upgrade their system(s) to meet or exceed the recommendations. Upgrading of the Contractor's computer systems will not be justification for a cost or time modification to the Contract.
2. The Contractor shall ensure that connectivity to the PMWeb system is accomplished through DSL, cable, T-1 or wireless communications systems. The minimum bandwidth requirements for using the system is 128kb/s. It is recommended a faster connection be used when uploading pictures and files into the system.
3. PMWeb currently supports Mozilla's Firefox v3.0-3.5, Apple's Safari v3.0-3.5, and Microsoft's Internet Explorer v7.0 web browsers for accessing the application.

G. Contractor Responsibility:

1. The Contractor shall be responsible for the validity of their information placed in PMWeb and for the abilities of their personnel.
2. Accepted users shall be knowledgeable in the use of computers, including Internet Browsers, email programs, CAD drawing applications, and Adobe Portable Document Format (PDF) document distribution program.
3. The Contractor shall utilize the existing forms in PMWeb to the maximum extent possible. If a form does not exist in PMWeb the Contractor must include a form of their own or provided by the Construction Manager as an attachment to a submittal.
4. Adobe PDF documents will be created through electronic conversion rather than optically scanned whenever possible. The Contractor is responsible for the training of their personnel in the use of PMWeb (outside what is provided by the Owner) and the other programs indicated above as needed.

H. Connectivity Problems: Provide a list of Contractor's key PMWeb personnel for the Construction Manager's acceptance. Contractor is responsible for adding and removing users from the system. The Construction Manager reserves the right to perform a security check on all potential users. The Contractor will be allowed to add additional personnel and subcontractors to PMWeb after clearance by security check.

I. Training:

1. The Owner has arranged and paid for training to be provided to the Contractor.
2. Training consists of web-based seminars in conjunction with a conference call.
3. Contractor shall arrange and pay for the facilities and hardware/software required to facilitate their own training.

PART 2 PRODUCTS

2.01 DESCRIPTION

- A. PMWeb project management application (no or-equal).

PART 3 EXECUTION

3.01 PMWEB UTILIZATION

- A. PMWeb shall be utilized in connection with all document and information management required by these Contract Documents.

3.02 SUBMITTALS

- A. Shop Drawings:
 1. Shop Drawing and design data documents shall be submitted PDF attachments to the PMWeb submittal work flow process and form. Examples of Shop Drawings include, but are not limited to:
 - a. Standard manufacturer installation drawings.
 - b. Drawings prepared to illustrate portions of the work designed or developed by the Contractor.
 - c. Steel fabrication, piece, and erection drawings.
- B. See Section 01 33 00, Submittal Procedures.

3.03 PRODUCT DATA

- A. Product catalog data and manufacturer's instructions shall be submitted as PDF attachments to the PMWeb submittal work flow process and form. Examples of product data include, but are not limited to:
 1. Manufacturer's printed literature.
 2. Preprinted product specification data and installation instructions.

3.04 ADMINISTRATIVE OR INFORMATIONAL SUBMITTALS

- A. All correspondence and preconstruction submittals shall be submitted using PMWeb. Examples of administrative submittals include, but are not limited to:
 1. Permits.

2. Requests for substitutions (RFS).
 3. List of contact personnel.
 4. Requests for Information (RFI).
- B. Network Analysis Schedules and associated reports and updates. Each schedule submittal specified in these Contract Documents shall be submitted as a native backed-up file (.PRX or .STX) of the scheduling program being used. The schedule shall also be posted as a PDF file in the format specified in these Contract Documents.
- C. Plans for safety, demolition, environmental protection, and similar activities.
- D. Quality Control Plan(s), Testing Plan and Log, Quality Control Reports, Production Reports, Quality Control Specialist Reports, Preparatory Phase Checklist, Initial Phase Checklist, Field Test reports, Summary reports, Rework Items List, etc.
- E. Meeting minutes for quality control meetings, progress meetings, pre-installation meetings, etc.
- F. Any general correspondence submitted.
- G. Project Photos: Project photos shall be posted monthly to PMWeb.

3.05 COMPLIANCE SUBMITTALS

- A. Test reports, certificates, and manufacture field report submittals shall be submitted on PMWeb as PDF attachments. Examples of compliance submittals include, but are not limited to:
1. Field test reports.
 2. Quality Control certifications.
 3. Manufacturer's documentation and certifications for quality of products and materials provided.

3.06 RECORD AND CLOSEOUT SUBMITTALS

- A. Operation and maintenance data and closeout submittals shall be submitted on PMWeb as PDF documents during the approval and review stage as specified, with actual set of documents submitted for final. Examples of record submittals include, but are not limited to:
1. Operation and Maintenance Manuals: Final documents shall be submitted as specified.
 2. Extra materials, spare stock, etc., submittal forms shall indicate when actual materials are submitted.

3.07 FINANCIAL SUBMITTALS

- A. Schedule of Value, Pay Estimates, and Change Request Proposals shall be submitted on PMWeb. Supporting material for Pay Estimates and Change

Requests shall be submitted on PMWeb as PDF attachments. Examples of compliance submittals include, but are not limited to:

1. Contractor's Schedule of Values.
2. Contractor's Monthly Progress Payment Requests.
3. Contract Change proposals requested by the Owner.

3.08 SUBMITTAL PAPER COPIES

- A. Contractor shall deliver bound and tabbed paper copies of every closed submittal to the Construction Manager within 1 week of the Construction Manager closing a submittal with any disposition as follows:
1. Each copy shall have the closed PMWeb cover page including the disposition and any comments.
 2. Final copies of submittals returned with comments, but not requiring resubmittal shall incorporate revisions per the Engineer's comments.
 3. Number of Paper Copies:
 - a. Final O&M Manuals: Three copies as specified in the Section 01 78 23, Operation and Maintenance Data.
 - b. All Other Submittals: Five copies as specified in Section 01 33 00, Submittal Procedures.
 - c. For submittals with attachments over 30 megabytes in size, provide one CD of the submittal for each required paper copy.

END OF SECTION

**SECTION 01 77 00
CLOSEOUT PROCEDURES**

PART 1 GENERAL

1.01 SUBMITTALS

A. Informational Submittals:

1. Submit prior to application for final payment.
 - a. Record Documents: As described in Section 01 33 00, Submittal Procedures and as required in General Conditions.
 - b. Approved Shop Drawings and Samples: As described in Section 01 33 00, Submittal Procedures, Special bonds, Special Guarantees, and Service Agreements and as required in General Conditions.
 - c. Consent of Surety to Final Payment: As required in General Conditions.
 - d. Releases or Waivers of Liens and Claims: As required in General Conditions.
 - e. Releases from Agreements.
 - f. All documentation as required by all Funding Agencies.
 - g. Final Application for Payment: Submit in accordance with procedures, requirements stated in Section 01 29 00, Payment Procedures and requirements stated in the General Conditions.
 - h. Extra Materials: As required by individual specification sections.

1.02 RECORD DOCUMENTS

A. Quality Assurance:

1. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.
2. Accuracy of Records:
 - a. Coordinate changes within record documents, making legible and accurate entries on each sheet of Drawings and other documents where such entry is required to show change.
 - b. Purpose of Project record documents is to document factual information regarding aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive Site measurement, investigation, and examination.
3. Make entries within 24 hours after receipt of information that a change in the Work has occurred.
4. Prior to submitting each request for progress payment, request Engineer's review and approval of current status of record documents. Failure to properly maintain, update, and submit record documents may result in a deferral by Engineer to recommend whole or any part of Contractor's Application for Payment, either partial or final.

1.03 RELEASES FROM AGREEMENTS

- A. Furnish Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's construction right-of-way.
- B. In the event Contractor is unable to secure written releases:
 - 1. Inform Owner of the reasons.
 - 2. Owner or its representatives will examine the Site, and Owner will direct Contractor to complete the Work that may be necessary to satisfy terms of the side agreement or special easement.
 - 3. Should Contractor refuse to perform this Work, Owner reserves right to have it done by separate contract and deduct cost of same from Contract Price, or require Contractor to furnish a satisfactory bond in a sum to cover legal Claims for damages.
 - 4. When Owner is satisfied that the Work has been completed in agreement with Contract Documents and terms of side agreement or special easement, right is reserved to waive requirement for written release if: (i) Contractor's failure to obtain such statement is due to grantor's refusal to sign, and this refusal is not based upon any legitimate Claims that Contractor has failed to fulfill terms of side agreement or special easement, or (ii) Contractor is unable to contact or has had undue hardship in contacting grantor.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 MAINTENANCE OF RECORD DOCUMENTS

- A. General:
 - 1. Promptly following commencement of Contract Times, secure from Owner at no cost to Contractor, one complete set of Contract Documents.
 - 2. Label or stamp each record document with title, "RECORD DOCUMENTS," in neat large printed letters.
 - 3. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded.
- B. Preservation:
 - 1. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
 - 2. Make documents and Samples available at all times for observation by Engineer.
- C. Making Entries on Drawings:

1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
 - a. Color Coding:
 - 1) Green when showing information deleted from Drawings.
 - 2) Red when showing information added to Drawings.
 - 3) Blue and circled in blue to show notes.
2. Date entries.
3. Call attention to entry by “cloud” drawn around area or areas affected.
4. Legibly mark to record actual changes made during construction, including, but not limited to:
 - a. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.
 - b. Horizontal and vertical locations of existing and new Underground Facilities and appurtenances, and other underground structures, equipment, or Work. Reference to at least two measurements to permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - d. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
 - e. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, and Engineer’s written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.
5. Dimensions on Schematic Layouts: Show on record drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.
 - a. Clearly identify the item by accurate note such as “cast iron drain,” “galv. water,” and the like.
 - b. Show, by symbol or note, vertical location of item (“under slab,” “in ceiling plenum,” “exposed,” and the like).
 - c. Make identification so descriptive that it may be related reliably to Specifications.

3.02 FINAL CLEANING

- A. At completion of the Work or of a part thereof and immediately prior to Contractor’s request for certificate of Substantial Completion; or if no certificate is issued, immediately prior to Contractor’s notice of completion, clean entire Site or parts thereof, as applicable.
 1. Leave the Work and adjacent areas affected in a cleaned condition satisfactory to the Owner.
 2. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces.
 3. Repair, patch, and touch up marred surfaces to specified finish and match adjacent surfaces.

4. Broom clean exterior paved driveways and parking areas.
 5. Hose clean sidewalks, loading areas, and others contiguous with principal structures.
 6. Rake clean all other surfaces.
 7. Leave water courses, gutters, and ditches open and clean.
- B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.

3.03 SUBSTANTIAL COMPLETION

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Construction Manager in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Construction Manager issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Construction Manager shall make an inspection of the Work to determine the status of completion. If Construction Manager does not consider the Work substantially complete, Construction Manager will notify Contractor in writing giving the reasons therefor.
- C. If Construction Manager considers the Work substantially complete, Construction Manager will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Construction Manager as to any provisions of the certificate or attached list. If, after considering such objections, Construction Manager concludes that the Work is not substantially complete, Construction Manager will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Construction Manager considers the Work substantially complete, Construction Manager will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Construction Manager believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Construction Manager will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Construction Manager in writing prior to Construction Manager's issuing the definitive certificate of Substantial Completion, Construction Manager's aforesaid recommendation will be binding on Owner and Contractor until final payment.

3.04 FINAL INSPECTION

Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Construction Manager will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

END OF SECTION

SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Detailed information for the preparation, submission, and Engineer's review of Operations and Maintenance (O&M) Data, as required by individual Specification sections.

1.02 DEFINITIONS

- A. Preliminary Data: Initial and subsequent submissions for Engineer's review.
- B. Final Data: Engineer-accepted data, submitted as specified herein.
- C. Maintenance Operation: As used on Maintenance Summary Form is defined to mean any routine operation required to ensure satisfactory performance and longevity of equipment. Examples of typical maintenance operations are lubrication, belt tensioning, adjustment of pump packing glands, and routine adjustments.

1.03 SEQUENCING AND SCHEDULING

- A. Equipment and System Data:
 - 1. Preliminary Data:
 - a. Do not submit until Shop Drawing for equipment or system has been reviewed and approved by Engineer.
 - b. Submit prior to shipment date.
 - 2. Final Data: Submit Instructional Manual Formatted data not less than 30 days prior to installation of equipment.
- B. Materials and Finishes Data:
 - 1. Preliminary Data: Submit at least 30 days prior to request for final inspection.
 - 2. Final Data: Submit within 15 days after final inspection.
 - 3. Record Data: Submit final Compilation Formatted and Electronic Media Formatted data prior to Substantial Completion of Project.

1.04 DATA FORMAT

- A. Prepare preliminary and final data in the form of an instructional manual. Prepare final data on electronic media.
- B. Instructional Manual Format:

1. Binder: Commercial quality, permanent, three-ring or three-post binders with durable plastic cover.
2. Size: 8-1/2 inches by 11 inches, minimum.
3. Cover: Identify manual with typed or printed title "OPERATION AND MAINTENANCE DATA" and list:
 - a. Project title.
 - b. Designate applicable system, equipment, material, or finish.
 - c. Identity of separate structure as applicable.
 - d. Identify volume number if more than one volume.
 - e. Identity of general subject matter covered in manual.
 - f. Identity of equipment number and Specification section.
4. Spine:
 - a. Project title.
 - b. Identify volume number if more than one volume.
5. Title Page:
 - a. Contractor name, address, and telephone number.
 - b. Subcontractor, Supplier, installer, or maintenance contractor's name, address, and telephone number, as appropriate.
 - 1) Identify area of responsibility of each.
 - 2) Provide name and telephone number of local source of supply for parts and replacement.
6. Table of Contents:
 - a. Neatly typewritten and arranged in systematic order with consecutive page numbers.
 - b. Identify each product by product name and other identifying numbers or symbols as set forth in Contract Documents.
7. Paper: 20-pound minimum, white for typed pages.
8. Text: Manufacturer's printed data, or neatly typewritten.
9. Three-hole punch data for binding and composition; arrange printing so that punched holes do not obliterate data.
10. Material shall be suitable for reproduction, with quality equal to original. Photocopying of material will be acceptable, except for material containing photographs.

C. Data Compilation Format:

1. Compile all Engineer-accepted preliminary O&M data into a hard-copy, hard-bound set.
2. Each set shall consist of the following:
 - a. Binder: Commercial quality, permanent, three-ring or three-post binders with durable plastic cover.
 - b. Cover: Identify each volume with typed or printed title "OPERATION AND MAINTENANCE DATA, VOLUME NO. ___ OF ___", and list:
 - 1) Project title.
 - 2) Contractor's name, address, and telephone number.
 - 3) If entire volume covers equipment or system provided by one Supplier include the following:
 - a) Identity of general subject matter covered in manual.

- b) Identity of equipment number and Specification section.
- c. Provide each volume with title page and typed table of contents with consecutive page numbers. Place contents of entire set, identified by volume number, in each binder.
- d. Table of contents neatly typewritten, arranged in a systematic order:
 - 1) Include list of each product, indexed to content of each volume.
 - 2) Designate system or equipment for which it is intended.
 - 3) Identify each product by product name and other identifying numbers or symbols as set forth in Contract Documents.
- e. Section Dividers:
 - 1) Heavy, 80 pound cover weight, tabbed with numbered plastic index tabs.
 - 2) Fly-Leaf:
 - a) For each separate product, or each piece of operating equipment, with typed description of product and major component parts of equipment.
 - b) List with Each Product:
 - (1) Name, address, and telephone number of Subcontractor, Supplier, installer, and maintenance contractor, as appropriate.
 - (2) Identify area of responsibility of each.
 - (3) Provide local source of supply for parts and replacement.
 - c) Identity of separate structure as applicable.
- f. Assemble and bind material, as much as possible, in same order as specified in the Contract Documents.

D. Electronic Media Format:

- 1. Portable Document Format (PDF):
 - a. After all preliminary data has been found to be acceptable to Engineer, submit Operation and Maintenance data in PDF format on CD.
 - b. Files to be exact duplicates of Engineer-accepted preliminary data. Arrange by specification number and name.
 - c. Files to be fully functional and viewable in most recent version of Adobe Acrobat.

1.05 SUBMITTALS

A. Informational:

- 1. Data Outline: Submit two copies of a detailed outline of proposed organization and contents of Final Data prior to preparation of Preliminary Data.
- 2. Preliminary Data:

- a. Submit two copies for Engineer's review.
 - b. If data meets conditions of the Contract:
 - 1) One copy will be returned to Contractor.
 - 2) One copy will be forwarded to Resident Project Representative.
 - 3) One copy will be retained in Engineer's file.
 - c. If data does not meet conditions of the Contract:
 - 1) All copies will be returned to Contractor with Engineer's comments (on separate document) for revision.
 - 2) Engineer's comments will be retained in Engineer's file.
 - 3) Resubmit two copies revised in accordance with Engineer's comments.
3. Final Data: Submit two printed copies and an electronic copy in format specified herein.

1.06 DATA FOR EQUIPMENT AND SYSTEMS

A. Content for Each Unit (or Common Units) and System:

1. Product Data:
 - a. Include only those sheets that are pertinent to specific product.
 - b. Clearly annotate each sheet to:
 - 1) Identify specific product or part installed.
 - 2) Identify data applicable to installation.
 - 3) Delete references to inapplicable information.
 - c. Function, normal operating characteristics, and limiting conditions.
 - d. Performance curves, engineering data, nameplate data, and tests.
 - e. Complete nomenclature and commercial number of replaceable parts.
 - f. Original manufacturer's parts list, illustrations, detailed assembly drawings showing each part with part numbers and sequentially numbered parts list, and diagrams required for maintenance.
 - g. Spare parts ordering instructions.
 - h. Where applicable, identify installed spares and other provisions for future work (e.g., reserved panel space, unused components, wiring, terminals).
2. As-installed, color-coded piping diagrams.
3. Charts of valve tag numbers, with the location and function of each valve.
4. Drawings: Supplement product data with Drawings as necessary to clearly illustrate:
 - a. Format:
 - 1) Provide reinforced, punched, binder tab; bind in with text.
 - 2) Reduced to 8-1/2 inches by 11 inches, or 11 inches by 17 inches folded to 8-1/2 inches by 11 inches.
 - 3) Where reduction is impractical, fold and place in 8-1/2-inch by 11-inch envelopes bound in text.

- 4) Identify Specification section and product on Drawings and envelopes.
 - b. Relations of component parts of equipment and systems.
 - c. Control and flow diagrams.
 - d. Coordinate drawings with Project record documents to assure correct illustration of completed installation.
5. Instructions and Procedures: Within text, as required to supplement product data.
 - a. Format:
 - 1) Organize in consistent format under separate heading for each different procedure.
 - 2) Provide logical sequence of instructions for each procedure.
 - 3) Provide information sheet for Owner's personnel, including:
 - a) Proper procedures in event of failure.
 - b) Instances that might affect validity of guarantee or Bond.
 - b. Installation Instructions: Including alignment, adjusting, calibrating, and checking.
 - c. Operating Procedures:
 - 1) Startup, break-in, routine, and normal operating instructions.
 - 2) Test procedures and results of factory tests where required.
 - 3) Regulation, control, stopping, and emergency instructions.
 - 4) Description of operation sequence by control manufacturer.
 - 5) Shutdown instructions for both short and extended duration.
 - 6) Summer and winter operating instructions, as applicable.
 - 7) Safety precautions.
 - 8) Special operating instructions.
 - d. Maintenance and Overhaul Procedures:
 - 1) Routine maintenance.
 - 2) Guide to troubleshooting.
 - 3) Disassembly, removal, repair, reinstallation, and re-assembly.
6. Guarantee, Bond, and Service Agreement: In accordance with Section 01 77 00, Closeout Procedures.

B. Content for Each Electric or Electronic Item or System:

1. Description of Unit and Component Parts:
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data, nameplate data, and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 - d. Interconnection wiring diagrams, including control and lighting systems.
2. Circuit Directories of Panelboards:
3. Electrical service.
4. Control requirements and interfaces.
5. Communication requirements and interfaces.

6. List of electrical relay settings, and control and alarm contact settings.
7. Electrical interconnection wiring diagram, including as applicable, single-line, three-line, schematic and internal wiring, and external interconnection wiring.
8. As-installed control diagrams by control manufacturer.
9. Operating Procedures:
 - a. Routine and normal operating instructions.
 - b. Startup and shutdown sequences, normal and emergency.
 - c. Safety precautions.
 - d. Special operating instructions.
10. Maintenance Procedures:
 - a. Routine maintenance.
 - b. Guide to troubleshooting.
 - c. Adjustment and checking.
 - d. List of relay settings, control and alarm contact settings.
11. Manufacturer's printed operating and maintenance instructions.
12. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.

C. Maintenance Summary:

1. Compile individual Maintenance Summary for each applicable equipment item, respective unit or system, and for components or sub-units.
2. Format:
 - a. Use Maintenance Summary Form bound with this section or electronic facsimile of such.
 - b. Each Maintenance Summary may take as many pages as required.
 - c. Use only 8-1/2-inch by 11-inch size paper.
 - d. Complete using typewriter or electronic printing.
3. Include detailed lubrication instructions and diagrams showing points to be greased or oiled; recommend type, grade, and temperature range of lubricants and frequency of lubrication.
4. Recommended Spare Parts:
 - a. Data to be consistent with manufacturer's Bill of Materials/Parts List furnished in O&M manuals.
 - b. "Unit" is the unit of measure for ordering the part.
 - c. "Quantity" is the number of units recommended.
 - d. "Unit Cost" is the current purchase price.

1.07 DATA FOR MATERIALS AND FINISHES

A. Content for Architectural Products, Applied Materials, and Finishes:

1. Manufacturer's data, giving full information on products:
 - a. Catalog number, size, and composition.
 - b. Color and texture designations.
 - c. Information required for reordering special-manufactured products.

2. Instructions for Care and Maintenance:
 - a. Manufacturer's recommendation for types of cleaning agents and methods.
 - b. Cautions against cleaning agents and methods that are detrimental to product.
 - c. Recommended schedule for cleaning and maintenance.

B. Content for Moisture Protection and Weather Exposed Products:

1. Manufacturer's data, giving full information on products:
 - a. Applicable standards.
 - b. Chemical composition.
 - c. Details of installation.
2. Instructions for inspection, maintenance, and repair.

1.08 SUPPLEMENTS

- A. The supplements listed below, following "End of Section", are part of this Specification.
1. Forms: Maintenance Summary Form.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

MAINTENANCE SUMMARY FORM

PROJECT: _____ CONTRACT NO.: _____

1. EQUIPMENT ITEM _____

2. MANUFACTURER _____

3. EQUIPMENT/TAG NUMBER(S) _____

4. WEIGHT OF INDIVIDUAL COMPONENTS (OVER 100 POUNDS) _____

5. NAMEPLATE DATA (hp, voltage, speed, etc.) _____

6. MANUFACTURER'S LOCAL REPRESENTATIVE _____

a. Name _____ Telephone No. _____

b. Address _____

7. MAINTENANCE REQUIREMENTS

Maintenance Operation Comments	Frequency	Lubricant (If Applicable)
List briefly each maintenance operation required and refer to specific information in manufacturer's standard maintenance manual, if applicable. (Reference to manufacturer's catalog or sales literature is not acceptable.)	List required frequency of each maintenance operation.	Refer by symbol to lubricant required.

SECTION 01 91 14
TESTING, INTEGRATION, AND STARTUP

PART 1 GENERAL

1.01 STARTUP

- A. The goal of startup is to verify proper performance and operation of the Facility.
- B. Testing, integration, and startup are complex portions of the Work required for satisfactory completion and require thorough planning and proper execution.
- C. See Attachment 1, Phase 1 Commissioning Model for the Morena Pump Station startup in the context of the overall Program integration and acceptance plan.

1.02 DEFINITIONS

- A. Acceptance Testing: A contractually required, specific and measurable test, often with liquidated damages attached, to demonstrate a system or facility performs to its intended function (e.g. flow amounts, duration and quality criteria are met). A successor activity to Performance Testing. All major defects are resolved at this point.
- B. Distributed Control System Provider (DCSP): Entity who is responsible for the development and programming of the Facility DCS.
- C. Auxiliary Systems: Subsystems and systems selected by the Owner as critical to the operation and function of the Work. Auxiliary systems are more specifically identified in the Contract Documents.
- D. Commissioning:
 - 1. The disciplined and systematic process of assuring that all components, subsystems and systems of a constructed unit are designed, installed, tested and operated in conformance with the design intent, and functional intent and operational requirements of the Owner.
 - 2. This includes:
 - a. Proof testing of design intent using static check sheets, dynamic check sheets and defined procedures to ensure compliance with design drawings, data sheets and specifications.
 - b. Achieving a smooth and safe transition from an inert state to a completely tested, clean, leak tight, operable and safe unit ready for startup and performance testing.
 - c. All testing shown on Attachment 1 Commissioning Model.
- E. Components: Individual items of equipment or portions of the Work that when combined with other components make up subsystems or systems. Components may be minor items such as pressure gauges, or they may be significant items such as pump motors.

- F. Contract Documents: Construction Contract, Specifications and Drawings.
- G. Facility: The combined equipment and systems located to perform a specified function e.g. Morena Pump Station (MPS).
- H. Factory Acceptance Testing (FAT): All testing required to be conducted at the fabricator's / manufacturer's / vendor's off-site locations, witnessed or unwitnessed. Includes all such testing, regardless of the specific descriptive title used for said testing in the Contract Documents.
- I. Final Completion: Refer to the Contract Requirements and Supplementary Provisions
- J. Functional Testing: A test of a given component, subsystem or system to confirm its operation meets specifications and Contract requirements. Often a prerequisite to Performance and Acceptance Testing.
- K. Integration Period: This is the period occurring after Intermediate Substantial Completion and before Substantial Completion during which the MPS will be tested and operated as part of the overall Pure Water Program system, including the Morena Force Main and Brine/Centrates Pipeline, the NCPWF Influent Pump Station and Influent Conveyance, the NCWRP Expansion, the Metropolitan Biosolids Center Improvements, NCPWF and the North City Pure Water Pipeline, and Dechlorination Facilities.
- L. Intermediate Substantial Completion: The time at which the Project's operating facilities or systems are sufficiently complete to send screened and oxygenated wastewater flows to the NCWRP. All functional tests that can be performed with potable water shall be complete and facilities shall be fully operable to allow for a flow increase to the NCWRP for 120 days. Refer to Attachment 1 for commissioning model planned. The Contractor shall support all activities within the Integration period as described in Section 01 91 14, Testing, Integration, and Startup. Refer to Contract requirements and Supplementary Provisions.
- M. Joint Test Group (JTG): Workgroup consisting of personnel from the Engineer, Construction Manager, Owner, Contractor, and Subcontractors whose goal is to facilitate pre-startup and startup of the Facility. This work group shall also support the Integration Period testing as part of a larger work group from other Facilities.
- N. Major Equipment Systems: Systems, subsystems, or major equipment components selected by the Owner as critical to the operation and function of the Work. Major equipment systems are more specifically identified in the Contract Documents.
- O. Manufacturer's Installation Inspection: Preliminary inspection conducted by Manufacturer or Manufacturer's accepted representative to confirm proper installation of components, systems, and subsystems.

- P. Mechanical/Electrical Functional Testing: Testing performed to confirm general performance of mechanical and electrical systems. Hydrostatic leak testing of pipes is an example. Electrical testing specified in Division 26, Electrical, shall be considered Mechanical/Electrical Functional Testing.
- Q. Performance Test: A defined test of a system, systems or facility over a period of 7 days, unless otherwise specified, to demonstrate the system or facility is fully operational and meets all specifications, performance objectives and Contract requirements. Performance testing will be done with NCPWF influent (tertiary treated wastewater) pumped from the NCWRP, as defined with these Contract Documents.
- R. Staging Site Demonstration: Startup phase during which the DCSP performs an FAT to test the proper communication and action of the DCSP-developed software system. This testing will be conducted offsite.
- S. Startup: The act of starting or operating a component, subsystem or system and testing its functionality and performance against defined metrics.
- T. Subsystems: A group of related equipment that performs a defined function and is an element of a larger system.
- U. Substantial Completion: Upon satisfactory completion of the 30-Day Systemwide facility Acceptance Test, See Attachment 1 Phase 1 Commissioning Model. Refer to Contract requirements and Supplementary Provisions.
- V. Systems: A group of related components, equipment or subsystems that perform a defined function or set of functions within a facility.
- W. Training: Classroom and equipment area instruction by Manufacturer or Manufacturer accepted representative intended to educate the Owner on the proper operation and maintenance of components, systems, and subsystems.
- X. Unit Process: Portion of the facility that performs a specific process function, such as high purity oxygen, screening facilities.
- Y. Beneficial Use: Utilization of a system, unit process, or facility by the Owner. Refer to Supplemental Special Provisions for further definition and extended warranty requirements for equipment placed into Beneficial Use.

1.03 SUBMITTALS

- A. Action Submittals:
 1. Startup Personnel Qualifications: The qualifications submittal for the Startup Manager and Project Integrator shall be provided at the Preconstruction Conference.
 2. Startup Management Plan: Submitted within 60 days after Notice to Proceed.

3. Overall Facility Startup Plan.
4. Factory Acceptance Test Plans.
5. Acceptance Test Plans.
6. Startup Schedule:
 - a. Schedule shall be a detailed Oracle Primavera P6 schedule linked to the milestones and key startup activities contained in the Construction Schedule as specified in Section 01 32 00 Construction Progress Documentation.
 - b. The Startup Schedule shall include each phase of testing of for the systems defined herein.
 - c. Schedule shall be submitted in both XER and PDF format and updated monthly.
 - d. The detailed Startup Schedule shall be submitted no later than 6 months prior to the start of ORT Part 1 in the accepted Baseline Schedule, as specified in Section 01 32 00 Construction Progress Documentation.
7. Startup Results Submittal:
 - a. Include the following:
 - 1) Final minutes from all JTG meetings.
 - 2) Results documentation from all Factory Acceptance Testing.
 - 3) Completed test plans (endorsed by Construction Manager and Contractor).
 - 4) Record of all Training:
 - a) Training requests.
 - b) Agendas.
 - c) Sign in sheets.
 - d) Handouts.
 - e) Electronic copy of all training presentations.
 - 5) Record of all Manufacturer Services/Inspections.
 - 6) Record of all testing not covered above.

1.04 JOINT TEST GROUP (JTG)

A. Purpose:

1. The purpose of the JTG is to facilitate communication and collaboration between all parties required to successfully complete startup including but not limited to the following:
 - a. Prepare test plans.
 - b. Conduct testing.
 - c. Oversee testing.
 - d. Assign individual or multiple JTG personnel tasks associated with startup to be completed outside of the JTG workshops.

B. Personnel:

1. The following Owner personnel will participate in the JTG:
 - a. Engineer.
 - b. DCSP.

- c. Owner's Representatives:
 - 1) Construction representative.
 - 2) Operations representative.
 - d. Construction Manager.
 - e. Owner Startup Manager.
 - f. Others as required.
2. The Contractor shall assign the following personnel to the JTG:
- a. Contractor Startup Manager.
 - b. Project Integrator.
 - c. Electrical Subcontractor Management Representative.
 - d. Ozone Supplier Management Representative.
 - e. MF Supplier Management Representative.
 - f. RO Supplier Management Representative.
 - g. UV Advanced Oxidation Supplier Management Representative.
- C. The JTG will participate in the following meetings:
1. Startup Preparation Workshops:
 - a. Status of equipment submittals and startup plan for overall facility.
 - b. Development of team.
 - c. Frequency: Every 2 weeks.
 - d. Duration: 4 hours minimum.
 - e. Start Date: 4 weeks after Notice to Proceed.
 2. Startup Planning Workshops:
 - a. Preparation of test plans.
 - b. Review of equipment shop drawings.
 - c. Frequency: Every week.
 - d. Duration: 8 hours minimum.
 - e. Start Date: 6 months before anticipated commencement of functional testing.
 3. Factory Acceptance Test Prep Workshops:
 - a. Preparation of factory test plans.
 - b. Address scheduling.
 - c. Frequency: Once per required FAT.
 - d. Duration: 8 hours minimum.
 - e. Start Date: 2 months prior to anticipated FAT date.
 4. Pre-Startup Execution Workshops:
 - a. Finalize planning for startup activities.
 - b. Finalize test plans.
 - c. Address any supplier/manufacturer issues.
 - d. Frequency: Every week.
 - e. Duration: 8 hours minimum.
 - f. Start Date: 1 month before anticipated commencement of functional testing.
 5. Startup Execution Workshops:
 - a. Current status of testing.
 - b. Identification of specific needs.
 - c. Identification and resolution of issues.

- d. Frequency: Daily.
- e. Duration: 4 hours minimum.
- f. Start Date: Commencement of functional testing, through completion of 30-Day Facility Acceptance Testing.

D. Authority:

- 1. The Construction Manager will be the final authority on all disputes. Construction Manager’s authority is not intended to compromise or change the Contractor’s rights and responsibilities as described elsewhere in these Contract Documents.
- 2. The JTG may not independently amend or change the Contract Documents. However, the Contract Documents may be amended or changed according to the Contract Documents, based on JTG recommendations approved by the Construction Manager.

E. Contractor Participation:

- 1. The Contractor is required to participate in all JTG meetings and shall dedicate the required time and personnel to complete tasks assigned by the JTG. This shall include, but not be limited to the development of all startup and testing plans identified as being required to be led by the Contractor.
- 2. The Contractor shall include, in his lump sum bid, all costs associated with onsite and offsite testing described in these Specifications including travel, subsistence, lodging, etc.

1.05 ORGANIZATION OF STARTUP PHASES

A. The following table summarizes the various phases of startup:

Description	Duration	Preceding Constraints	Comments
Submittals	As required to meet testing schedule		
Factory Acceptance Testing	As required to meet testing schedule	Approved submittals required prior to testing.	
Staging Site Demonstration	180 days	Delivery of DCS components to DCSP staging site. Completion of all FATs.	Done by DCSP

Description	Duration	Preceding Constraints	Comments
Mechanical/Electrical Functional Testing and Equipment Testing	As required to meet testing schedule for individual unit process	Complete all FATs. Complete equipment and piping installation. Approved submittals required prior to testing (including O&Ms).	Includes hydrostatic testing
PIC Operational Readiness Test Part 1	As required to meet testing schedule	Manufacturer's installation assistance and inspection. Completion of PICS Operational Readiness Test Part 1. Completion of staging site demonstration test and loading of application software. Approved submittals required prior to testing (including O&Ms).	
PIC Operational Readiness Test Part 2	As required to meet testing schedule	Completion of PICS Operational Readiness Test Part 1. Completion of staging site demonstration test and loading of application software. Approved submittals required prior to testing (including O&Ms).	
Functional and Performance Testing on Unit Processes	As required to meet testing schedule	Completion of PIC Operational Readiness Test Part 2. Approved submittals required prior to testing (including O&Ms).	See Attachment 1 for graphical presentation

Description	Duration	Preceding Constraints	Comments
Training	As specified	Completion of all functional and performance testing.	
Facility Commissioning	As required	Completion of Functional and Performance Testing of Unit Processes and Auxiliary Systems, and Pump Station, and Training.	
Integration Period Testing and Commissioning	120 days	Intermediate Substantial Completion. Interfacing Facilities Ready to Test.	Integrating the NCWRP, NCPWF, MPS, NCPWPS and MBC facilities
Facility Acceptance Test	30 days	Completion of commissioning of the unit processes. Manufacturer's CPI. Training. Approved submittals required prior to testing (including O&Ms).	

1.06 WORK RELATED TO THE FACILITY

- A. During the period between Intermediate Substantial Completion and Substantial Completion, the Owner will conduct integration procedures associated with the Facility and its coordinated operation with NCWRP, NCPWF, NCPWPS including the Dechlorination Facility, and Metropolitan Biosolids Center, and systems being constructed by others, such as the communications and control interface and COMNET upgrade. This integration will generally consist of communications system verification and a verification that the facilities can operate as one overall system.

1.07 CONTRACTOR STARTUP PERSONNEL

- A. Contractor shall provide personnel, both supervisory and from the applicable trades, who are experienced in startup, testing, and commissioning for the execution of the work described in these Contract Documents.

- B. Startup Manager: Only assigned duties are those specifically related to planning and execution of startup activities in support of the Work. The Startup Manager shall have the necessary experience to fully understand all startup requirements and the authority to dedicate Contractor's resources as required to execute the Work.
1. The Startup Manager shall have the following minimum qualifications:
 - a. Has provided startup services for water and wastewater facilities and conveyance facilities similar to those included in the Work.
 2. The Contractor shall allocate the costs for the Startup Manager as a monthly allocation starting at the project limited NTP and terminating at Final Completion.
 3. Once the Owner and Construction Manager accept the Startup Manager, the Contractor shall not change the Startup Manager throughout the full period of performance of the Work, beginning after the limited NTP, without the express written permission of Construction Manager and Owner.
 4. The minimum scope of services to be managed and/or executed by the Startup Manager shall include the following tasks:
 - a. Formation of an onsite startup team of supervisory staff, including the Contractor's Project Integrator, qualified in each and every element of the startup process required as part of the Work. This staff shall prepare all Contractor-performed startup and testing documentation and direct the associated startup activities, including all required Contractor and Subcontractor personnel required for testing. This requirement is also applicable to all factory testing, whether witnessed by Construction Manager or not.
 - b. Complete planning, development, and where required, the preparation of all Startup and Test Plans, testing procedures, schedules, and related prerequisite, and final documentation for startup activities required by the Contract Documents. This requirement is applicable to all required startup and/or testing plans, reports, and procedures, regardless of the specific portion of the Contract Documents where they may be specified or otherwise required.
 - c. Overall coordination and scheduling of all startup and testing activities. This shall include the development of detailed startup and testing schedules, integrated with Contractor's CPM schedule. It shall also include all coordination with the Owner and Construction Manager for operation of the system to accommodate test flows and joint testing activities.
 - d. Coordination of all manufacturers' startup activities and certification of proper installation and/or function as required by the Contract Documents.
 - e. Coordination, direction, and management of the actual day-to-day testing.
 - f. Review and certify all test results. Prepare and/or compile all versions of all test reports and related submittals. Prior to being submitted to the Construction Manager, all test reports shall be certified by the

- Startup Manager that the reports and associated test results comply with the Contract Documents.
 - g. Coordinate all testing and startup with the Engineer, Construction Manager, and Owner.
 - h. Integration with the vendor packaged control systems.
- C. Project Integrator: Only assigned duties are those specifically required to plan and execute the installation, interconnection, integration, and startup of the various PICS devices, panels, components, systems, and subsystems required for the Work. The Project Integrator shall have the necessary experience to fully understand all PICS and related devices, panels, components, systems, and subsystems installation, integration, and startup requirements and the authority to dedicate Contractor's resources as required to execute the Work.
 - 1. The Project Integrator shall have the following minimum qualifications:
 - a. Has provided PICS integration services for wastewater facilities including conveyance facilities similar to those included in the Work.
 - b. The Project Integrator shall not be the same person as the System Integrator for the Instrumentation and Control system.
 - 2. The Contractor shall allocate the costs for the Project Integrator as a monthly allocation starting at the project limited NTP and terminating at Final Completion.
 - 3. Once the Owner, RPR, and the Construction Manager accept the Project Integrator, the Contractor shall not change the Project Integrator throughout the full period of performance of the Work without the express written permission of RPR, the Construction Manager and Owner.
 - 4. The minimum scope of services to be managed and/or executed by the Project Integrator shall include the following tasks:
 - a. Integration of all Process Instrumentation and Control System (PICS) components and related devices, panels, components, systems, and subsystems required to be provided as part of the Work, regardless of the actual supplier or prepackage nature of the supply.
 - b. Integration and coordination of the Process Instrumentation and Control System with all components provided as packaged systems or supplied with individual equipment suppliers.
- D. The Startup Manager and the Project Integrator may not be the same person.

1.08 THE STARTUP MANAGEMENT PLAN

- A. The Contractor Startup Manager shall conduct a startup coordination workshop and prepare and submit a Startup Management Plan that describes how Contractor will accomplish the minimum scope of services and manage the daily startup activities. The coordination workshop shall, at a minimum, include the Contractor's Startup Manager, Project Integrator, and Project Superintendent. The requirements for Startup requirements for the Work will be reviewed at the workshop. The Startup Management Plan shall be prepared immediately following the workshop and shall include a detailed description, including procedures and examples of how the Startup Team will manage the interface

between Contractor's trades, Contractor's management, Contractor's subcontractors, Contractor's PLC programmers, Construction Manager's field team, Owner, and the DCSP programming team. The workshop shall be conducted within 4 weeks of Notice to Proceed. The draft Startup Management Plan shall be completed and submitted within 4 weeks of the startup coordination workshop. The plan will be reviewed and processed for acceptance in accordance with Section 01 33 00, Submittal Procedures.

1.09 THE STARTUP AND TEST PLANS

- A. The Contractor under the guidance of the JTG will develop specific plans for the testing of all elements of the Facility. These plans shall outline the detailed sequence of activities necessary to confirm the proper operation of every component, system, and subsystem.
- B. Test plans will be prepared for each phase of startup where testing is required including, but not limited to the following:
 - 1. Factory acceptance testing.
 - 2. Staging site demonstration.
 - 3. Manufacturer's installation inspection.
 - 4. Mechanical/electrical functional testing.
 - 5. Operational Readiness Test Part 1.
 - 6. Operational Readiness Test Part 2.
 - 7. Functional and performance testing on the following unit processes shall have individual test plans for each unit process with its auxiliary systems.
 - a. Screening Facility.
 - b. High Purity Oxygen.
 - c. Influent and Overflow flow control.
 - 8. Pump Performance Testing
 - 9. Pre-Selected Equipment Permit Testing and Extended Performance Tests.
- C. Test plans will be developed as described below:
 - 1. The Overall Startup Plan shall include six main sections arranged as follows:
 - a. Overall Startup Plan Summary.
 - b. Factory Acceptance Testing.
 - c. Operational Readiness Testing.
 - d. Functional and Performance Testing.
 - e. Systemwide 120-Day Integration Period. Startup Schedule.
 - 2. The contents and requirements pertaining to each section are described below. It is expected that each section could require multiple volumes, depending on the size and complexity of the Work.
 - 3. Overall Startup Plan Summary:
 - a. The Overall Startup Plan Summary is the master startup plan document. It includes a brief summary of all testing and startup activities and provides the basic organization of the startup and testing

program. It shall be submitted in advance of any other test plans except for Factory Acceptance Test Plans as described herein.

- b. The Overall Startup Plan Summary shall include the following:
- 1) Introduction with a narrative description of the overall testing and startup program planned for implementation by the Contractor. Tables and flowcharts in addition to those described below should be included to clearly illustrate the Contractor's intent for the testing and startup program.
 - 2) List of major Acceptance Test Plan categories. Factory Acceptance Testing shall be a specific subset for each category. At a minimum, a separate acceptance test plan shall be prepared for the following four categories:
 - a) All PIC and DCS testing specified in Division 40, Process Integration, of the specifications and including all related testing referring to Division 40 from other specification sections and divisions.
 - b) All electrical testing specified in Division 26, Electrical, of the specifications and including all related testing referring to Division 26, Electrical, from other specification sections and divisions.
 - c) All hydrostatic testing of piping and appurtenances, pipelines, aqueducts, valves, water holding structures, pressure vessels, tanks, and any other component, subsystem, or system specified to be hydrostatic or pressure tested.
 - d) Unless otherwise indicated in the Contract Documents, all other testing.
- c. In addition to the breakdown listed above, the Contractor may propose to further divide, or group, the testing into categories assigned by process area or physical site delineation. However, said division or grouping must be agreed to, in writing, by the Construction Manager prior to the initial submittal of the Overall Startup Plan Summary. The Construction Manager will be the sole judge as to the acceptability of the additional division or grouping of testing proposed by the Contractor.
- 1) Complete listing of component, subsystem, and system tests within each Test Plan category. Special focus should be placed on a complete listing of tests for all major equipment items and all auxiliary systems identified in the Contract Document. In any case, all components, sub-systems, and systems and their associated testing shall be included in the listing.
 - 2) Complete listing of Factory Acceptance Testing (witnessed and unwitnessed). All specified Factory Acceptance Testing will be required to be successfully completed to achieve Substantial Completion. It may be to the Contractor's benefit to obtain concurrence on the listing of Factory Acceptance Testing early in the project. In that case, this section would simply be a copy of the material already agreed to, with any updates.

- 3) Flowchart the full testing program from Factory Acceptance Testing and initial shakedown through Acceptance Testing and ending at Substantial Completion. The flowchart shall demonstrate the precedence, or order, by which the testing will take place. The order of testing shall be such that it is consistent with the requirements of the Contract Documents.
 - 4) Provide a preliminary schedule illustrating the timeline associated with the flowchart described above. This schedule does not need to be CPM based as it will be replaced with schedules developed according to requirements stated below for the Startup Schedule.
4. Factory Acceptance Test Plan:
- a. The Factory Test Plan shall be a comprehensive description of the complete test setup, procedures, analyses, and reporting program for each factory test required for the Work. Detailed step by step procedures describing all activities in the test process shall be included for all factory tests, witnessed or unwitnessed. Unwitnessed readiness tests prior to witnessed PIC Factory Acceptance Test are exempt from this requirement. However, all other shop or factory tests, witnessed, or unwitnessed, that require testing to demonstrate compliance with the Contract Documents and require submittal of test results, must have a Factory Acceptance Test Plan accepted by the Engineer and Construction Manager at least 4 weeks prior to the test.
 - b. At a minimum, the following shall be included for each Factory Acceptance Test Plan:
 - 1) Identification information for the component, subsystem, or system being tested. All applicable tag numbers shall be included.
 - 2) A narrative description of the purpose and goals of the test.
 - 3) Pass/Fail criteria.
 - 4) A listing and copy of all pertinent reference documents (Contract Documents and industry standards or specifications applicable to the testing).
 - 5) Complete description, including drawings, for all test stands and/or test apparatuses.
 - 6) Credentials of test personnel.
 - 7) Descriptions of all test equipment.
 - 8) Descriptions and product information, including calibration certificates, for all test instruments.
 - 9) Step-by-step detailed procedures of how the test will be conducted. The level of detail shall be sufficient for any witness with a rudimentary technical aptitude to be able to follow the steps and develop confidence that the tests were being performed as planned. All steps are significant, and all steps shall be included in the procedures.
 - 10) Copies of the actual data logs and/or data recording forms that will be used for the test.
 - 11) A complete disclosure of all calculation methodologies.

- 12) Sample computations or analyses with results in the same format as the final report. This item is intended to demonstrate how data collected will be used to generate final results. A sample shall be included for each type of computation required for the test and analysis of results.
 - 13) A detailed outline of the final factory testing report.
- c. Each factory test shall be described separately. Factory Acceptance Test Plans are the only portion of the Startup and Test Plans that will be accepted prior to acceptance of the Overall Startup Plan Summary. Also, Factory Acceptance Test Plans will be allowed to be submitted and reviewed individually. However, the Overall Startup Plan Summary is required to summarize the factory testing program and all submittal numbers for individually submitted Factory Acceptance Test Plans shall be accurately accounted for in that document.
 - d. This section is not intended to supersede the specific requirements for PIC/DCS Factory Acceptance Tests (FATs) described for the Work. However, Factory Acceptance Test Plans shall be provided for the PIC/DCS FATs in accordance with these requirements. In the case of conflict, the specific testing requirements of the FATs in the PIC/DCS specification sections shall prevail. All other Factory Acceptance Testing Plans shall strictly comply with this section unless otherwise approved by the Construction Manager.
- D. Contractor shall execute these test plans with the witnessing of the Construction Manager and/or Engineer and/or Owner.
- E. For startup and testing purposes, the following designations are made:
1. Main Unit Processes:
 - a. High Purity Oxygen.
 - b. Screening Facility.
 - c. Influent and Overflow Sewer System.
 - d. DCS/Control:
 - 1) DCS with UPS.
 - 2) Instruments.
 - 3) Interconnection and control cables/wiring.
 - 4) Appurtenant communication and interconnection devices and equipment.
 - 5) Fiber Optic Communications Systems.
 2. Auxiliary Systems:
 - a. Main Piping:
 - 1) Associated main discharge pipe valves and piping out to NCWRP, and other facility interfaces
 - 2) Yard piping.
 - 3) Appurtenant instruments, devices, valves, and piping.
 - b. Building Systems (all structures, as applicable):
 - 1) Bridge cranes.

- 2) Hoists.
 - 3) HVAC.
 - 4) Potable water.
 - 5) Non-potable utility water.
 - 6) Lighting.
 - 7) Sump pumps.
 - 8) Miscellaneous instruments and devices (i.e., flood switches).
 - c. Corrosion Control: Coating materials.
 - d. Landscaping:
 - 1) Controllers.
 - 2) Appurtenant instruments, devices, valves, sprinklers, and piping.
 - e. Security Systems:
 - 1) Access control devices.
 - 2) Cameras.
 - 3) Door and Hatch Switches
 - 4) Other security devices.
 - f. Fire Protection:
 - 1) Automatic call systems.
 - 2) Detection devices.
 - 3) Fire protection devices.
- F. Contractor shall submit the completed test reports as part of the Startup Results Submittal.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL STARTUP AND TESTING REQUIREMENTS

- A. Contractor is responsible for the complete testing, check out, startup, and commissioning of all elements of the Facility. Verify these activities through daily inspection reports, test records/reports, onsite vendor certifications, specified testing, and by other appropriate means. Startup and Testing Plans and Test Reports shall include specific language to demonstrate that the requirements stated herein are planned, executed, and accomplished. The requirements below are complementary to those indicated elsewhere in the Contract Documents.
- B. Engineer and Construction Manager shall be solely responsible for determining the party responsible for conducting any and all corrective actions and for determining the party responsible for any and all delays.
- C. Facility Startup Meetings:
 - 1. Schedule and attend a minimum of twenty facility startup meetings. The first of such meetings shall be held prior to submitting Facility Startup Plan and shall include preliminary discussions regarding such plan.

2. Agenda items shall include, but not limited to, content of Facility Startup Plan, coordination needed between various parties in attendance, and potential problems associated with startup.
3. Attendees will include:
 - a. Contractor.
 - b. Contractor's designated quality control representative.
 - c. Subcontractors and equipment manufacturer's representatives whom Contractor deems to be directly involved in facility startup.
 - d. Construction Manager.
 - e. Engineer's Representative.
 - f. Owner's operational personnel.
 - g. Others as required by Contract Documents or as deemed necessary by Contractor or City.
- D. Provide temporary valves, gauges, piping, test equipment and other materials and equipment required for testing and startup.
- E. Owner will:
 1. Provide water, power, chemicals, and other items as required for startup, unless otherwise indicated.
 2. Operate process units and facility with support of Contractor.
 3. Provide labor and materials as required for laboratory analyses.

3.02 FACTORY ACCEPTANCE TESTING

- A. Contractor shall coordinate the timing and location of all Factory Acceptance Testing (FAT) including, but not limited to the following items:
 1. High Purity Oxygen
 2. Screens
 3. Vertical Turbine Pumps
 4. Any other systems containing PLC's or complex control panels as identified by the Construction Manager.
- B. The JTG will prepare the test plans for each FAT or review manufacturer standard test plans in accordance with these Contract Documents. The Contractor's Startup Manager shall be the lead representative for the development of these test plans.
- C. The following Contractor personnel are required to attend all FATs:
 1. Startup Manager.
 2. Project Integrator.
 3. Manufacturer Representative(s).

3.03 STAGING SITE DEMONSTRATION

- A. The DCSP shall provide the required items for the development of the application software programming.

3.04 MANUFACTURER'S INSTALLATION INSPECTION

- A. When Contractor has completed installation of components, systems, or subsystems, they shall schedule a manufacturer inspection. This manufacturer or approved manufacturer's representative shall certify that the component, system, or subsystem is properly installed and that testing of the component, system, or subsystem may commence.
- B. Preparation:
1. Complete installation before testing.
 2. Furnish qualified manufacturers' representatives, when required by individual Specification sections.
 3. Obtain and submit from equipment manufacturer's representative Manufacturer's Certificate of Proper Installation Form.
 4. Cleaning and Checking:
 - a. Prior to beginning functional testing:
 - 1) Calibrate testing equipment in accordance with manufacturer's instructions.
 - 2) Inspect and clean equipment, devices, connected piping, and structures to ensure they are free of foreign material.
 - 3) Lubricate equipment in accordance with manufacturer's instructions.
 - 4) Turn rotating equipment by hand when possible to confirm that equipment is not bound.
 - 5) Open and close valves by hand and operate other devices to check for binding, interference, or improper functioning.
 - 6) Check power supply to electric-powered equipment for correct voltage.
 - 7) Adjust clearances and torque.
 - 8) Test piping for leaks.
 5. Ready-to-test determination will be by Engineer and Construction Manager based at least on the following:
 - a. Acceptable Operation and Maintenance Data.
 - b. Notification by Contractor of equipment readiness for testing.
 - c. Receipt of Manufacturer's Certificate of Proper Installation, if so specified.
 - d. Adequate completion of work adjacent to, or interfacing with, equipment to be tested, including Membrane Equipment System.
 - e. Availability and acceptability of manufacturer's representative, when specified, to assist in testing of respective equipment.
 - f. Satisfactory fulfillment of other specified manufacturer's responsibilities.
 - g. Equipment and electrical tagging complete.
 - h. Delivery of all spare parts and special tools.

3.05 MECHANICAL/ELECTRICAL FUNCTIONAL TESTING

- A. After each mechanical system is completely installed, the Contractor shall confirm proper installation according to these Contract Documents. Mechanical system testing shall include, but not be limited to the following system types:
 - 1. Piping (buried and exposed).
 - 2. HVAC systems.
 - 3. Freestanding tanks.
 - 4. Pumps, Motors, and Drives
- B. After the complete installation of electrical systems (or portions thereof), the Contractor shall conduct all testing, including the independent electrical testing, as specified in Division 26, Electrical.

3.06 OPERATIONAL READINESS TEST PART 1

- A. This work shall consist of manual verification of controls, verification of instrument calibration, and the completion of all loop checks.
- B. The Operational Readiness Test Part 1 shall be performed by the PIC Integrator to test and document the PIC, excluding DCSP provided applications software, is ready for operation.

3.07 OPERATIONAL READINESS TEST PART 2

- A. The Operational Readiness Test shall be a coordinated effort between the Contractor, PIC System Integrator, and DCSP to confirm the PIC, including the applications software is ready for operation. This testing is described in Division 40, Process Interconnections.

3.08 FUNCTIONAL TESTING ON UNIT PROCESSES

- A. Functional Testing shall include successful completion of all specified testing and related work required by the Contract Documents. Successful Functional Testing will demonstrate that all portions of the unit processes or auxiliary systems are functional, operational, installed as specified, and perform their intended function.
- B. Demonstration of the ability of all portions of the facilities to successfully operate, as specified, over their full range of capacity or capability is required as part of Functional Testing. Functional Testing shall include all balancing, adjustments, specified tests (both factory and field), tuning, and startup activities not included in Performance Testing.
- C. Functional testing shall be performed using the process flow stream indicated in Attachment 1.
- D. Functional Testing shall include testing of all specified shutdown conditions, failure conditions, pumping station power fail and restart, bypass conditions, and failure resets. Functional Testing shall include all equipment testing for operating

parameters. Functional Testing shall not be considered complete until all testing produces successful results and all documentation of tests and all manufacturer's certifications required by the Contract Documents are submitted and accepted by the Construction Manager. Functional Testing shall be successfully completed prior to conducting and Performance Testing or Facility Commissioning.

- E. Equipment Testing shall be conducted as part of Functional Testing.
 - 1. Furnish the services of an experienced and authorized representative of the manufacturer or supplier of each item of equipment indicated in the equipment schedules (excluding manually-operated valves smaller than 24 inches in size, injectors, tanks, batch-type disc meters, rotameters, and other minor items of equipment specifically exempted by the Engineer or Construction Manager in writing), who shall visit the Site of the Work and inspect, check, adjust if necessary, and approve the equipment installation. In each case, arrange to have the supplier or manufacturer's representative revisit the Site as often as necessary until any and all trouble is corrected, and the equipment installation and operation are satisfactory to the Construction Manager.
 - 2. Contractor shall require that each manufacturer's representative furnish to the Construction Manager a written report addressed to the City certifying that the equipment has been properly installed and lubricated, is in accurate alignment, is free from any undue stress imposed by connecting piping or anchor bolts and has been operated satisfactorily over its full range of capability and under full-load conditions.
 - 3. Contractor shall require that the electrical and/or instrumentation subcontractor and the adjustable speed drive supplier furnish a written and signed report to the Construction Manager certifying that the motor control logic for the equipment items that reside in motor control centers, control panels, control boards, microprocessors, computers, and the like furnished by the electrical and/or instrumentation Subcontractor have been properly tested and calibrated. The report shall certify that the control logic for equipment startup, shutdown, sequencing, resets, interlocks, and emergency shutdown has been tested and is properly operating. The Contractor shall also sign said certification.

3.09 EQUIPMENT PERFORMANCE TESTING

- A. Testing specified within specific equipment specifications to verify performance requirements of a piece of equipment.
- B. This testing shall be performed by the equipment supplier with support from the Contractor.
- C. The method for testing to validate the performance requirements shall be provided in submitted and approved test plan submittals.

3.10 SYSTEM PERFORMANCE TESTING

- A. Testing of the defined main unit process systems over the specified period of time to demonstrate that the unit process is fully operation and meets all specifications, performance objectives and Contract requirements.
- B. Complete the performance testing of each upstream unit process prior to performance testing of a downstream unit process in order to provide each unit process with the required influent water quality conditions for operation.
- C. Submit a performance testing plan that incorporates the sequences and water supplies shown in Attachment 1 and provide temporary connections as required for the testing operations indicated.
- D. Each unit process system shall continuously meet performance requirements specified and shall operate without fault, failure, or defect for a continuous period.
 - 1. Individual equipment/system failures that are corrected within 24 hours and do not prevent the entire process from continuously satisfying the established operational requirements shall not require the consecutive-day test to be restarted unless the failure recurs.
 - 2. Restart the consecutive test period for any of the following conditions:
 - a. Any failure of the complete unit process system to meet operational requirements.
 - b. When malfunctions or deficiencies cause shutdown or partial operation of the unit process system.
 - c. Any individual equipment/system failure that meets any of the following conditions:
 - 1) Requires more than 24 hours to correct.
 - 2) Recurs within the 24-hour correction period requiring further correction.
 - d. Immediately correct defects in material, workmanship, or equipment/system which became evident during Performance Testing.
- E. Performance Testing Requirements and Durations.
 - 1. Conduct tests as specified in this Section and as required in the process startup specification sections for each main unit process system. As indicated in Attachment 1, unless otherwise approved by the Construction Manager, performance testing will commence upon completion of the increase of flow to the NCWRP.
 - 2. Main Unit Process Tests. – 7 continuous days
 - 3. The specified test duration represents the continuous operation of the system.
- F. Temporary Facilities.
 - 1. Install temporary piping, valves, hoses, supports and materials as required for testing.

2. Permanent facilities use potable water for various processes,

3.11 FACILITY COMMISSIONING

A. Facility Commissioning Testing:

1. The disciplined and systematic process of assuring that all components, subsystems and systems of a constructed unit are designed, installed, tested and operated in conformance with the design intent, and functional intent and operational requirements of the Owner.
2. Notify Construction Manager, Engineer and Owner in writing at least 10 days prior to scheduled date of test.
3. Commissioning shall not commence until equipment has been accepted by Construction Manager and Engineer as having satisfied performance test requirements specified.
4. Type of fluid, gas, or solid for testing shall be as specified.
5. Unless otherwise indicated, furnish labor, materials, and supplies for conducting the test and taking samples and performance measurements.
6. Prepare Test Reports summarizing test method and results.
7. When, in Construction Manager's and Engineer's opinion, the integrated facility operates as specified and is accepted as to conforming to Contract requirements. Such acceptance will be evidenced by Construction Manager's and Engineer's signature on Facility Commissioning Report.

3.12 TRAINING

- A. All components, systems, or subsystems require separate training by the manufacturer.
- B. Training for each component, system, or subsystem shall be a minimum of 4 hours if no specific requirements are described in the individual specification sections.
- C. All training shall be requested at least 14 days in advance of proposed training date.
 1. Proposed training shall be requested by the Contractor in an acceptable format including the following information as a minimum:
 - a. Description of training.
 - b. Name and contact information of trainer.
 - c. Location of training.
 - d. Proposed date.
 - e. Alternative dates (if applicable).
 - f. Proposed start time.
 - g. Proposed duration.
 - h. Proposed detailed agenda including topics, times, breaks, etc.
- D. All training shall be scheduled through the Construction Manager.

- E. If suitable training facilities are not available at the Facility, Contractor shall arrange and pay for training offsite.

3.13 INTEGRATION PERIOD TESTING

- A. A 120-Day time period commencing approximately 120 days after Intermediate Substantial Completion during which the overall Pure Water Program system will be tested and operated, including the Morena Conveyance, the NCWRP Expansion, NCPWF Influent Pump Station and Conveyance, NCPWF the Metropolitan Biosolids Center Improvements, the NCPW Pump Station and the NCPWPL, and Dechlorination Facilities. The project milestone for the commencement of the 120 Day Integration Period is 120 days after Intermediate Substantial Completion. The overall logic of the 120-Day Integration Period is shown on Attachment 1 – Phase 1 Commissioning Model.
- B. The testing during this period shall be led by the Construction Manager (CM). The JTG shall support the CM in the development of the test plans and in the Integration Period testing process.
- C. The costs for the support during the Integration Period shall be covered under a lump sum Bid Item
- D. Successful completion of the Integration Period testing shall be a prerequisite to Substantial Completion.
- E. The Contractor is advised that the entire time between Intermediate Substantial Completion and Substantial Completion will be considered the Integration Period, even though the NCPWF Acceptance Test is not expected to be conducted until sometime during the later portion of the period. All Work applicable to the period between Intermediate Substantial Completion and Substantial Completion shall apply to all activities conducted during that period whether specifically designated for any particular activity or not.
- F. The Contractor shall provide personnel on a 3-shift, 24-hour per day basis to maintain the Work as directed by the Construction Manager during the Integration Period. The Contractor shall provide a minimum of 2 persons (actual distribution to be as directed by the Construction Manager) for each 8-hour shift. This coverage shall be for 24 hours per day, 7 days per week for the full duration of the period unless otherwise designated by the Construction Manager. Personnel shall be properly trained, experienced, and qualified to maintain the Work. The Contractor shall submit credentials of said personnel demonstrating proper training and qualifications. The Construction Manager shall be the sole judge as to the suitability of the personnel to be provided.
- G. An estimated quantity of 5760 hours has been allocated for the designated maintenance personnel during the Integration Period at the hourly rate of the Contractor's support staff. Time paid for these maintenance personnel will be verified and approved by the Construction Manager.

- H. Construction Manager may elect to increase or decrease the number of maintenance personnel to be provided at any time during the Integration Period. Any allowance hours not used by the Contractor due to a reduction in the number of personnel will be deducted from the total allowance amount. There shall be no damages for any lost compensation due to reduction of the number of allowance hours actually used during the Integration Period.
- I. Contractor shall maintain the Work as directed by the Construction Manager. Flow rates, delivery locations, equipment used, and other related operational aspects of the system shall be closely coordinated with the Construction Manager and the City.
- J. Contractor shall keep on 24-hour standby and provide all crews, materials, and equipment required to repair, replace adjust, balance, modify and provide other services as may be required to immediately correct all failures or malfunctions of any kind.
- K. In addition to maintenance personnel, Contractor shall keep on standby and provide technicians who were actually involved in the installation of the local fiber optic/DCS network, serial links, instruments, and all control wiring at the various facilities included in the Work. A minimum of two technicians shall be onsite 8 hours per day, 6 days per week, during the Integration Period and on call 24 hours per day, 7 days per week. All technicians used during the Period shall have a thorough understanding of the system and be capable of taking corrective action as may be needed.
- L. Authorized representatives of equipment suppliers or manufacturers shall certify that all corrective actions for all defects, malfunctions, faulty equipment operation, calibration, adjustment, or related flaws are complete and acceptable.

3.14 FACILITY ACCEPTANCE TEST

- A. The Facility Acceptance Test, commencing immediately upon completion of the 120-Day Integration Period as shown on Attachment 1, shall be a 30-day operational run of the completed systems demonstrating that all portions of the facility operate continuously as intended.
- B. All aspects of the Work and all Project facilities must be functional and operate in automatic mode 24 hours per day, 7 days per week during the acceptance test at varying flow rates established by the Construction Manager.
- C. Unless indicated otherwise, if any item fails or malfunctions during the test, the item shall be repaired, and the test restarted at time zero with no credit given for the operating time before the aforementioned failure or malfunction. Malfunctions meeting all of the following conditions, in the opinion of the Owner/Construction Manager, will not be considered grounds for restarting the test at time zero:

1. Malfunctions that do not cause any interruption of the continuous operation of any other components, subsystems, systems, and equipment during the acceptance test.
 2. Malfunctions that are corrected without causing or requiring any components, subsystems, systems, and equipment to cease operations during the acceptance.
 3. Malfunctions that are corrected properly and permanently, in the opinion of the Owner and Construction Manager, within 4 hours of the time the malfunction is detected (the 4-hour period includes the time required to locate the cause of the malfunction and shall begin upon Contractor's notification from the Construction Manager that a malfunction exists and shall end when the item is corrected and the system is successfully placed back into operation).
- D. Time lost during the test for equipment repairs, wiring corrections, control point settings, or other reasons that are not determined by the Construction Manager to be grounds to restart the test shall be justifiable cause for extending the test duration by an amount of time equal to the time required to repair the problems.
- E. Operation of the system for the acceptance test shall be conducted on a schedule or plan of operations developed by the JTG and supported by Contractor as specified. The Contractor shall provide personnel to operate the Work and support said testing activities to be performed jointly with the Construction Manager in accordance with a test plan prepared by the JTG.
- F. During the test, furnish the services of authorized representatives of the manufacturers, in addition to those services required in support of other testing, as necessary, to correct faulty equipment operation, calibration, adjustment, or related flaws.
- G. Contractor's acceptance test personnel shall include qualified representatives for the electrical and instrumentation crews as indicated for Acceptance Testing.
- H. The Contractor's warrantee period.

3.15 WITNESSING AND SUPERINTENDENCE

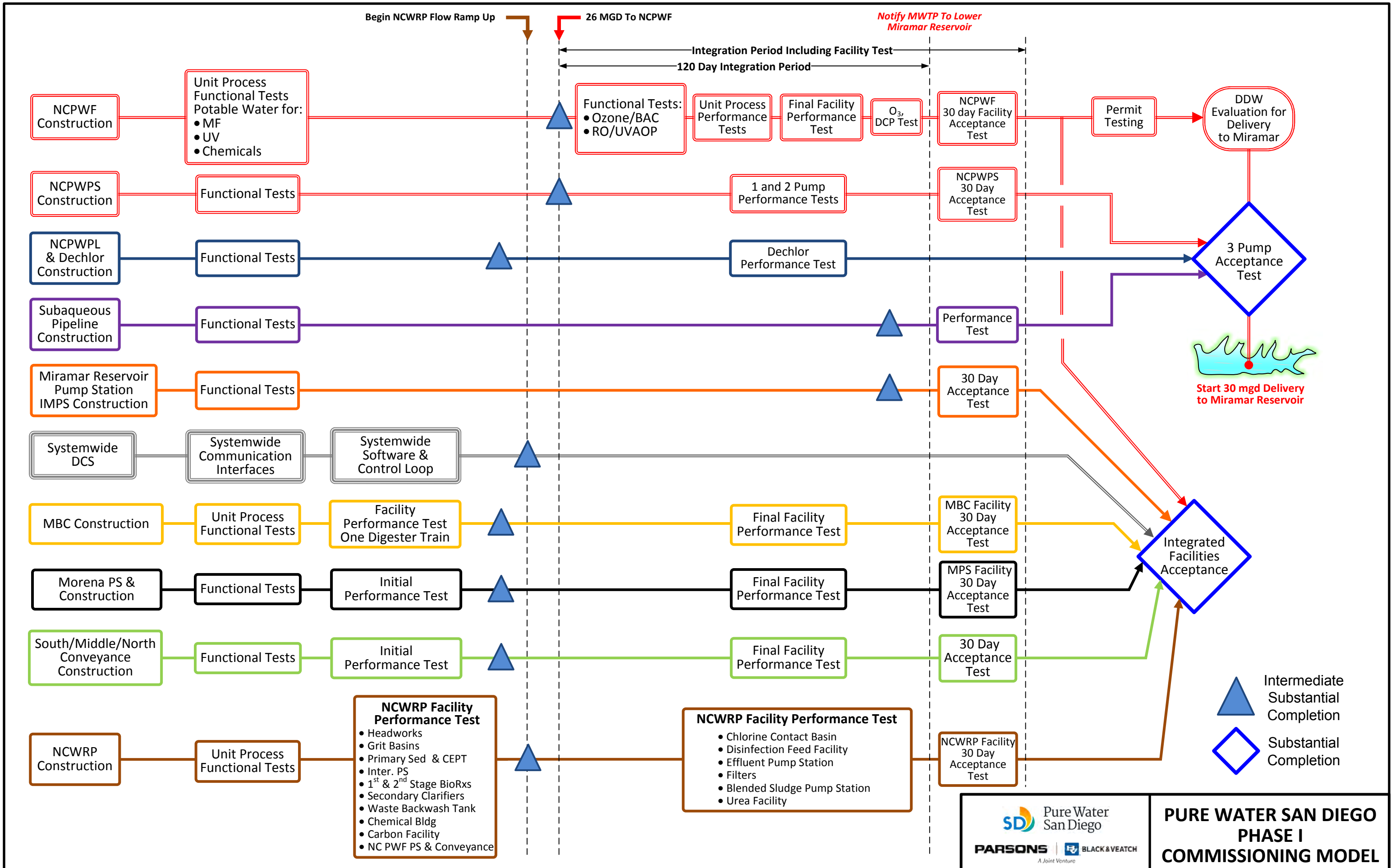
- A. The Engineer, Owner, Construction Manager, and others as necessary shall be allowed to witness all testing conducted during any phase of startup.
- B. The Contractor shall maintain overall superintendence of the Work during all phases of startup.
- C. The Contractor shall promptly and permanently repair damage to any portion of the Work during startup and testing.
 1. All repair work shall be performed by the manufacturer or with manufacturer's approved published methods.

- D. The Contractor shall perform all scheduled maintenance in strict compliance with manufacturers' published procedures and with products acceptable to manufacturers.
- E. Authorized representatives of equipment suppliers or manufacturers shall certify that all corrective actions for all defects, malfunctions, faulty equipment operation, calibration, adjustment, or related flaws are complete and acceptable.
- F. The Contractor shall keep on 24-hour local standby and provide all crews, materials, and equipment required to repair, replace adjust, balance, modify and provide other services as may be required to immediately correct all failures or malfunctions of any kind.

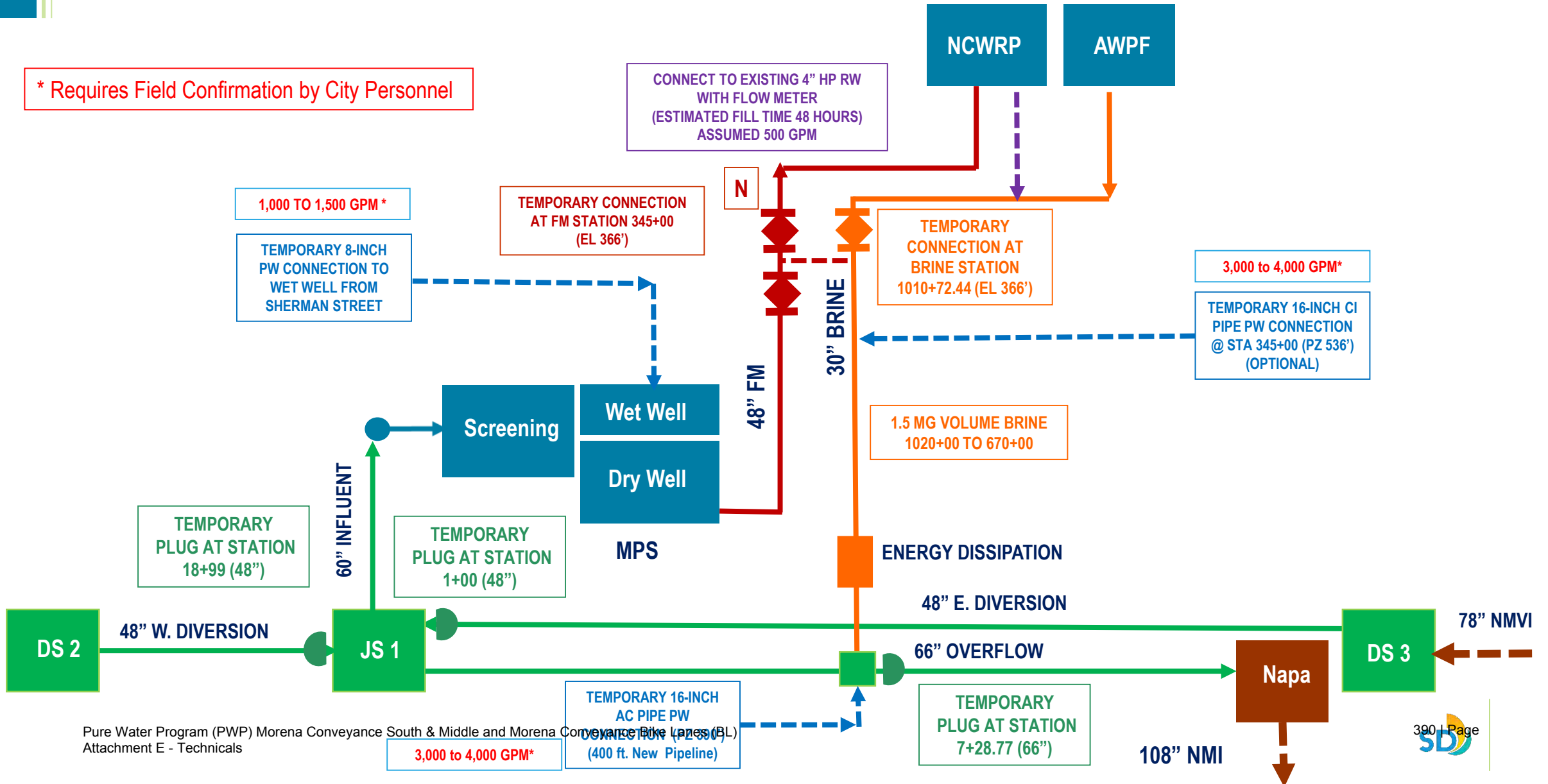
3.16 SUPPLEMENT

- A. The supplement listed below, following "End of Section," is part of this Specification.
 - 1. Attachment 1, Phase 1 Commissioning Model

END OF SECTION



PROPOSED MPS TESTING SYSTEM SCHEMATIC



SECTION 26 05 33 RACEWAY AND BOXES

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards that shall be complied with for work in this section:
1. American Association of State Highway and Transportation Officials (AASHTO): HB, Standard Specifications for Highway Bridges.
 2. ASTM International (ASTM):
 - a. A123/123M, Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.
 - b. A167, Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
 - c. A240/A240M, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
 - d. C857, Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures.
 - e. D149, Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies.
 3. Telecommunications Industry Association (TIA): 569B, Commercial Building Standard for Telecommunications Pathways and Spaces.
 4. National Electrical Contractor's Association, Inc. (NECA): Installation standards.
 5. National Electrical Manufacturers Association (NEMA):
 - a. 250, Enclosures for Electrical Equipment (1000 Volts Maximum).
 - b. C80.1, Electrical Rigid Steel Conduit (ERSC).
 - c. C80.3, Steel Electrical Metallic Tubing (EMT).
 - d. C80.5, Electrical Rigid Aluminum Conduit (ERAC).
 - e. C80.6, Electrical Intermediate Metal Conduit (EIMC).
 - f. RN 1, Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
 - g. TC 2, Electrical Polyvinyl Chloride (PVC) Conduit.
 - h. TC 3, Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
 - i. TC 6, Polyvinyl Chloride (PVC) Plastic Utilities Duct for Underground Installation.
 - j. TC 14, Reinforced Thermosetting Resin Conduit (RTRC) and Fittings.
 6. National Fire Protection Association (NFPA): 70, National Electrical Code (NEC).
 7. Underwriters Laboratories Inc. (UL):

- a. 1, Standard for Safety for Flexible Metal Conduit.
- b. 5, Standard for Safety for Surface Metal Raceways and Fittings.
- c. 6, Standard for Safety for Electrical Rigid Metal Conduit – Steel. d. 6A, Standard for Safety for Electrical Rigid Metal Conduit – Aluminum, Red Brass and Stainless.
- e. 360, Standard for Safety for Liquid-Tight Flexible Steel Conduit.
- f. 514B, Standard for Safety for Conduit, Tubing, and Cable Fittings.
- g. 651, Standard for Safety for Schedule 40 and 80 Rigid PVC Conduit and Fittings.
- h. 651A, Standard for Safety for Type EB and A Rigid PVC Conduit and HDPE Conduit.
- i. 797, Standard for Safety for Electrical Metallic Tubing – Steel.
- j. 870, Standard for Safety for Wireways, Auxiliary Gutters, and Associated Fittings.
- k. 1242, Standard for Safety for Electrical Intermediate Metal Conduit – Steel.
- l. 1660, Standard for Safety for Liquid-Tight Flexible Nonmetallic Conduit.
- m. 1684, Standard for Safety for Reinforced Thermosetting Resin Conduit (RTRC) and Fittings.
- n. 2024, Standard for Safety for Optical Fiber and Communication Cable Raceway.

1.02 SUBMITTALS

A. Action Submittals:

- 1. Manufacturer’s Literature:
 - a. Rigid galvanized steel conduit.
 - b. Intermediate metal conduit.
 - c. Electric metallic tubing.
 - d. Rigid aluminum conduit.
 - e. PVC Schedule 40 conduit.
 - f. PVC Schedule 80 conduit.
 - g. PVC-coated rigid galvanized steel conduit.
 - h. Flexible metal, liquid-tight conduit.
 - i. Flexible metal, nonliquid-tight conduit.
 - j. Conduit fittings.
 - k. Wireways.
 - l. Surface metal raceway.
 - m. Device boxes for use in hazardous areas.
 - n. Junction and pull boxes used at or below grade.
 - o. Large junction and pull boxes.
 - p. Terminal junction boxes.

2. Precast Handholes:
 - a. Dimensional drawings and descriptive literature.
 - b. Traffic loading calculations.
 - c. Accessory information.
3. Equipment and machinery proposed for bending metal conduit.
4. Method for bending PVC conduit less than 30 degrees.
5. Seismic anchorage and bracing drawings and cut sheets
6. Conduit Layout:
 - a. Provide drawings for underground and concealed conduits including, but not limited to ductbanks, under floor slabs, concealed in floor slabs, and concealed in walls.
 - b. Provide plan and section showing arrangement and location of conduit and duct bank required for:
 - 1) Low and medium voltage feeder and branch circuits.
 - 2) Instrumentation and control systems.
 - 3) Communications systems.
 - 4) Empty conduit for future use.
 - c. Reproducible; scale not greater than 1 inch equals 20 feet.

B. Informational Submittals:

1. Seismic anchorage and bracing calculations
2. Component and attachment testing seismic certificate of compliance
3. Manufacturer's certification of training for PVC-coated rigid galvanized steel conduit installer.

1.03 QUALITY ASSURANCE

A. Authority Having Jurisdiction (AHJ):

1. Provide the Work in accordance with NFPA 70, National Electrical Code (NEC). Where required by the AHJ, material and equipment shall be labeled or listed by a nationally recognized testing laboratory or other organization acceptable to the AHJ in order to provide a basis for approval under NEC.
2. Materials and equipment manufactured within scope of standards published by Underwriters Laboratories, Inc. shall conform to those standards and shall have an applied UL listing mark.

B. PVC-Coated, Rigid Galvanized Steel Conduit Installer: Certified by conduit manufacturer as having received minimum 2 hours of training on installation procedures.

PART 2 PRODUCTS

2.01 CONDUIT AND TUBING

- A. Rigid Galvanized Steel Conduit (RGS):
 - 1. Meet requirements of NEMA C80.1 and UL 6.
 - 2. Material: Hot-dip galvanized with chromated protective layer.
- B. Intermediate Metal Conduit (IMC):
 - 1. Meet requirements of NEMA C80.6 and UL 1242.
 - 2. Material: Hot-dip galvanized with chromated and lacquered protective layer.
- C. Electric Metallic Tubing (EMT):
 - 1. Meet requirements of NEMA C80.3 and UL 797.
 - 2. Material: Hot-dip galvanized with chromated and lacquered protective layer.
- D. Rigid Aluminum Conduit:
 - 1. Meet requirements of NEMA C80.5 and UL 6A.
 - 2. Material: Type 6063, copper-free aluminum alloy.
- E. PVC Schedule 40 Conduit:
 - 1. Meet requirements of NEMA TC 2 and UL 651.
 - 2. UL listed for concrete encasement, underground direct burial, concealed or direct sunlight exposure, and 90 degrees C insulated conductors.
- F. PVC Schedule 80 Conduit:
 - 1. Meet requirements of NEMA TC 2 and UL 651.
 - 2. UL listed for concrete encasement, underground direct burial, concealed or direct sunlight exposure, and 90 degrees C insulated conductors.
- G. Fiberglass Conduit:
 - 1. Meet requirements of NEMA TC 14 and UL 1684.
 - 2. Winding: Single circuit with angle as close to 54.75 as possible.
 - 3. Resin System: Epoxy based using and anhydride curing agent.
 - 4. Use carbon black as ultraviolet inhibitor.
 - 5. Toxicity: Conduit shall not contain compounds that can release halogens in more than trace amounts when burning.

6. Dielectric Strength: Exceed 400 volts per mil when tested in accordance with ASTM D149.
7. Jointing System: Two-part epoxy adhesive supplied by conduit manufacturer.
8. Manufacturers:
 - a. Champion Fiberglass.
 - b. Osburn Associates.
 - c. FRE Composites, Inc.
 - d. Or approved equal

H. PVC-Coated Rigid Galvanized Steel Conduit:

1. Meet requirements of NEMA RN 1 and ETL.
2. Material:
 - a. Meet requirements of NEMA C80.1 and UL 6.
 - b. Exterior Finish: PVC coating, 40-mil nominal thickness; bond to metal shall have tensile strength greater than PVC.
 - c. Interior finish: Urethane coating, 2-mil nominal thickness.
3. Threads: Hot-dipped galvanized and factory coated with urethane.
4. Bendable without damage to interior or exterior coating.

I. Flexible Metal, Liquid-Tight Conduit:

1. UL 360 listed for 105 degrees C insulated conductors.
2. Material: Galvanized steel with extruded PVC jacket.

J. Flexible Metal, Nonliquid-Tight Conduit:

1. Meet requirements of UL 1.
2. Material: Galvanized steel.

K. Innerduct:

1. Resistant to spread of fire, per requirements of UL 2024.
2. Smooth or corrugated HDPE.
3. Textile Manufacturer: Maxcell or approved equal.

2.02 FITTINGS

A. Rigid Galvanized Steel and Intermediate Metal Conduit:

1. General:
 - a. Meet requirements of UL 514B.
 - b. Type: Threaded, galvanized. Set screw and threadless compression fittings not permitted.
2. Bushing:
 - a. Material: Malleable iron with integral insulated throat, rated for 150 degrees C.
 - b. Manufacturers and Products:

- 1) Appleton; Series BU-I.
 - 2) O-Z/Gedney; Type HB.
 - 3) Or approved equal
3. Grounding Bushing:
 - a. Material: Malleable iron with integral insulated throat rated for 150 degrees C, with solderless lugs.
 - b. Manufacturers and Products:
 - 1) Appleton; Series GIB.
 - 2) O-Z/Gedney; Type HBLG.
 - 3) Or approved equal
4. Conduit Hub:
 - a. Material: Malleable iron with insulated throat with bonding screw.
 - b. UL listed for use in wet locations.
 - c. Manufacturers and Products:
 - 1) Appleton, Series HUB-B.
 - 2) O-Z/Gedney; Series CH.
 - 3) Meyers; ST Series.
 - 4) Or approved equal
5. Conduit Bodies:
 - a. Sized as required by NFPA 70.
 - b. Manufacturers and Products (For Normal Conditions):
 - 1) Appleton; Form 35 threaded unilets.
 - 2) Crouse-Hinds; Form 7 or Form 8 threaded condulets.
 - 3) Killark; Series O electrolets.
 - 4) Thomas & Betts; Form 7 or Form 8.
 - 5) Or approved equal
 - c. Manufacturers (For Hazardous Locations):
 - 1) Appleton.
 - 2) Crouse-Hinds.
 - 3) Killark.
 - 4) Or approved equal
6. Couplings: As supplied by conduit manufacturer.
7. Unions:
 - a. Concrete tight, hot-dip galvanized malleable iron.
 - b. Manufacturers and Products:
 - 1) Appleton; Series SCC bolt-on coupling or Series EC three-piece union.
 - 2) O-Z/Gedney; Type SSP split coupling or Type 4 Series, three-piece coupling.
 - 3) Or approved equal
8. Conduit Sealing Fitting:
 - a. Manufacturers and Products:
 - 1) Appleton; Type EYF, EYM, or ESU.
 - 2) Crouse-Hinds; Type EYS or EZS.
 - 3) Killark; Type EY or Type EYS.
 - 4) Or approved equal
9. Drain Seal:
 - a. Manufacturers and Products:
 - 1) Appleton; Type EYD.

- 2) Crouse-Hinds; Type EYD or Type EZD.
- 3) Or approved equal

10. Drain/Breather Fitting:

a. Manufacturers and Products:

- 1) Appleton; Type ECDB.
- 2) Crouse-Hinds; ECD.
- 3) Or approved equal

11. Expansion Fitting:

a. Manufacturers and Products:

- 1) Deflection/Expansion Movement:
 - a) Appleton; Type DF.
 - b) Crouse-Hinds; Type XD.
 - c) Or approved equal
- 2) Expansion Movement Only:
 - a) Appleton; Type XJ.
 - b) Crouse-Hinds; Type XJ.
 - c) Thomas & Betts; XJG-TP.
 - d) Or approved equal

12. Cable Sealing Fitting:

- a. To form watertight nonslip cord or cable connection to conduit.
- b. For Conductors with OD of 1/2 inch or Less: Neoprene bushing at connector entry.
- c. Manufacturers and Products:
 - 1) Appleton; CG-S.
 - 2) Crouse-Hinds; CGBS.
 - 3) Or approved equal

B. Electric Metallic Tubing:

- 1. Meet requirements of UL 514B.
- 2. Type: Steel body and locknuts with steel or malleable iron compression nuts. Set screw and drive-on fittings not permitted.
- 3. Electro zinc-plated inside and out.
- 4. Raintight.
- 5. Coupling Manufacturers and Products:
 - a. Appleton; Type 95T.
 - b. Crouse-Hinds.
 - c. Thomas & Betts.
 - d. Or approved equal
- 6. Connector Manufacturers and Products:
 - a. Appleton; Type ETP.
 - b. Crouse-Hinds.
 - c. Thomas & Betts.
 - d. Or approved equal

C. Rigid Aluminum Conduit:

1. General:

- a. Meet requirements of UL 514B.
- b. Type: Threaded, copper-free. Set screw fittings not permitted.

2. Insulated Bushing:
 - a. Material: Cast aluminum, with integral insulated throat, rated for 150 degrees C.
 - b. Manufacturer and Product: O-Z/Gedney; Type AB (or approved equal).
3. Grounding Bushing:
 - a. Material: Cast aluminum with integral insulated throat, rated for 150 degrees, with solderless lugs.
 - b. Manufacturer and Product: O-Z/Gedney; Type ABLG (or approved equal).
4. Conduit Hub:
 - a. Material: Cast aluminum, with insulated throat.
 - b. UL listed for use in wet locations.
 - c. Manufacturers and Products:
 - 1) O-Z/Gedney; Type CHA.
 - 2) Thomas & Betts; Series 370AL.
 - 3) Meyers; Series SA.
 - 4) Or approved equal
5. Conduit Bodies:
 - a. Manufacturers and Products (For Normal Conditions):
 - 1) Appleton; Form 85 threaded unilets.
 - 2) Crouse-Hinds; Mark 9 or Form 7-SA threaded condulets.
 - 3) Killark; Series O electrolets.
 - 4) Or approved equal
 - b. Manufacturers (For Hazardous Locations):
 - 1) Appleton.
 - 2) Crouse-Hinds.
 - 3) Killark.
 - 4) Or approved equal
6. Couplings: As supplied by conduit manufacturer.
7. Conduit Sealing Fitting:
 - a. Manufacturers and Products:
 - 1) Appleton; Type EYF-AL or EYM-AL.
 - 2) Crouse-Hinds; Type EYS-SA or EZS-SA.
 - 3) Killark; Type EY or Type EYS.
 - 4) Or approved equal
8. Drain Seal:
 - a. Manufacturers and Products:
 - 1) Appleton; Type EYDM-A.
 - 2) Crouse-Hinds; Type EYD-SA or Type EZD-SA.
 - 3) Or approved equal
9. Drain/Breather Fitting:
 - a. Manufacturers and Products:
 - 1) Appleton; Type ECDB.
 - 2) Crouse-Hinds; ECD.
 - 3) Or approved equal
10. Expansion Fitting:
 - a. Manufacturers and Products:
 - 1) Deflection/Expansion Movement: Steel City; Type DF-A
 - 2) Expansion Movement Only: Steel City; Type AF-A.
 - 3) Or approved equal
11. Cable Sealing Fittings:
 - a. To form watertight nonslip cord or cable connection to conduit.

- b. Bushing: Neoprene at connector entry.
- c. Manufacturer and Product: Appleton; CG-S (Or approved equal)

D. PVC Conduit and Tubing:

- 1. Meet requirements of NEMA TC 3.
- 2. Type: PVC, slip-on.

- E. Fiberglass Conduit:
 - 1. Manufactured by same process as conduit.
 - 2. Supplied by conduit manufacturer.

- F. PVC-Coated Rigid Galvanized Steel Conduit:
 - 1. Meet requirements of UL 514B.
 - 2. Fittings: Rigid galvanized steel type, PVC coated by conduit manufacturer.
 - 3. Conduit Bodies: Cast metal hot-dipped galvanized or urethane finish. Cover shall be of same material as conduit body. PVC coated by conduit manufacturer.
 - 4. Finish: 40-mil PVC exterior, 2-mil urethane interior.
 - 5. Overlapping pressure-sealing sleeves.
 - 6. Conduit Hangers, Attachments, and Accessories: PVC-coated.
 - 7. Manufacturers:
 - a. Robroy Industries.
 - b. Ocal.
 - c. Or approved Equal
 - 8. Expansion Fitting:
 - a. Manufacturer and Product: Ocal; OCAL-BLUE XJG (or approved equal).

- G. Flexible Metal, Liquid-Tight Conduit:
 - 1. Metal insulated throat connectors with integral nylon or plastic bushing rated for 105 degrees C.
 - 2. Insulated throat and sealing O-rings.
 - 3. Manufacturers and Products:
 - a. Thomas & Betts; Series 5331.
 - b. O-Z/Gedney; Series 4Q.
 - c. Or approved Equal

- H. Flexible Metal, Nonliquid-Tight Conduit:
 - 1. Meet requirements of UL 514B.
 - 2. Body: Galvanized steel or malleable iron.
 - 3. Throat: Nylon insulated.
 - 4. 1-1/4-Inch Conduit and Smaller: One screw body.
 - 5. 1-1/2-Inch Conduit and Larger: Two screw body.
 - 6. Manufacturer and Product: Appleton; Series 7400 (or approved equal).

- I. Flexible Coupling, Hazardous Locations:
 - 1. Approved for use in atmosphere involved.
 - 2. Rating: Watertight and UL listed for use in Class I, Division 1 and 2 areas.
 - 3. Outer bronze braid and an insulating liner.
 - 4. Conductivity equal to a similar length of rigid metal conduit.

5. Manufacturers and Products:
 - a. Crouse-Hinds; Type ECGJH or Type ECLK.
 - b. Appleton; EXGJH or EXLK.
 - c. Or approved equal

J. Watertight Entrance Seal Device:

1. New Construction:
 - a. Material: Oversized sleeve, malleable iron body with sealing ring, pressure ring, grommet seal, and pressure clamp.
 - b. Manufacturer and Product: O-Z/Gedney; Type FSK or Type WSK, or approved equal as required.
2. Cored-Hole Application:
 - a. Material: Assembled dual pressure disks, neoprene sealing ring, and membrane clamp.
 - b. Manufacturer and Product: O-Z/Gedney; Series CSM (or approved equal)

2.03 OUTLET AND DEVICE BOXES

A. Sheet Steel: One-piece drawn type, zinc-plated or cadmium-plated.

B. Cast Metal:

1. Box: Malleable iron or Cast ferrous metal.
2. Cover: Gasketed, weatherproof, malleable iron, or cast ferrous metal, with stainless steel screws.
3. Hubs: Threaded.
4. Lugs: Cast Mounting.
5. Manufacturers and Products, Nonhazardous Locations:
 - a. Crouse-Hinds; Type FS or Type FD.
 - b. Appleton; Type FS or Type FD.
 - c. Killark.
 - d. Or approved equal
6. Manufacturers and Products, Hazardous Locations:
 - a. Crouse-Hinds; Type GUA or Type EAJ.
 - b. Appleton; Type GR.
 - c. Or approved equal

C. Cast Aluminum:

1. Material:
 - a. Box: Cast, copper-free aluminum.

- stainless steel screws.
- 2. Hubs: Threaded.
- 3. Lugs: Cast mounting.
- 4. Manufacturers and Products, Nonhazardous Locations:
 - a. Crouse-Hinds; Type FS-SA or Type FD-SA.
 - b. Appleton; Type FS or Type FD
 - c. Killark.
 - d. Or approved equal
- 5. Manufacturers and Products, Hazardous Locations:
 - a. Crouse-Hinds; Type GUA-SA.
 - b. Appleton; Type GR.
 - c. Or approved equal
- D. PVC-Coated Cast Metal:
 - 1. Type: One-piece.
 - 2. Material: Malleable iron, cast ferrous metal, or cast aluminum.
 - 3. Coating:
 - a. Exterior Surfaces: 40-mil PVC.
 - b. Interior Surfaces: 2-mil urethane.
 - 4. Manufacturers:
 - a. Robroy Industries.
 - b. Ocal.
 - c. Or approved equal
- E. Nonmetallic:
 - 1. Box: PVC.
 - 2. Cover: PVC, weatherproof, with stainless steel screws.
 - 3. Manufacturer and Product: Carlon; Type FS or Type FD, with Type E98
or Type E96 covers (or approved equal)

2.04 JUNCTION AND PULL BOXES

- A. Outlet Box Used as Junction or Pull Box: As specified under Article Outlet and Device Boxes.
- B. Conduit Bodies Used as Junction Boxes: As specified under Article Fittings.
- C. Large Sheet Steel Box:
 - 1. NEMA 250, Type 1.
 - 2. Box: Code-gauge, galvanized steel.
 - 3. Cover: Full access, screw type.
 - 4. Machine Screws: Corrosion-resistant.
- D. Large Cast Metal Box:
 - 1. NEMA 250, Type 4.
 - 2. Box: Cast malleable iron, with drilled and tapped conduit entrances and exterior mounting lugs.

4. Gasket: Neoprene.
 5. Hardware and Machine Screws: ASTM A167, Type 316 stainless steel.
 6. Manufacturers and Products, Surface Mounted Nonhinged Type:
 - a. Crouse-Hinds; Series W.
 - b. O-Z/Gedney; Series Y.
 - c. Or approved equal
- E. Large Cast Metal Box, Hazardous Locations:
1. NEMA 250 Type 7 or Type 9 as required for Class, Division, and Group involved.
 2. Box: Cast ferrous metal, electro-galvanize finished or copper-free aluminum with drilled and tapped conduit entrances.
 3. Cover: Nonhinged with screws.
 4. Hardware and Machine Screws: ASTM A167, Type 316 stainless steel. 5. Manufacturers and Products:
 - a. Crouse-Hinds; Type EJB.
 - b. Appleton; Type AJBEW.
 - c. Or approved equal
- F. Large Cast Aluminum Box:
1. NEMA 250 Type 4.
 2. Box: Cast copper-free aluminum, with drilled and tapped conduit entrances and exterior mounting lugs.
 3. Cover: Nonhinged.
 4. Gasket: Neoprene.
 5. Hardware and Machine Screws: ASTM A167, Type 316 stainless steel. 6. Manufacturers and Products, Surface Mounted Type:
 - a. Crouse-Hinds; Series W-SA.
 - b. O-Z/Gedney; Series YS-A, YL-A.
 - c. Killark.
 - d. Or approved equal
- G. Large Stainless Steel Box:
1. NEMA 250 Type 4X.
 2. Box: 14-gauge, ASTM A240/A240M, Type 316 stainless steel.
 3. Cover: Nonhinged with screws.
 4. Hardware and Machine Screws: ASTM A167, Type 316 stainless steel. 5. Manufacturers:
 - a. Hoffman Engineering Co.
 - b. Robroy Industries.
 - c. Wiegman.
 - d. Or approved equal
- H. Large Steel Box:
1. NEMA 250 Type 12.
 2. Box: 12-gauge steel, with white enamel painted interior and gray primed exterior, over phosphated surfaces. Provide gray finish as approved by Engineer.
 3. Cover: Hinged with screws.
 4. Hardware and Machine Screws: ASTM A167, Type 316 stainless steel. 5. Manufacturers:

- a. Hoffman Engineering Co. (or approved equal)

- b. Robroy Industries.
- c. Wiegman.
- d. Or approved equal

I. Concrete Box, Nontraffic Areas:

- 1. Box: Reinforced, cast concrete with extension.
- 2. Cover: Steel diamond plate with locking bolts.
- 3. Cover Marking: ELECTRICAL, TELEPHONE, or as shown.
- 4. Size: 10 inches by 17 inches, minimum.
- 5. Manufacturers and Products:
 - a. Utility Vault Co.; Series 36-1017.
 - b. Christy, Concrete Products, Inc.; N9.
 - c. Quazite; "PG" Style.
 - d. Or approved equal

J. Concrete Box, Traffic Areas:

- 1. Box: Reinforced, cast concrete with extension and bottom slab.
- 2. Cover: Steel checked plate; H/20 loading with screw down.
- 3. Cover Marking: ELECTRICAL, TELEPHONE, or as shown.
- 4. Manufacturers and Products:
 - a. Christy, Concrete Products, Inc.; B1017BOX.
 - b. Utility Vault Co.; 3030 SB.
 - c. Or approved equal

2.05 TELEPHONE TERMINAL CABINET

- A. Material: Code-gauge galvanized steel box with hinged doors and 3/4-inch fire-resistant plywood backboard, meeting requirements of telephone service provider.
- B. Finish: Provide gray finish as approved by Engineer.
- C. Minimum Size: 18 inches high by 18 inches wide by 6 inches deep.

2.06 TELEPHONE AND DATA OUTLET

- A. Provide outlet boxes and cover plates meeting requirements of TIA 569B.

2.07 TERMINAL JUNCTION BOX

- A. Cover: Hinged, unless otherwise shown.
- B. Interior Finish: Paint with white enamel or lacquer.
- C. Terminal Blocks:
 - 1. Separate connection point for each conductor entering or leaving box.
 - 2. Spare Terminal Points: 25 percent, minimum.

2.08 METAL WIREWAYS

- A. Meet requirements of UL 870.
- B. Type: Steel-enclosed, lay-in type.
- C. Cover: Removable, screw type.
- D. Rating: Indoor.
- E. Finish: Rust inhibiting phosphatizing primer and gray baked enamel.
- F. Hardware: Plated to prevent corrosion; screws installed toward the inside protected by spring nuts or otherwise guarded to prevent wire insulation damage.
- G. Knockouts: Without knockouts, unless otherwise indicated.
- H. Manufacturers:
 - 1. Circle AW.
 - 2. Hoffman.
 - 3. Square D.
 - 4. Or approved equal

2.09 PRECAST HANDHOLES

- A. Concrete Strength: Minimum, 3,000 psi compressive, in 28 days.
- B. Loading: AASHTO, H-20 in accordance with ASTM C857.
- C. Drainage:
 - 1. Slope floors toward drain points, leaving no pockets or other nondraining areas.
 - 2. Provide drainage outlet or sump at low point of floor constructed with a heavy, cast iron, slotted or perforated hinged cover, and a minimum 4-inch outlet and outlet pipe.
- D. Raceway Entrances:
 - 1. Provide on all four sides.
 - 2. Provide knockout panels or precast individual raceway openings.
 - 3. At entrances where raceways are to be installed by others, provide minimum 12-inch-high by 24-inch-wide knockout panels for future raceway installation.
- E. Embedded Pulling Iron:

1. Material: 3/4-inch-diameter stock, fastened to overall steel reinforcement before concrete is placed.
2. Location:
 - a. Wall: Opposite each raceway entrance and knockout panel for future raceway entrance.
 - b. Floor: Centered below handhole cover.

F. Cable Racks:

1. Arms and Insulators: Adjustable, of sufficient number to accommodate cables for each raceway entering or leaving handhole, including spares.
2. Wall Attachment:
 - a. Adjustable inserts in concrete walls. Bolts or embedded studs not permitted.
 - b. Insert Spacing: Maximum 3 feet on center for inside perimeter of handhole.
 - c. Arrange in order that spare raceway ends are clear for future cable installation.

G. Handhole Frames and Covers:

1. Material: Steel, hot-dipped galvanized.
2. Cover Type: Solid, bolt-on of checkered design.
3. Cover Loading: AASHTO H-20.
4. Cover Designation: Burn by welder, on upper side in integral letters, minimum 2 inches in height, appropriate titles:
 - a. 600 Volts and Below: ELECTRIC LV.
 - b. TELEPHONE.

H. Hardware: Steel, hot-dip galvanized.

I. Furnish knockout for ground rod in each handhole.

J. Manufacturers:

1. Utility Vault Co.
2. Penn-Cast Products, Inc.
3. Concrete Conduit Co.
4. Associated Concrete Products, Inc.
5. Pipe, Inc.
6. Or approved equal

2.10 ACCESSORIES

A. Duct Bank Spacers:

1. Modular Type:
 - a. Nonmetallic, interlocking, for multiple conduit sizes.
 - b. Suitable for all types of conduit.

- c. Manufacturers:
 - 1) Underground Device, Inc.
 - 2) Carlon.
 - 3) Or approved equal
 - 2. Template Type:
 - a. Nonmetallic, custom made one-piece spacers.
 - b. Suitable for all types of conduit.
 - c. Material: HDPE or polypropylene, 1/2-inch minimum thickness.
 - d. Conduit openings cut 1 inch larger than conduit outside diameter.
 - e. Additional openings for stake-down, rebar, and concrete flow through as required.
 - f. Manufacturer and Product: SP Products; Quik Duct or approved equal.
- B. Identification Devices:
- 1. Raceway Tags:
 - a. Material: Permanent, nonferrous metal.
 - b. Shape: Round.
 - c. Raceway Designation: Pressure stamped, embossed, or engraved.
 - d. Tags relying on adhesives or taped-on markers not permitted.
 - 2. Warning Tape:
 - a. Material: Polyethylene, 4-mil gauge with detectable strip.
 - b. Color: Red.
 - c. Width: Minimum 6 inches.
 - d. Designation: Warning on tape that electric circuit is located below tape.
 - e. Identifying Letters: Minimum 1-inch-high permanent black lettering imprinted continuously over entire length.
 - f. Manufacturers and Products:
 - 1) Panduit; Type HTDU.
 - 2) Reef Industries; Terra Tape.
 - 3) Or approved equal
 - 3. Buried Raceway Marker:
 - a. Material: Sheet bronze, consisting of double-ended arrows, straight for straight runs and bent at locations where runs change direction.
 - b. Designation: Engrave to depth of 3/32 inch; ELECTRIC CABLES, in letters 1/4-inch high.
 - c. Minimum Dimension: 1/4 inch thick, 10 inches long, and 3/4 inch wide.
- C. Raceway Coating: Clean and paint in accordance with SSP Section 210-3.4.3 (J) and 210-3.7 (J)
- D. Heat Shrinkable Tubing:
- 1. Material: Heat-shrinkable, cross-linked polyolefin.

2. Semi-flexible with meltable adhesive inner liner.
 3. Color: Black.
 4. Manufacturers:
 - a. Raychem.
 - b. 3M.
 - c. Or approved equal
- E. Wraparound Duct Band:
1. Material: Heat-shrinkable, cross-linked polyolefin, precoated with hot-melt adhesive.
 2. Width: 50 mm minimum.
3. Manufacturer and Product: Raychem; Type TWDB (or approved equal)

PART 3 EXECUTION

3.01 GENERAL

- A. Comply with NECA Installation Standards.
- B. Crushed or deformed raceways not permitted.
- C. Maintain raceway entirely free of obstructions and moisture.
- D. Immediately after installation, plug or cap raceway ends with watertight and dust-tight seals until time for pulling in conductors.
- E. Aluminum Conduit: Do not install in direct contact with concrete. Install in PVC sleeve or cored hole through concrete walls and slabs.
- F. Sealing Fittings: Provide drain seal in vertical raceways where condensate may collect above sealing fitting.
- G. Avoid moisture traps where possible. When unavoidable in exposed conduit runs, provide junction box and drain fitting at conduit low point.
- H. Group raceways installed in same area.
- I. Proximity to Heated Piping: Install raceways minimum 12 inches from parallel runs.
- J. Follow structural surface contours when installing exposed raceways. Avoid obstruction of passageways.
- K. Run exposed raceways parallel or perpendicular to walls, structural members, or intersections of vertical planes.
- L. Block Walls: Do not install raceways in same horizontal course or vertical cell with reinforcing steel.

- M. Install watertight fittings in outdoor, underground, or wet locations.
- N. Paint threads and cut ends, before assembly of fittings, galvanized conduit, PVC-coated galvanized conduit, or IMC installed in exposed or damp locations with zinc-rich paint or liquid galvanizing compound.
- O. Metal conduit shall be reamed, burrs removed, and cleaned before installation of conductors, wires, or cables.
- P. Do not install raceways in concrete equipment pads, foundations, or beams without Engineer approval.
- Q. Horizontal raceways installed under floor slabs shall lie completely under slab, with no part embedded within slab.
- R. Install concealed, embedded, and buried raceways so that they emerge at right angles to surface and have no curved portion exposed.
- S. Install conduits for fiber optic cables, telephone cables, and Category 6 data cables in strict conformance with the requirements of TIA 569B.

3.02 INSTALLATION IN CAST-IN-PLACE STRUCTURAL CONCRETE

- A. Minimum Cover: 2 inches, including fittings.
- B. Conduit placement shall not require changes in reinforcing steel location or configuration.
- C. Provide nonmetallic support during placement of concrete to ensure raceways remain in position.
- D. Conduit larger than 1 inch shall not be embedded in concrete slabs, walls, foundations, columns, or beams unless approved by Engineer.
- E. Slabs and Walls (Requires Engineer Approval):
 1. Trade size of conduit not to exceed one-fourth of slab or wall thickness.
 2. Install within middle two-fourths of slab or wall.
 3. Separate conduit less than 2-inch trade size by a minimum ten times conduit trade size, center-to-center, unless otherwise shown.
 4. Separate conduit 2-inch and greater trade size by a minimum eight times conduit trade size, center-to-center, unless otherwise shown.
 5. Cross conduit at an angle greater than 45 degrees, with minimum separation of 1 inch.
 6. Separate conduit by a minimum six times the outside dimension of expansion/deflection fittings at expansion joints.

7. Conduit shall not be installed below the maximum water surface elevation in walls of water holding structures.

F. Columns and Beams (Requires Engineer Approval):

1. Trade size of conduit not to exceed one-fourth of beam thickness.
2. Conduit cross-sectional area not to exceed 4 percent of beam or column cross section.

3.03 CONDUIT APPLICATION

A. Diameter: Minimum 3/4 inch.

B. Exterior, Exposed:

1. Rigid galvanized steel.
2. Rigid aluminum.
3. Intermediate metal.
4. PVC-coated rigid galvanized steel.

C. Interior, Exposed:

1. Rigid galvanized steel.
2. Rigid aluminum.
3. Intermediate metal.
4. Electric metallic tubing for ceiling portion of lighting circuits.
5. PVC-coated rigid galvanized steel.

D. Interior, Concealed (Not Embedded in Concrete):

1. Rigid galvanized steel.
2. Rigid aluminum.
3. Intermediate metal.
4. Electric metallic tubing.

E. Aboveground, Embedded in Concrete Walls, Ceilings, or Floors:

1. Rigid galvanized steel.
2. Intermediate metal.

F. Direct Earth Burial:

1. PVC Schedule 40.
2. PVC Schedule 80.
3. PVC-coated rigid galvanized steel.
4. Fiberglass.

G. Concrete-Encased Ductbank:

1. Rigid galvanized steel.
 2. Intermediate metal.
 3. PVC Schedule 40.
 4. PVC Schedule 80.
- H. Under Slabs-On-Grade:
1. PVC-coated rigid galvanized steel.
- I. Transition from Underground or Concrete Embedded to Exposed: PVC-coated rigid steel conduit.
- J. Under Equipment Mounting Pads: Rigid galvanized steel conduit.
- K. Exterior Light Pole Foundations: PVC-coated rigid steel conduit.
- L. Corrosive Areas:
1. PVC-coated rigid galvanized steel.
- M. Hazardous Gas Areas:
1. Rigid galvanized steel.

3.04 FLEXIBLE CONNECTIONS

- A. For motors, wall or ceiling mounted fans and unit heaters, dry type transformers, electrically operated valves, instrumentation, and other locations approved by Engineer where flexible connection is required to minimize vibration:
1. Conduit Size 4 Inches or Less: Flexible, liquid-tight conduit.
 2. Conduit Size Over 4 Inches: Nonflexible.
 3. Wet or Corrosive Areas: flexible metal liquid-tight.
 4. Dry Areas: Flexible, metallic liquid-tight.
 5. Hazardous Areas: Flexible coupling suitable for Class I, Division 1 and 2 areas.
- B. Suspended Lighting Fixtures in Dry Areas: Flexible steel, nonliquid-tight conduit.
- C. Outdoor Areas, Process Areas Exposed to Moisture, and Areas Required to be Oiltight and Dust-Tight: Flexible metal, liquid-tight conduit.
- D. Flexible Conduit Length: 18 inches minimum, 60 inches maximum; sufficient to allow movement or adjustment of equipment.

3.05 PENETRATIONS

- A. Make at right angles, unless otherwise shown.
- B. Notching or penetration of structural members, including footings and beams, not permitted.
- C. Apply heat shrinkable tubing or single layer of wraparound duct band to metallic conduit protruding through concrete floor slabs to a point 2 inches above and 2 inches below concrete surface.
- D. Concrete Walls, Floors, or Ceilings (Aboveground): Provide nonshrink grout dry-pack, or use watertight seal device.
- E. Entering Structures:
 - 1. General: Seal raceway at first box or outlet with oakum or expandable plastic compound to prevent entrance of gases or liquids from one area to another.
 - 2. Concrete Roof or Membrane Waterproofed Wall or Floor:
 - a. Provide a watertight seal.
 - b. Without Concrete Encasement: Install watertight entrance seal device on each side.
 - c. With Concrete Encasement: Install watertight entrance seal device on accessible side.
 - d. Securely anchor malleable iron body of watertight entrance seal device into construction with one or more integral flanges.
 - e. Secure membrane waterproofing to watertight entrance seal device in a permanent, watertight manner.
 - 3. Existing or Precast Wall (Underground): Core drill wall and install watertight entrance seal device.

4. Nonwaterproofed Wall or Floor (Underground, without Concrete Encasement):
 - a. Provide Schedule 40 galvanized pipe sleeve, or watertight entrance seal device.
 - b. Fill space between raceway and sleeve with expandable plastic compound or oakum and lead joint, on each side.
5. Handholes:
 - a. Metallic Raceways: Provide insulated grounding bushings.
 - b. Nonmetallic Raceways: Provide bell ends flush with wall.
 - c. Install such that raceways enter as near as possible to one end of wall, unless otherwise shown.

3.06 SUPPORT

- A. Support from structural members only, at intervals not exceeding NFPA 70 requirements. Do not exceed 10 feet in any application. Do not support from piping, pipe supports, or other raceways.
- B. Multiple Adjacent Raceways: Provide ceiling trapeze. For trapeze-supported conduit, allow 30 percent extra space for future conduit.
- C. Application/Type of Conduit Strap:
 1. Aluminum Conduit: Aluminum or stainless steel.
 2. Rigid Steel or EMT Conduit: Zinc coated steel, pregalvanized steel or malleable iron.
 3. PVC-Coated Rigid Steel Conduit: PVC-coated metal.
- D. Provide and attach wall brackets, strap hangers, or ceiling trapeze as follows:
 1. Wood: Wood screws.
 2. Hollow Masonry Units: Toggle bolts.
 3. Concrete or Brick: Expansion shields, or threaded studs driven in by powder charge, with lock washers and nuts.
 4. Steelwork: Machine screws.
 5. Location/Type of Hardware:
 - a. Dry, Noncorrosive Areas: Galvanized.
 - b. Wet, Noncorrosive Areas: Stainless steel.
 - c. Corrosive Areas: 316 Stainless steel.
- E. Nails or wooden plugs inserted in concrete or masonry for attaching raceway not permitted. Do not weld raceways or pipe straps to steel structures. Do not use wire in lieu of straps or hangers.
- F. Support aluminum conduit on concrete surfaces with stainless steel or nonmetallic spacers, or aluminum or nonmetallic framing channel.

3.07 BENDS

- A. Install concealed raceways with a minimum of bends in the shortest practical distance.
- B. Make bends and offsets of longest practical radius. Bends in conduits and ducts being installed for fiber optic cables shall be not less than 20 times cable diameter, 15 inches minimum.
- C. Install with symmetrical bends or cast metal fittings.
- D. Avoid field-made bends and offsets, but where necessary, make with acceptable hickey or bending machine. Do not heat metal raceways to facilitate bending.
- E. Make bends in parallel or banked runs from same center or centerline with same radius so that bends are parallel.
- F. Factory elbows may be installed in parallel or banked raceways if there is change in plane of run, and raceways are same size.
- G. PVC Conduit:
 - 1. Bends 30 Degrees and Larger: Provide factory-made elbows.
 - 2. 90-Degree Bends: Provide rigid steel elbows, PVC-coated where direct buried.
 - 3. Use manufacturer's recommended method for forming smaller bends.
- H. Flexible Conduit: Do not make bends that exceed allowable conductor bending radius of cable to be installed or that significantly restricts conduit flexibility.

3.08 EXPANSION/DEFLECTION FITTINGS

- A. Provide on raceways at structural expansion joints and in long tangential runs.
- B. Provide expansion/deflection joints for 50 degrees F maximum temperature variation.
- C. Install in accordance with manufacturer's instructions.

3.09 PVC CONDUIT

- A. Solvent Welding:
 - 1. Apply manufacturer recommended solvent to joints.
 - 2. Install in order that joint is watertight.

- B. Adapters:
 - 1. PVC to Metallic Fittings: PVC terminal type.
 - 2. PVC to Rigid Metal Conduit or IMC: PVC female adapter.
- C. Belled-End Conduit: Bevel unbelled end of joint prior to joining.

3.10 PVC-COATED RIGID STEEL CONDUIT

- A. Install in accordance with manufacturer's instructions.
- B. Tools and equipment used in cutting, bending, threading and installation of PVC-coated rigid conduit shall be designed to limit damage to PVC coating.
- C. Provide PVC boot to cover exposed threading.

3.11 WIREWAYS

- A. Install in accordance with manufacturer's instructions.
- B. Locate with cover on accessible vertical face of wireway, unless otherwise shown.
- C. Applications:
 - 1. Metal wireway in indoor dry locations.

3.12 TERMINATION AT ENCLOSURES

- A. Cast Metal Enclosure: Install manufacturer's premolded insulating sleeve inside metallic conduit terminating in threaded hubs.
- B. Nonmetallic, Cabinets, and Enclosures:
 - 1. Terminate conduit in threaded conduit hubs, maintaining enclosure integrity.
 - 2. Metallic Conduit: Provide ground terminal for connection to maintain continuity of ground system.
- C. Sheet Metal Boxes, Cabinets, and Enclosures:
 - 1. General:
 - a. Install insulated bushing on ends of conduit where grounding is not required.
 - b. Provide insulated throat when conduit terminates in sheet metal boxes having threaded hubs.

- c. Utilize sealing locknuts or threaded hubs on sides and bottom of NEMA 3R and NEMA 12 enclosures.
 - d. Terminate conduits at threaded hubs at the tops of NEMA 3R and NEMA 12 boxes and enclosures.
 - e. Terminate conduits at threaded conduit hubs at NEMA 4 and NEMA 4X boxes and enclosures.
- 2. Rigid Galvanized, Intermediate or Aluminum Conduit:
 - a. Provide one lock nut each on inside and outside of enclosure.
 - b. Install grounding bushing at source enclosure.
 - c. Provide bonding jumper from grounding bushing to equipment ground bus or ground pad.
 - 3. Electric Metallic Tubing: Provide gland compression, insulated connectors.
 - 4. Flexible Metal Conduit: Provide two screw type, insulated, malleable iron connectors.
 - 5. PVC-Coated Rigid Galvanized Steel Conduit: Provide PVC-coated, liquid-tight, metallic connector.
- D. Motor Control Center, Switchboard, Switchgear, and Free-Standing Enclosures:
 - 1. Terminate metal conduit entering bottom with grounding bushing; provide grounding jumper extending to equipment ground bus or grounding pad.

3.13 UNDERGROUND RACEWAYS

- A. Grade: Maintain minimum grade of 4 inches in 100 feet, either from one handhole, or pull box to the next, or from a high point between them, depending on surface contour.
- B. Cover: As shown on the contract drawings.
- C. Make routing changes as necessary to avoid obstructions or conflicts.
- D. Couplings: In multiple conduit runs, stagger so couplings in adjacent runs are not in same transverse line.
- E. Union type fittings not permitted.
- F. Spacers:

1. Provide preformed, nonmetallic spacers designed for such purpose, to secure and separate parallel conduit runs in a trench or concrete encasement.
 2. Install at intervals not greater than that specified in NFPA 70 for support of the type conduit used, but in no case greater than 10 feet.
- G. Support conduit so as to prevent bending or displacement during backfilling or concrete placement.
- H. Transition from Underground to Exposed: PVC-coated rigid steel conduit.
- I. Installation with Other Piping Systems:
1. Crossings: Maintain minimum 12-inch vertical separation.
 2. Parallel Runs: Maintain minimum 12-inch separation.
 3. Installation over valves or couplings not permitted.
- J. Provide expansion fittings that allow minimum of 4 inches of movement in vertical conduit runs from underground where exposed conduit will be fastened to or will enter building or structure.
- K. Provide expansion/deflection fittings in conduit runs that exit building or structure belowgrade. Conduit from building wall to fitting shall be PVC-coated rigid steel.
- L. Colored Concrete Backfill
1. As specified in the Standard Specifications “Whitebook” Section 700-1.5.1.3.
- M. Backfill:
1. As shown on City of San Diego Std Drawing SDG-119, Type I
 2. Do not backfill until inspected by Engineer.

3.14 UNDER SLAB RACEWAYS

- A. Make routing changes as necessary to avoid obstructions or conflicts.
- B. Support raceways so as to prevent bending or displacement during backfilling or concrete placement.
- C. Install raceways with no part embedded within slab and with no interference with slab on grade construction.
- D. Raceway spacing, in a single layer or multiple layers:
1. 3 inches clear between adjacent 2-inch or larger raceway.
 2. 2 inches clear between adjacent 1-1/2-inch or smaller raceway.

- E. Individual Raceways and Single Layer Multiple Raceways: Install at lowest elevation of backfill zone with spacing as specified herein. Where conduits

cross at perpendicular orientation, installation of conduits shall not interfere with placement of under slab fill that meets compaction and void limitations of earthwork specifications.

F. Under slab raceways that emerge from below slab to top of slab as exposed, shall be located to avoid conflicts with structural slab rebar. Coordinate raceway stub ups with location of structural rebar.

G. Fittings:

1. Union type fittings are not permitted.
2. Provide expansion/deflection fittings in raceway runs that exit building or structure below slab. Locate fittings 18 inches, maximum, beyond exterior wall. Raceway type between building exterior wall to fitting shall be PVC-coated rigid steel.
3. Couplings: In multiple raceway runs, stagger so couplings in adjacent runs are not in same traverse line.

3.15 OUTLET AND DEVICE BOXES

A. General:

1. Install plumb and level.
2. Install suitable for conditions encountered at each outlet or device in wiring or raceway system, sized to meet NFPA 70 requirements.
3. Open no more knockouts in sheet steel device boxes than are required; seal unused openings.
4. Install galvanized mounting hardware in industrial areas.

B. Size:

1. Depth: Minimum 2 inches, unless otherwise required by structural conditions. Box extensions not permitted.
 - a. Hollow Masonry Construction: Install with sufficient depth such that conduit knockouts or hubs are in masonry void space.
2. Ceiling Outlet: Minimum 4-inch octagonal device box, unless otherwise required for installed fixture.
3. Switch and Receptacle: Minimum 2-inch by 4-inch device box.

C. Locations:

1. Drawing locations are approximate.
2. To avoid interference with mechanical equipment or structural features, relocate outlets as directed by Engineer.
3. Light Fixture: Install in symmetrical pattern according to room layout, unless otherwise shown.

D. Mounting Height:

1. General:
 - a. Dimensions given to centerline of box.
 - b. Where specified heights do not suit building construction or finish, adjust up or down to avoid interference.
 - c. Do not straddle CMU block or other construction joints.
2. Light Switch:
 - a. 48 inches above floor.
 - b. When located next to door, install on lock side of door.
3. Thermostat: 54 inches above floor.
4. Telephone Outlet:
 - a. 15 inches above floor.
 - b. 6 inches above counter tops.
 - c. Wall Mounted: 52 inches above floor.
5. Convenience Receptacle:
 - a. General Interior Areas: 15 inches above floor.
 - b. General Interior Areas (Counter Tops): Install device plate bottom or side flush with top of backsplash, or 6 inches above counter tops without backsplash.
 - c. Industrial Areas, Workshops: 48 inches above floor.
 - d. Outdoor Areas: 24 inches above finished grade.
6. Special-Purpose Receptacle: 48 inches above floor or as shown.
7. Switch, Motor Starting: 48 inches above floor, unless otherwise indicated on Drawings.

E. Flush Mounted:

1. Install with concealed conduit.
2. Install proper type extension rings or plaster covers to make edges of boxes flush with finished surface.
3. Holes in surrounding surface shall be no larger than required to receive box.

F. Supports:

1. Support boxes independently of conduit by attachment to building structure or structural member.

2. Install bar hangers in frame construction or fasten boxes directly as follows:
 - a. Wood: Wood screws.
 - b. Concrete or Brick: Bolts and expansion shields.
 - c. Hollow Masonry Units: Toggle bolts.
 - d. Steelwork: Machine screws.
 3. Threaded studs driven in by powder charge and provided with lock washers and nuts are acceptable in lieu of expansion shields.
 4. Provide plaster rings where necessary.
 5. Boxes embedded in concrete or masonry need not be additionally supported.
- G. Install separate junction boxes for flush or recessed lighting fixtures where required by fixture terminal temperature.
- H. Boxes Supporting Fixtures: Provide means of attachment with adequate strength to support fixture.

3.16 JUNCTION AND PULL BOXES

A. General:

1. Install plumb and level.
2. Installed boxes shall be accessible.
3. Do not install on finished surfaces.
4. Use outlet boxes as junction and pull boxes wherever possible and allowed by applicable codes.
5. Use conduit bodies as junction and pull boxes where no splices are required and allowed by applicable codes.
6. Install pull boxes where necessary in raceway system to facilitate conductor installation.
7. Install where shown and where necessary to terminate, tap-off, or redirect multiple conduit runs.
8. Install in conduit runs at least every 150 feet or after the equivalent of three right-angle bends.

B. Flush Mounted:

1. Install with concealed conduit.
2. Holes in surrounding surface shall be no larger than required to receive box.
3. Make edges of boxes flush with final surface.

C. Mounting Hardware:

1. Noncorrosive Dry Areas: Galvanized.
2. Noncorrosive Wet Areas: 316 Stainless steel.

3. Corrosive Areas: 316 Stainless steel.

D. Supports:

1. Support boxes independently of conduit by attachment to building structure or structural member.
2. Install bar hangers in frame construction or fasten boxes directly as follows:
 - a. Wood: Wood screws.
 - b. Concrete or Brick: Bolts and expansion shields.
 - c. Hollow Masonry Units: Toggle bolts.
 - d. Steelwork: Machine screws.
3. Threaded studs driven in by powder charge and provided with lock washers and nuts are acceptable in lieu of expansion shields.
4. Boxes embedded in concrete or masonry need not be additionally supported.

E. At or Below Grade:

1. Install boxes for below grade conduit flush with finished grade in locations outside of paved areas, roadways, or walkways.
2. If adjacent structure is available, box may be mounted on structure surface just above finished grade in accessible but unobtrusive location.
3. Obtain Engineer's written acceptance prior to installation in paved areas, roadways, or walkways.
4. Use boxes and covers suitable to support anticipated weights.

3.17 TELEPHONE TERMINAL CABINET

- A. Install with top of cabinet 6 feet above floor.
- B. Door Opening: 120 degrees, minimum.

3.18 TELEPHONE AND DATA OUTLET

- A. Provide empty 4-11/16-inch square, deep outlet box.
- B. Provide blank single gang raised device cover if cables are not installed.

3.19 HANDHOLES

- A. Excavate, shore, brace, backfill, and final grade in accordance with the contract drawings.
- B. Do not install until final raceway grading has been determined.

- C. Install such that raceway enters at nearly right angle and as near as possible to end of wall, unless otherwise shown.
- D. Identification: Field stamp covers with handhole number as shown. Stamped numbers to be 1-inch minimum height.

3.20 EMPTY RACEWAYS

- A. Provide permanent, removable cap over each end.
- B. Provide PVC plug with pull tab for underground raceways with end bells.
- C. Provide nylon pull cord.
- D. Identify, as specified in Article Identification Devices, with waterproof tags attached to pull cord at each end, and at intermediate pull point.

3.21 IDENTIFICATION DEVICES

- A. Raceway Tags:
 - 1. Identify Raceway Schedule designation.
 - 2. For exposed raceways, install tags at each terminus, near midpoint, and at minimum intervals of every 50 feet, whether in ceiling space or surface mounted.
 - 3. Install tags at each terminus for concealed raceways.
 - 4. Provide noncorrosive wire for attachment.
- B. Warning Tape: Install approximately 12 inches above underground or concrete-encased raceways. Align parallel to, and within 12 inches of, centerline of run.

3.22 PROTECTION OF INSTALLED WORK

- A. Protect products from effects of moisture, corrosion, and physical damage during construction.

- B. Provide and maintain manufactured watertight and dust-tight seals over conduit openings during construction.
- C. Touch up painted conduit threads after assembly to cover nicks or scars.
- D. Touch up coating damage to PVC-coated conduit with patching compound approved by manufacturer. Compound shall be kept refrigerated according to manufacturers' instructions until time of use.

END OF SECTION

SECTION 31 45 20

COMPACTION GROUTING

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of testing and material standards which all relevant work shall comply with:

Materials and Inspection:

1. ASTM D1586 Standard Penetration Testing (SPT)
2. ASTM D344 Static Cone Penetration Testing (CPT)
3. ASTM C150 Compliance Standard for Portland Cement
4. ASTM C143 Test Method for Slump of Portland Cement Concrete
5. ASTM C1107 Standard Specification for Packaged Dry, Hydraulic-Cement Grout
6. ASTM C 109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars

- B. Installation of Compaction Grouting shall comply with the following documents:

1. This specification.
2. Project drawings:
 - a. Ground Improvement and Excavation Plan, drawing no. 40067-D Sheets C-162 and C-163
 - b. Engineer's existing underground utilities plan in the work area.
3. Project geotechnical report – “Geotechnical Report, Cut & Cover Pipeline Portion, Morena Pump Station, WW Forcemain, and Brine/Centrates Conveyance Predesign (NC01), San Diego, California,” prepared by AECOM, dated January 5, 2018.
4. Form of contract between Owner and General Contractor, Owner and Installation Contractor, and General Contractor and Installation Contractor as applicable.
5. All applicable City, State and Federal environmental permits.

1.02 DEFINITIONS

- A. Compaction grouting: A process where a very stiff, low slump (0-2 inches), cement mortar grout is injected under high pressure through a grout pipe into the ground at various elevations or stages to displace and densify in-situ soils.

MORENA PUMP STATION AND CONVEYANCE SYSTEM

- B. Compaction grouting cut-off criteria: Criteria to determine when to stop the injection of grout at any given stage.
- C. Grout injection point: A point on the pavement or slope surface to designate the location of the pipe insertion for grouting.
- D. Field Quality Control Representative: The individual given specific inspection tasks identified in this specification.

1.03 DESCRIPTION OF WORK

- A. Work shall consist of designing, furnishing and installing materials, and constructing a ground improvement system at the locations noted on the drawings and as specified herein. Ground improvement system shall be performed by compaction grouting techniques.
- B. Provision of all equipment, material, labor, and supervision to design and install ground improvements shall be included in the work. Design shall rely on subsurface information presented in the project geotechnical report.
- C. The Installer shall locate and protect underground utilities and above ground utilities and other structures from damage during installation of ground improvements.
- D. In connection with the compaction grouting program, as shown on the drawings, the Installer shall provide all labor, materials and equipment to accomplish the following items of work:
 - 1. Implement ground/structure movement monitoring system.
 - 2. Install and remove grout pipes.
 - 3. Furnish and inject compaction grout.
 - 4. Monitor surface ground/structure movements during compaction grouting operations.
 - 5. Follow compaction grouting sequence of operations.
- E. It shall be the Installer's responsibility to determine and implement the systems and criteria to ensure that specified improvement is achieved.

1.04 SUBMITTALS

- A. Informational Submittals:
 - 1. Statement of qualifications for Installer.
 - 2. Grouting plan: The grouting plan will outline the proposed work for compaction grouting. The plan must include:

- a. A list of personnel to be used on the project outlining their experience in compaction grouting
 - b. Grout mix design including material specifications
 - c. Equipment and methods for measuring and recording stroke and back pressures, including pressure surges at the top of the injection point.
 - d. Equipment and methods for measuring and recording pumping rates and grout volumes with calibration procedures and certification of the equipment
 - e. Description of the materials and equipment, including size and type, and methods to be used in each grouting operation, including inclination and depth of grout pipes and increments in which the grout pipes will be withdrawn
 - f. Sample forms for drilling logs, grouting logs and monitoring logs
 - g. Detailed description of the proposed monitoring program for ground surface movement and distress to related freeway facilities such as pavement, storm drains, and utility conduits
3. Daily Records: Accurate daily records of all grout pipe installation, compaction grouting quantities, including stage data, volume, pressure and depth for each grout pipe location. Any change in the predetermined grouting program necessitated by a change in the subsurface conditions should be included in the daily record. Daily records should be submitted to the Owner's Representative at the end of each work day.
 4. Pumping System Automatic Records: Submit a copy of the automatic records (grout pressures and pumping rates) as informational submittals at the end of each work day.

1.05 QUALITY ASSURANCE

- A. The compaction grouting program, including installation of grout pipes, shall be performed by a specialist Installer with experience in compaction grouting.
- B. The Installer shall provide experienced management, supervisory and key personnel as required to implement the compaction grouting program, as follows:
 1. The project manager shall have experience in compaction grouting, with the full-time employ of the Installer.
 2. The superintendent shall have experience in compaction grouting.
 3. The Compaction Grouting Installer shall provide:
 - a. Evidence of previous compaction grouting project experience.
 - b. Evidence of management, supervisory and key personnel experience.

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- C. The Owner's representative will ensure that procedures and documentation conform to these specifications.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cement: Portland cement must be Type I or II and comply with Hydraulic cement grout ASTM C 1107.
- B. Grout: Grout must be a combination of Portland cement, fine aggregate, coarse aggregate, and water. A stiff grout mix must be used. Materials must be thoroughly mixed and agitated to provide grout of uniform consistency. The cement content of the grout must not be less than 7 pcf. Water must be added to the grout mix in an amount to provide a slump of 0-2 inches under ASTM C 143.
- C. Fine Aggregate: Fine aggregate must have between 10 and 30 percent passing the no. 200 sieve and a minimum of 85 percent passing the no 8 sieve. Fine aggregate must be graded to eliminate sand blocking at the grout working pressures.
- D. Coarse Aggregate: Coarse aggregate must be no larger than 3/8 inch and comprise less than 15 percent of the total aggregate.
- E. Water: Water for mixing must not contain:
1. Oil
 2. Impurities at concentrations that cause either of the following results when compared to the same test using distilled or deionized water:
 - a. Change of more than 25 percent in the setting time of cement when tested under ASTM C 191 or ASTM C 266
 - b. Reduction by more than 5 percent in the mortar compressive strength at 14 days when tested under ASTM C 109
 3. Chlorides as Cl in excess of 2,000 parts per million (per California Test 422) or sulfates as SO₄ in excess of 1,500 parts per million (per California Test 417)
- F. Gravel: Gravel must be no larger than 3/4 inch and have no more than 40 percent passing the #4 sieve and no more than 5 percent passing the #200 sieve.

PART 3 CONSTRUCTION

3.01 EQUIPMENT

- A. Equipment used to mix and pump compaction grout must be specifically designed for that purpose.
- B. The mixer must be batch type and equipped with suitable water meters. Sufficient mixer power must be provided to blend the ingredients into zero slump consistencies.
- C. The pump must be capable of displacing zero slump grout and to maintain pressures from 0 to 600 psi with rates of displacement as low as 0.3 cubic feet per minute.
- D. Controls must be provided to enable the operator to vary the rate of displacement over its entire range uniformly while continuously pumping.
- E. Grout pipes must be 2 to 3 inch steel casings with adequate strength to withstand the required jacking and pumping pressures per the installation plan.
- F. The pumping system must be equipped with suitable automatic recording devices that continuously measure and record grout pressures including stroke, back, and surge at the top injection point; pumping rates and grout take for each hole; and total grout take per work shift. Calibrate the instruments for measuring pressures, pumping rates, and volume.

3.02 INSTALLATION

- A. Temporary access ramps into the existing drainage channel shall be constructed to provide access to the site for compaction grouting. The access ramps shall be finished with a 12-inch thick gravel layer at the surface of the ramp to avoid tracking of sediment off the project site and out of the channel. Gravel shall comply with Part 2.01 F.
- B. The Installer shall determine on the ground, the vertical and horizontal projection of the exterior limits of all underground structures including conduits, irrigation systems and storm drains. Determine the location on the ground surface of each grout injection point and the elevation of each injection stage. On the pavement surface the grout injection points must consist of coring holes through the Portland cement concrete pavement.
- C. Holes in pavement must not be cored more than 1 day before grout injection. Drilled holes must not remain open when precipitation is predicted within the following 24 hour period. Use the National Weather Forecast for weather predictions.

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- D. Push, drive, or drill the grout pipe to the specified depth of grouting. There must be no voids between the grout pipe and the surrounding soil to prevent grout leakage and premature upward movement of the grout pipes during grouting. If the grout hole is drilled to full depth and the grout pipe cannot be advanced to the full depth of grouting, the grout hole must be cleaned and drilled again until the grout pipe can be advanced to the target depth. If the grout hole tends to collapse during drilling, the grout injection pipe must be advanced simultaneously with the drilling operation.
- E. At each grout point, grout pipes must be advanced to the elevation shown. If refusal is encountered before the specified depth is attained, notify the Owner's Geotechnical Engineer. Unless approved, the grout injection point is rejected and a new grout injection point must be drilled adjacent to the rejected hole and the grout pipe advanced to the depth shown. Grouting must be conducted in stages as the grout pipe is withdrawn. The interval between stages must not exceed 2 feet. The grout injection hole must not be greater than 0.4 inches in diameter than the outside diameter of the casing. Once grouting of a hole is started it must be completed in 1 continuous operation during 1 shift. If grouting is terminated for any reason before the full depth is grouted, that grout point is rejected. A new grout injection point must be drilled adjacent to the rejected hole and the grout pipe advanced to the depth shown.
- F. The rate of grout injection must be not more than 10 cubic feet per minute at an individual grout injection point. Multiple grout injections may be conducted simultaneously.
- G. The grout points must be designated as alternating rows of primary and secondary grout points. Two adjacent primary rows of grout points must be completely grouted before grouting the intermediate secondary row.
- H. Compaction grouting cut-off criteria includes:
 - 1. Cut-off grout pressures or surface movement occurs in conjunction with low grout volumes
 - 2. Excessive damage to the existing facilities such as pavement heave in excess of 0.125 inches.
 - 3. Maximum volume of grout injected at each stage to be determined by the installer.
- I. During the grouting operation, monitor the existing facilities including concrete pavement, barriers, storm drains, and unpaved embankment soils for indications of movement or distress. Establish and monitor a minimum of 5 survey reference points. Monitor overhead poles, electroliers, and structures within 30 feet of active grout points for movement.

- J. Monitor and record the interior of storm drains for signs of distress such as deflection, heaving, or cracking. Distress of storm drainage pipe must trigger grout cut-off at any stage.
- K. When grouting stage is within 10 feet of the storm drain or existing utility, grout pressure must not exceed 245 psi, unless authorized.
- L. After compaction grouting is complete, clean and fill with hydraulic cement grout the voids in the structural section created by the coring operation. You may extend the grout with clean pea gravel according to the grout manufacturer's recommendations. The backfill material must not exhibit any evidence of depressions or surplus material above the level surface of the pavement.
- M. The amount of grout injected at each grouting location and the pressure at which the grout shall be injected shall be submitted by the Installer to the Owner's geotechnical engineer for review and comment.
- N. Residue from grouting operations must not be allowed to:
 - 1. Flow across roadways or canal lining
 - 2. Flow into gutters or other drainage facilities
 - 3. Flow beyond the project limits
 - 4. Be left on the surface of the pavement or embankment.

3.03 FIELD QUALITY CONTROL

- A. All compaction grouting shall be performed under the inspection of the Field Quality Control Representative.
- B. Monitoring and logging of compaction grouting operations for both test areas and production work shall be done by the Field Quality Control Representative.
- C. The Field Quality Control Representative will perform slump tests of grout and take measurements of grout mix quantities to verify the Installer's grout mix, as follows:
 - 1. Slump tests will be performed:
 - a. once for every 10 cubic yards of grout injected, or
 - b. at any change in mix design, or
 - c. at least twice during each grout shift.
 - 2. Grout mix proportions will be checked at least once daily.

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- D. The Field Quality Control Representative will require the Installer to cast minimum size 3 inch by 6 inch grout test cylinders *or* 2 inch by 2 inch cube molds for strength testing. One set of four cylinders or molds will be cast during each slump test.
- E. Layout of grout injection points shall be by the Installer and checked by the Field Quality Control Representative with sufficient control points provided by the Owner.
- F. Daily records shall be maintained by the Installer and submitted to the Owner's Geotechnical Engineer.
- G. The Installer shall monitor nearby structures as follows:
 - 1. A level control system will be installed by the contractor for each structure within 25 feet of the ground improvement operations.
 - 2. Monitoring shall be carried out on a continuing basis whenever compaction grouting is occurring.
 - 3. After completion of the compaction grouting program, the monitoring system and grout pipes will be removed and all holes will be filled and patched.

3.04 TESTING AND INSPECTION

- A. The effectiveness of the proposed grouting layout scheme shall be verified as follows:
 - 1. The Owner may retain a soil testing firm to perform the in situ testing as directed by the Owner's Geotechnical Engineer. Test sections will be performed before and during production work, as follows:
 - a. Test section locations will be agreed upon by the Field Quality Control Representative/Installer within the treatment area. A test section shall consist of a single module comprised of at least three grout injection points. Tests will be performed at the center of the module prior to and after grouting.
 - b. All testing to determine specification compliance will be provided by an independent testing agency retained by the Owner. Regardless of the method selected, the same test method shall be utilized both before and after the soil improvement work in order

to provide the most accurate assessment of the degree of improvement obtained.

- c. The method of installation of the test section shall comply with Section 3.02 of this specification and shall be performed using the same grout line sizes, grout mix drilling and grouting equipment and procedures as that to be used for production work.
 - d. Prior to commencement of production grouting, a test sections shall be performed. If the pre-production test section indicates that the required ground improvement has not been achieved, the Installer shall revise the Work procedure Plan and re-test.
- B. Monitoring and logging of compaction grouting operations in the test areas and for production work shall be done by the Installer.

END OF SECTION

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PRESSURE RELIEF VALVE

PART 1 GENERAL

1.01 Description

- A. Furnish horizontal in-line 12-inch ANSI Class 300 Plunger Valve complete with electric motor actuator.

1.02 Related Work Specified Elsewhere

- A. SSP Section 210- Paint and Protective Coatings
- B. SSP Section 212– Water and Sewer System Valves and Appurtenances

1.03 Valve shall conform to the following Codes and Standards

- A. American National Standards Institute (ANSI)
 - B1.20.1 Pipe Threads, General Purpose (Inch)
 - B16.5 Steel Pipe Flanges and Flanged Fittings
- B. American Society for Testing and Materials (ASTM)
 - A216 Specification for Steel Castings, Alloy, Specially Heat-Treated, for Pressure-Containing Parts, Suitable for High-Temperature Service.
 - A536 Specification for Common Requirements for Iron Castings for General Industrial Use.
 - A743 Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application
- C. American Iron and Steel Institute (AISI) AISI 304 Austenitic Stainless Steel (maximum percent: 0.08C, 2.0 Mn, 1.0 Si, 18-20 Cr, 8-10.5 Ni), AISI 316 Austenitic Stainless Steel, AISI 420 Martensitic Stainless Steel (minimum percent: 0.15C, maximum percent: 1.0 Mn, 1.0 Si, 12-14 Cr, 0.0 Ni,)
- D. European (EN or DIN) standards equivalent to referenced American standards; subject to Engineer approval.
- E. Purchaser Furnished Data:
Operating Conditions, design criteria, process criteria, and facility drawings shall be provided to allow the manufacturer to properly design customize Plunger Valve performance.

1.04 Submittals

- A. Submittals shall be in accordance with the general provisions.
- B. Submittals shall be made to the designated representative of the City of San Diego, as indicated on the solicitation.
- C. Submit Manufacturer's data and descriptive literature written in the English language and in US Imperial units. Include catalog data, preliminary performance testing procedures, quality control procedures, calculations, detailed construction sheets showing all valve parts and descriptions of materials of construction with and applicable to USA material specifications, such as AISI, ANSI, ASTM, AWWA, American Society of Automotive Engineers (SAE) or the Copper Development Association (CDA). Identify each valve by tag number to which the catalog data and detail sheets pertain.
- D. Furnish for approval prior to release to manufacture, factory developed production drawings that clearly show in US imperial units, valve dimensions, laying lengths, port sizes, component parts and materials of construction. Provide graphical factory generated computer modeling results for both estimated noise levels in decibels and outlet discharge jet lengths for all flows in 10 percent increments through the complete stroke of the valve.
- E. Furnish for approval prior to release to manufacture, shop assembly drawings that clearly show dimensions and orientation of valve actuators as installed on the valves. Provide valve actuator safety verification through the complete stroke specifically noting values for both break torque under maximum differential as well as maximum dynamic torque. Use the ratio of actuator output torque over valve input torque for validation. Valve Manufacturers compliance shall be factory signed and dated.
- F. Furnish for approval prior to release to manufacture, all shop coating and lining.
- G. During manufacture, furnish 4 copies of signed and dated valve manufacturers mil thickness and holiday free coating and lining test reports. Describe test results and repair procedures for each valve. Do not ship valves to project site until the reports have been approved by the Engineer and accepted by the City of San Diego.
- H. Prior to shipping, furnish for approval four signed and dated copies of valve manufacturers factory shop hydrostatic test reports, performance test reports and any other required test reports. Test reports shall show all

relevant test parameters of the valve and actuator assembly as tested in the Manufacturer's facility and shall indicate valve orientation, flow rate, and inlet/outlet pressures as a minimum.

- I. Submit current quality assurance program certificate of compliance with proposal.
- J. Submit American Iron and Steel Institute (AISI) certification per P.L. 113-76, Consolidated Appropriations Act, 2014, Section 436, for all items specified herein.

1.05 Substitution

- A. Where Plunger Valves are shown or specified in project specifications or plans, no Contractor may substitute any other style of valve.

1.06 Quality Assurance

- A. The Manufacturer shall be ISO 9001 and ISO 14001 Certified.
- B. Shop Testing:

Plunger Valves shall be shop tested prior to shipment in accordance with the following minimum standards:

- 1. Leakage Test: Plunger Valves shall be qualitatively tested to 1.1 times valve pressure rating to identify drip tight closure of valve seat, seal leaks and other problems in the assembly process in both flow directions.
- 2. Hydrostatic Test: Plunger Valves shall be hydrostatically tested to withstand 1.5 times of the valve's maximum design operating pressure rating to identify drip tight body enclosure.
- 3. A Functional Test: Plunger Valves shall be tested for proper functionality. The test procedure shall consist of three (3) complete open/close cycles of operation with the valve actuator settings in place (limit switches, torque switches, position switches, etc.).
- 4. The valve Manufacturer shall submit six copies of certified shop test reports that shall include all appropriate information including: hand wheel rotation direction, valve full stroke calibration data, pressure settings, operating times and visual inspection notes.

1.07 Experience

- A. The valve manufacturer shall have experience in the production and sales of plunger valves. The valve Manufacturer shall also have installed plunger valves in the United States that have been in operation. Valve manufacturer shall provide complete documentation to meet this requirement, including contact names and telephone and fax numbers that can verify field installations. Acceptance of the validity of submitted documentation is solely at the discretion of the client.
- B. The valve manufacturer shall provide 24 hour manufacturers response for any field service requirement. Approved service agents, Licensee(s), or representatives of the manufacturer shall be permitted as long as the valve manufacturer is present. The valve manufacturer shall be responsible for its authorized agents and licensees. A detailed manufacturers signed service call write up, inclusive of photo-documentation, shall be provided without exception, by the valve manufacturer. The valve manufacturer shall be required to know and keep data files on all work performed, modifications and remediation as well as the agents performing the work. This data shall be permanently kept with the manufacturer regardless of licensee.

1.08 National Sanitation Foundation (NSF) Standard 61 Annex-G

- A. The entire plunger valve must have verifiable Certification of Compliance with the NSF 61 Annex G - Drinking Water System Components Standard. Certifications shall accompany submittals.

PART 2 PRODUCTS

2.01 Plunger Valve Performance Requirements

- A. Performance: The Plunger Valve shall be designed to operate smoothly throughout the specified flow range shown on contract drawing 40067-09-D without damaging cavitation, excessive noise, or excessive vibration. It shall not need vanes to prevent cavitation.
- B. Noise: Operating noise levels shall not exceed 95 decibels (dBA) at a distance of three (3) feet from the valve at the normal flow point. Material stresses shall not exceed 1/5 of the ultimate or 1/3 of the yield strength of the material. Flow rate as a function of pressure drop across the valve shall be linear to within 3-8%.

2.02 Plunger Valve Operating Requirements

- A. Valve Assembly Components: Each Plunger Valve assembly shall consist of a flanged short conical inlet section having an internal cone to divert the water flow into the annular cross sectional area of the valve body.

- B. An oval body section with an inner annular chamber shall be formed by the body shell. The plunger shall utilize an internal slider-crank mechanism driven by a 90 degree AWWA worm gear.
- C. The plunger shall move in an axial flow direction to increase or decrease the annular cross section open to the flow medium. The medium will flow around the plunger from the outer annular chamber to the inner chamber to control and regulate flow.
- D. The seals of the plunger valve shall allow the valve to be drip and bubble tight in both flow directions for the long term and without the need for premature seal replacement. The outside of the plunger shall seat against a quad-o-ring sealing ring. The quad-o-ring shall deflect and seal in both axial directions. The quad o-ring will provide the best available design for modulating service in the prevention of twist, roll and point loading of the plunger seal. The seal shall be insensitive to debris. The elastomeric profile sealing ring shall seat leak tight at the downstream end of the plunger. The elastomeric profile sealing ring shall be mechanically retained in the downstream flange of the valve body by a stainless steel seat ring. Valve shall be provided with a dry body shaft bore to prevent corrosion of the uncoated shaft bore. The valve operating shaft shall have five o-ring seals; two on the shaft at the crank mechanism and three on the shaft at the gear box. The o-ring seals shall maintain a drip tight seal regardless of modulation cycles or inactivity.
- E. To prevent possible dislodging over the valves life and or during prolonged modulation or transmitted pipeline vibration, the push rod linkages shall be mechanically retained with split pins. In addition, the control linkage and complete crank mechanism shall be either completely machined or investment casted. Exposed rough casting which could hide defects are not allowed.
- F. Valves shall be provided with 4 integral feet per each 180 degree circumference. There shall be 4 total lifting lugs, one per each foot. The four lifting lugs shall be factory drilled and taped. They shall be sufficiently broad in placement to assist with rigging of an unbalanced load.
- G. The valve shall function properly and without issue within any 180 degree flange rotation and the actuator with a left or right installation orientation.

2.03 Plunger Valve Design Features

- A. Plunger Valve must be a single piece body designed to avoid flow disturbance, corrosion between uncoated body sections and possible leakage. Valves bodies shall not be two or three piece and shall not have

flange to flange body connections. The Plunger Valve shall feature a continuously increasing annular cross section and resulting linear increase of flow velocity to the full open position without producing damaging cavitation.

- B. The plunger shall be seated against the upstream quad-o ring and an elastomeric seat located in body downstream flange with the valve in the closed position. The elastomeric seat shall be properly kept in position in a groove in the body and the downstream stainless steel seat ring shall secure the elastomeric profile sealing ring from displacement. The profile seat ring shall not be penetrated by fasteners, exposed to the flow stream in the open position and shall not be subject to cold flow of the elastomer.
- C. The Plunger Valve assembly shall axially recess in the upstream direction to increase flow.
- D. Plunger Valve design shall feature axial stroke movements, upstream and downstream, guided in the internal body by a rugged crank and push rod mechanism of stainless steel. The crank and push rod mechanism shall have an industry standard 90° angle of rotation stroke from open to close matching the travel for AWWA waterworks quarter turn valves. The provided actuator shall include a mechanical stop in the open and closed positions which will prevent attempts of actuator to hyper extend the plunger or place undesired stresses on the internal linkage system. The plunger shall slide and be contained in the axial position by guide rails. To prevent possible corrosion between the guide rails and the valve body, the guide rails shall be completely fused to the valve body in an overlay weld process to prevent any gaps or corrosion pathways. Guide rails which are riveted or bolted to the valve body are not acceptable for long-term operability and corrosion protection. The guide rails shall be bronze and shall be positioned around the plunger in an uneven quantity to reduce the potential for damaging harmonic vibration, clogging or excessive wear. The guide rails shall be low to no lead and very low zinc content to prevent dezincification (see Materials of Construction chart).
- E. The movement of the plunger shall be controlled by means of a self-locking quarter turn, 90 degree AWWA worm gear. AWWA worm gear shall come equipped with externally adjustable mechanical stops to limit valve travel in both the open and closed positions. The valve stroke shall equal 90 degrees plus or minus 2 degrees, whereby the mechanical stops of the worm gear shall be engaged before the full extension or retraction of the plunger. In no instance shall the full output torque of actuator be allowed to be transmitted to the valve at its end of travel, either open or closed, without engaging the travel stops of the worm gear first. The AWWA worm gear unit shall be operated by a hand wheel floorstand.

- F. The design of the annular throat cross section, open to flow, shall ensure precise flow control over the complete open to close stroke of the plunger.
- G. The proposed valve actuator shall operate in accordance with the manufacturer's requirements.
- H. The Plunger Valve must be easy to maintain, as such it shall have the profile sealing ring in the downstream flange. A mechanic shall not have to reach inside the valve to perform seat replacement. The profile sealing ring shall be interchangeable without dismantling the valve from the pipeline.
- I. Connections: Valve end connections shall be provided by ANSI standard pattern flanges for the size and pressure rating specified.
- J. The valve body shall come equipped with a threaded tapped plug suitable for draining the valve body cavity should maintenance or inspection be required and/or for installation of a pressure gauge.
- K. Plunger Valve shall come equipped with a valve support consisting of a separate footplate and valve baseplate. Valve footplate shall be anchored in valve pedestal to prevent endue movement during a seismic event.

2.04 Material Requirements

A. Principal Component Parts Materials of Construction

Item	Material	Specification
Valve Body	Ductile Iron	ASTM A536, GR. 60,40,18
Plunger	Stainless Steel	AISI 316
Regulating cylinder	Stainless Steel	AISI 316
Shaft Bushing	Bronze	ASTM C90800/ CuSn12
Crank shaft	Stainless Steel	AISI 420 –solid core, no chrome plating
Crank mechanism	Stainless Steel	AISI 316
Seat / Retaining ring	Stainless Steel	AISI 316
Plunger guide rails	Aluminum Bronze Welded Overlay	CuAl8 (lead <0.0020% Zinc < 0.008%
Quad-sealing-ring	EPDM hardness A:80, (=/- 5). Elongation >200%, Tensile >12 N/mm, Elasticity >25%	
Profile sealing ring	EPDM (only)	

Shaft O-Rings	EPDM	
Worm Gearbox	Housing: Ductile Iron Worm wheel: Stainless Steel	GGG-40 GGG-60 10088-3

- B. All studs, bolts, washers, and nuts in contact with water shall be Type 316 stainless steel. Seat and seat ring retainers shall be Allen or hex head fasteners. Slotted screw fasteners shall not be used.
- C. All materials of moving components in contact with each other shall be of dissimilar hardness to prevent galling. The valve shall be moved through an open-close-open cycle three (3) times after final assembly and prior to shipment to ensure this requirement.
- D. Use coating System #2 - Submerged Metal, Domestic Sewage: Epoxy per SSP 210.3.7 - Painting and Coating as well as the noted herein.
- E. The valve manufacturer coating process shall include post preparation and coating application assurances of targeted performance. The manufacturer shall utilize and incorporate a QC process that includes Coating thickness Testing, Holiday Free Testing, Cross Linkage Testing, Impact Resistance Testing, Coating Adhesion Testing and Cathodic Disbonding Testing. The Quality Compliance testing shall remain on record with the manufacturer and available for review and approval.
- F. The valve shall be blast coated to near white metal. The blast cleaned body shall be then thoroughly cleaned to remove all dust, grease, oil or other negative adhesion potentials. It shall meet the coating manufacturers recommended duration for humidity and temperature and at coating application. Coating shall take place within 12 hours of the blast cleaning process.
- H. The applied coatings shall be tested and signed and dated-verified holiday free with a dry film thickness of a minimum of 16 mils DFT.

2.05 Flanges

- A. For design pressure up to 300 pounds per square inch (psi), use AWWA Class D iron flanges or use ANSI B16.5, Class 250 steel flanges.

- B. Facing: Flanges of all classes shall be flat faced; without projection or raised face. Per manufacturer's design, a serrated concentric finish having with at least four (4) grooves (3 grooves/inch) finish shall be used to aid in gasket retention. The cutting tool employed shall have an approximate 0.06 in (1.52 mm) or larger radius. The resultant surface finish shall have a 250 to 500µin. (6.35 to 12.7 µm) roughness.

2.06 Flanged Expansion Outlet Hood

- A. The flanged expansion outlet shall be mounted directly downstream flange of the plunger valve.
- B. The flanged expansion outlet shall be manufactured out of ASTM A283 with welded internal support ribs. It shall be sized and of an appropriate thickness to prevent vibration. It shall wholly supported by the downstream plunger valve flange. It shall be coated to a minimum of 16 mils DFT.

2.07 Plunger Valve Manufacturer

Plunger Valve manufacturer shall be:

VAG Armaturen GmbH
Carl-Reuther-Str. 1
68305 Mannheim, Germany
North American Factory Contact:
VAG/GA USA (724)776-1020

Or Equal.

PART 3 EXECUTION

3.01 Installation

- A. Valve installation shall be in strict accordance with the Manufacturer's printed recommendations and the Contract Documents. Uncrated valve handling shall utilize all four lifting eyes.
- B. Four (4) hard bound copies and one (1) CD of the Operation and Maintenance Manual shall be provided with the valve. The manuals shall include installation instructions, maintenance procedures and operation parameters.

3.02 Workmanship

- A. Valves shall be free from manufacturing defects and shall be manufactured in a workman like manner.

- B. Grease and scale shall be completely cleaned from the valve prior to painting per Society for Protective Coatings (SSPC) standards.
- C. Valves shall be manufactured under the direction of a registered professional engineer.
- D. All ductile iron components shall be coated strictly to the coating manufacturers guidelines. A certificate of compliance with the purchaser's material specifications and the Manufacturer's quality assurance program shall be furnished with each valve.
- E. Valves shall be factory "Ocean Crated" to prevent damage in transit. Crating shall fully enclose the valve and actuator.

3.03 Field Testing and Performance

- A. The valve manufacturer shall furnish all required start-up assistance and inspection of valve after installation at the City of San Diego's facility. Representatives, Licensee(s) and authorized service agents of the valve manufacturer shall not perform any work inclusive of but not limited to, start up and testing, operating the valve without the valve manufacturer's on site presence. The valve manufacturer shall be wholly responsible for any work performed by its Licensee or their authorized agents.
- B. Valves shall be field leak tested by the Contractor to the specified operating pressure in the closed position and shall not leak. Field leakage relevant to the Plunger Valve shall be corrected by the valve Manufacturer at the valve Manufacturer's expense. Field leakage test results shall be certified by the City of San Diego's Engineer or an appointee of the City of San Diego, Manufacturer's onsite representative and Contractor.
- C. Plunger Valves shall be subjected to onsite performance testing as part of the commissioning activities in accordance with a written performance test plan. The valve shall be field verified and subjected to variable flow conditions from closed to full open.
- D. The plunger valve operator shall maintain a fixed flow rate.
- E. Upon completion of the field testing, the test results and acceptable functioning shall be documented and signed and dated the valve manufacturer. Representatives, Licensee or other stake holders may accompany start up but shall not be an acceptable substitute for the valve manufacturer's presence or documented sign off.

3.04 Warranty

- A. The plunger valve Manufacturer shall warrant its products, including actuators incorporated in the work, to be free from defects in materials, workmanship and performance for a period of five years from the date of receipt. Upon notice by the City of San Diego, any damage or defect found during the warranty period shall be promptly repaired or replaced by the valve Manufacturer at no cost to the City of San Diego. Where a valve is for sale via a Licensee of the valve manufacturer/ the Licensor, and as this agreement is subject to dissolution and or termination to the potential detriment of the City of San Diego, both the Licensee and the valve Manufacturer, Licensor, shall be wholly responsible for the warranty. The warranty claim and resolution shall be severable and actionable to both Licensee and Licensor. Warranty claims and resolution will not need to be exhausted through the Licensee and shall remain in effect for the total duration of the warranty period to the Licensor. Performed actions of authorized agents of the Licensee shall constitute actions of the valve manufacturer and shall be the responsibility of the valve Manufacturer/Licensor. This warranty shall be in effect regardless of the contract between the contracted entity/Licensee and the Licensor.

END OF SECTION

SECTION 40 95 34

FIBER OPTICS AND INSTALLATION

PART 1 - GENERAL

1.1 WORK IN THIS SECTION

- A. The Work of the following Divisions and 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. Division 26 – Electrical
- B. Fiber optic cable shall consist of optical fibers, strength members, and jacketing. Associated components shall include optical fiber connectors, optical patch panels, terminal bay cabinets, and splice closures as indicated. Fiber optic cables shall be installed exclusively in inner duct. The Fiber Optic CONTRACTOR (FC) shall install the fiber optic cabling in new raceways, concrete-encased duct-banks, conduits, manhole systems in strict accordance with drawings, notes and other specification sections where applicable. Where new raceway is required within structures to support fiber optic cables, those conduits shall be either EMT, GRC or PVC coated GRC, as appropriate for the process area and as specified in Division 26. Fiber optic Termination Panels and Patch panels shall be located in new facility buildings in strict accordance with drawings, notes and other specification sections where applicable. References in this section to ‘cable’ shall refer to fiber optic cable.
- C. FC shall provide LC connectors unless otherwise specified.

1.2 SCOPE

- A. The intent of this Specification is that the Fiber Optic CONTRACTOR (FC) will provide a complete and operational, turn-key Fiber Optic based Backbone network, capable of supporting GigaBit plus communications in support of the specified DCS systems at each facility, and locations as shown on drawings.
- B. The FC shall furnish all materials, tools, equipment, consumables and supplies and shall perform all labor required to complete the work in this Specification.
- C. The FC shall integrate the fiber optic backbone network, with each existing or new facility DCS LAN and WAN, Wide Area Network, Firewalls, Switches and Routers, as shown on drawings and as directed by City COMNET network support staff.

1.3 WORK SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS, CODES AND STANDARDS

- A. ASTM INTERNATIONAL (ASTM)

1. ASTM C 338 (1993; R 2003), Standard Test Method Softening Point of Glass.
 2. ASTM D 4976 (2004a) Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.
- B. ELECTRONIC INDUSTRIES ALLIANCE (EIA)
1. EIA 455-168A (1992) FOTP-168 Chromatic Dispersion Measurement of Multimode Graded-Index and Single-Mode Optical Fibers by Spectral Group Delay Measurement in the Time Domain
 2. EIA 455-169A (2001) FOTP-169 Chromatic Dispersion Measurement of Optical Fibers by the Phase-Shift Method
 3. EIA 455-25C (1996) FOTP-25 Repeated Impact Testing of Single-Mode Fiber Optic Cables and Cable Assemblies
 4. EIA 455-30B (1991) Frequency Domain Measurement of Multitude Optical Fiber Information Transmission Capacity
 5. EIA 455-33A (1988) FOTP-33 Fiber Optic Cable Tensile Loading and Bending Test
 6. EIA 455-41 (1993) FOTP-41 Compressive Loading Resistance of Fiber Optic Cables
 7. EIA 455-46A (1990) FOTP-46 Spectral Attenuation Measurement for Long-Length, Graded-Index Optical Fibers
 8. EIA 455-47B (1992) FOTP-47 Output For Field Radiation Pattern Measurement
 9. EIA 455-80B (1996) FOTP-80 Cutoff Wavelength of Un-cabled Single-Mode Fiber by Transmitted Power
 10. EIA 455-81B (2000) FOTP-81 Compound Flow (Drip) Test for Filled Fiber Optic Cable
 11. EIA 455-82B (1991) FOTP-82 Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable
- C. TELECOMMUNICATIONS INDUSTRIES ASSOCIATION (TIA)
1. EIA/TIA 455-165A (1993) Standard for Mode-Field Diameter Measurement by Near-Field Scanning Technique
 2. TIA 455-104A (1993, R 2005) Standard for Fiber Optic Cable Cyclic Flexing Test
 3. TIA 455-78B (2002) Optical Fibers - Part 1-40: Measurement Methods and Test Procedures – Attenuation
 4. TIA/EIA 492 AAAA
 5. TIA/EIA 492 CAAB

6. ANSI/TIA/EIA-526-7 Optical Power Loss Measurements of Installed Single-mode Fiber Cable Plant.
 7. ANSI/TIA/EIA-568 Commercial Building Telecommunications Cabling Standard
 8. TIA/EIA-568-B.2, Transmission performance specification for 4 pair 100 Ohm Category 6 cabling
 9. TIA 568-C.3 Optical Fiber Cabling Components Standard.
 10. ANSI/TIA/EIA-569-A Commercial Building Standard for Telecommunications Pathways and Spaces
 11. ANSI/TIA 569-B Commercial Building Standard for Telecommunications Pathways and Spaces
 12. ANSI/TIA/EIA-606 The Administration Standards for the Telecommunications Infrastructure of Commercial Building
 13. ANSI/TIA/EIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications
 14. ANSI/TIA/EIA-TSB-67 Telecommunications System Bulletin Technical Systems Bulletin, Transmission Performance Specifications for Field Testing of Unshielded Twisted Pair Cabling Systems.
 15. TIA/EIA 604-12 FOCIS-12 Fiber Optic Connector Intermateability Standard, Type MT-RJ.
 16. TIA/EIA 604-2 FOCIS-2 Fiber Optic Connector Intermateability Standard, Type ST.
 17. TIA/EIA 604-3 FOCIS-3 Fiber Optic Connector Intermateability Standard, Type SC and SC-APC.
 18. TIA/EIA-598-B Optical Fiber Cable Color Coding.
- D. ISO: ISO/IEC 11801 (2002) Information Technology – General Cabling for Customer Premises.
- E. ITU: ITU-T G.652 Characteristics of single-mode optical fiber and cable
- F. IEC: IEC 60793-2-50 Type B1.3.
- G. BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL (BICSI)
1. BICSI, Telecommunications Distribution Methods Manual
 2. BICSI, Cabling Installation Manual
- H. NATIONAL FIRE PROTECTION ASSOCIATION: NFPA-70, National Electric Code.
- I. UNDERWRITERS LABORATORY: All Fiber Optic Cable and equipment furnished by the FC in this Section shall be listed by and shall bear the label of Underwriters' Laboratories, Incorporated, (UL) or of an independent testing laboratory acceptable to the City of San Diego (City).

1.4 SUBMITTALS

A. General

1. All submittals shall be provided in accordance with the general provision Submittal Procedures, as a minimum, and in accordance with specialty submittal requirement below.
2. All submittal of this section shall be provided with six (6) hard copies and one (1) soft copy (CD).

B. Informational Submittals:

1. Preconstruction Submittals: The following preconstruction submittals shall be submitted to the City's representative for approval and approved prior to installation of any fiber optic cable:
 - a. Qualifications of personnel working with fiber optic cable
 - b. Quality Assurance Plan
 - 1) Pre-Installation Test Plan, Fiber Optic Cabling
 - 2) Post-Installation Test Plan, Fiber Optic Cabling
 - 3) Primavera P6 Fiber Optic Cable Master Installation Schedule, inclusive of all work related to this Specification Section
2. Product Data: The following Product submittals shall be submitted to the City's representative for approval and approved prior to issuing any Purchase Orders for all applicable Fiber Optic Products. Data shall include a complete list (Bill of Material – BOM) of all material, parts, special tools, consumables and supplies, each with current unit prices, source of supply, and vendors contact information, including telephone numbers. Manufacturer's product data shall be submitted for the following items:
 - a. Fiber Optic Cable
 - b. Splice Organizers
 - c. Pre-Connected Cable Assembly
 - d. Fiber Optic Terminal Cabinets
 - e. Optical Patch Panel Assemblies
 - f. Fiber Optic Line/Patch Cables
 - g. Inner Duct
 - h. Cable Supports and Management Systems
 - i. Cable Trays/Ladder Rack
 - j. All other mounting hardware
 - k. Fire stopping Material
 - l. Identification tape

m. Testing equipment

C. Action Submittals:

1. Test Reports: FC shall submit test reports for approval, to the City's representative, not later than 14 calendar days after the completion of each test. Test Reports shall be submitted as follows:
 - a. Factory Test Certificates.
 - b. Fiber Optic Cable Bi-Directional, Optical Time Domain Reflectometer (OTDR) pre-installation tests, "on-reel" on site. No cable installation shall occur until the "on-reel" test report has been submitted and approved by City representative.
 - c. Fiber Optic Cable Bi-Directional, Optical Time Domain Reflectometer (OTDR) post-installation tests, Installed and terminated.
 - d. Unidirectional End-to-End Attenuation Tests.
 - e. Unidirectional End-to-End Bandwidth Tests.
 - 1) The OTDR, Attenuation and Bandwidth 'tests' result information for each link shall be recorded in the memory of the field-test instrument upon completion of the test, and immediately transferred to CD/DVD in the presence of the City representative, to provide non-volatile backup. The CD/DVC shall be transmitted to the City representative immediately upon completion of daily testing.
 - 2) The test result records saved within the field-test instrument shall be transferred into a Windows™-based database utility that allows for the maintenance, inspection and archiving of these test records.
 - 3) These results shall be transferred to the PC or laptop unaltered, i.e., "as saved by the tester" at the end of each test. The popular 'csv' format (comma separated value format) does not provide adequate protection and shall not be acceptable. The database for the completed job shall be stored and delivered to the City representative on CD/DVD; this CD/DVD shall include the software tools, complete with applicable licenses, required to view, inspect, and print any selection of test reports.
2. Pulling Plan: The FC shall submit a proposed Fiber Optic Cable Pulling Plan. The Pulling Plan shall be submitted for approval to the City's representative not later than 30 calendar days after project award, prior to the scheduled start of cable and conduit placement.
 - a. The Pull Plan: Will identify all Fiber raceway segments to be pulled, including layout drawings along the pipeline alignment for conduit and handholes/pull boxes locations.

- b. Plans show suggested pullbox locations along the pipeline alignment, however actual locations must be calculated by the FC and approved by the City.
 - c. Will identify the proposed methodology of placement for each segment.
 - d. Will show proposed ‘unique Reel Number Identifications’, ‘cable start and stop footage measurements’, Cable(s) ID number, as well as cable type and fiber count.
 - e. Will show calculated pulling tension for the segment and proposed methodology for measuring pulling tension in each segment.
 - f. State manufactures maximum allowed pulling tension for each segment.
 - g. Calculated amount of lubrication required.
 - h. Detailed description of pull operation methods for all conduit runs.
 - i. Exact locations of splice points
3. Cable Testing Plan: The FC shall submit written procedures outlining the steps and methods that shall be used for the various tests the cable shall undergo during and after installation. Include a sample copy of each test form to be used in the test procedure

1.5 QUALIFICATIONS

- A. FC may place cable with FC’s own forces or through a sub-contractor. However, all personnel installing inner-duct work, or cable shall be performed by personnel who have experience in placing fiber optic cabling in conduit, cable trays, and underground duct systems installations in compliance with TIA 568-C.3.
- B. Installer certified by the Fiber Optic Association and Building Industry Consulting Services International.
- C. Installer will have recent experience with all aspects of the fiber optic cable system as specified, including the installation of cable and testing of fiber optics and the installation and testing of all components.
- D. Installer will have recent experience with installation and testing of of continuous fiber optic cable.
- E. Tester:
 - 1. Experience with projects utilizing fiber optic cable in compliance with TIA 568-C.3.
 - a. Technician:
 - 1) Successfully completed training program, which includes testing with an Optical Time Domain Reflectometer (OTDR).
 - 2) Certificate of completion of training issued by one of following organizations:
 - a) Manufacturer of fiber optic cable and fiber optic connectors.

- b) Manufacturer of test equipment used for field certification.
- F. Fiber optic cable splices, terminations and testing shall be made by certified cable splicers who have experience in fusion and in-line compression splicing and terminating fiber optic cables. Personnel working pursuant to this section, may, at the City representative option, be required to demonstrate technical competence by performing sample work and/or by displaying their state qualifications/certificates. FC personnel may be required, at no additional cost to the City, to provide sample work shall involving performing acceptable sample splices and terminations, in the presence of the City representative.
- G. Manufacturer:
 - 1. Cable:
 - a. ISO 9001 or QF TL 9000 registered, whichever applies to material.
 - b. Experience manufacturing optical fiber cable.
 - 2. Housing: ISO 9001 or QF TL 9000 registered.
 - 3. Connector:
 - a. ISO 9001 or QF TL 9000 registered.
 - b. Experience with manufacturing and supporting connector technology that does not require epoxy or polishing in field.
 - 4. Jumper Cable: ISO 9001 and QF TL 9000 registered.

1.6 QUALITY ASSURANCE PLAN

- A. FC shall prepare a Quality Assurance Plan. The Plan shall include as a minimum:
 - 1. Shall include a schedule of when tests will be performed relative to installation milestones, specific test procedure that will be used, a list of test equipment that will be used including manufacturer, model number, range, resolution accuracy and shall conform to the specified requirements.
 - 2. List and show all test equipment Calibration certificates, valid within the last 180 calendar days.
 - 3. Show detailed procedures defining methods to ensure compliance to contract drawings and specifications by drawing control, inspection and procurement records.
 - 4. Show when and how each system will be tested, material testing procedures and certification records.
 - 5. Shall address whether cladding modes have been stripped prior to testing, source wavelength (peak), spectral width full width/half maximum (FWHM), mode structure, fiber end preparation, and bandwidth measurements of fiber links both greater and less than 1 kilometer.

- B. Test plan shall be submitted and approved by the City representative in a timely fashion to the PMT, and ‘Approved’ at least 30 calendar days prior to the start of the Earliest Test Plan item.

1.7 STORAGE AND HANDLING

- A. Care shall be exercised in handling materials during construction.
- B. The FC shall be solely responsible for proper handling and storage of all fiber Optic cabling and Fiber Optic apparatus. The FC shall ensure that all Fiber Optic cable reels are ordered, received and stored with hard reel-shields in place. Reels received without reel-shields may, at the sole discretion of the City, be required to be returned.
- C. Fiber Optic cabling shall be stored in a clean, dry environment, approved by the City representative, until installation. Fiber Optic cable reels shall be stored with proper orientations such that large reels do not create a crush-weight on fiber.
- D. Adequate care shall be exercised when handling and storing reels of cable to prevent damage to the cable. Cable with dents, flat spots, or other sheath distortions shall not be installed
- E. Fiber Optic ancillary apparatus, such as connectors, splice cases, patch panels, terminal enclosures, etc. shall be stored indoors in a clean, dry environment at all times.
- F. Package the cable on a reel with inner hub diameter greater than the recommended minimum-bending diameter of the cable.
- G. Package shall be sturdy enough to endure reasonable handling in the process of shipping and storage.
- H. Securely attach tags or clearly and permanently stencil or label each reel, with the following information: customer order number, customer job number, customer reel number, termination, ship date, manufacturer’s name, factory reel number, manufacturer’s cable code (type and fiber count), length of cable, weight of cable and reel.
- I. Seal the ends of all cable to prevent the escape of filling compound and to prevent the entry of moisture during shipping, handling, storage and installation.

1.8 SPECIAL GUARANTEE

- A. The Contractor shall guarantee the Work of this Section for 2 years following final acceptance of the Work. In making any warranty repairs, the Contractor shall utilize technical services as necessary. Repairs shall be completed within 5 days after written notification by Owner.

PART 2 - PRODUCT

2.1 OPTICAL FIBERS

- A. Named Types:

1. Single Mode Type: Single-Mode (SM) fiber must be the equivalent graded index optical glass. Core diameter of the fiber shall be approximately 8.7 (µm) micrometer. Cladding diameter shall be 125 (µm) plus or minus 3 micrometer (µm). Core cladding offset shall be less than 1 micrometer. Minimum tensile strength of the fiber after primary protective coating shall be greater than 350,000 kilopascal (50,000 psi). Softening point of the clad material of the optical fiber shall be 1630 degrees C plus or minus 50 degrees C in accordance with ASTM C 338, or the optical fiber shall meet the requirements in paragraph entitled, "Splice Compatibility Test." Corning's SMF-28e Single-mode or equal.
- B. Fiber Primary Protective Coating: Optical fiber shall be coated with suitable material to preserve the intrinsic high tensile strength of the glass fiber. Outside diameter of the coated optical fiber shall be 250 plus or minus 15 micrometers. Coating material shall be readily removable, mechanically or chemically, without damaging the optical fibers when the removal is desired.
- C. Optical Fiber Color-Code Coating: Primary protective coated SM fibers shall be coated with a color-code coating for individual fiber identification. Maximum outside diameter of color-code coated fiber shall be less than 300 micrometers.
- D. Colorants: Color concentrates or inks used to color code the optical fibers and the loose buffer tube shall not be susceptible to migration and chemical reaction with surrounding compounds.

2.2 FIBER OPTIC CABLE

- A. Fiber Optic Cable specified under this section shall be provided and staged by the DCSP. However, the fiber optic cable shall be installed by the fiber optic subcontractor and that Work shall be performed under Division 26, inclusive of all fiber terminations, fiber optic pre-installation testing and fiber optic post installation testing. All testing to be witnessed by the City's representative and the DCSP.
- B. Cable Length: Cable shall be manufactured continuous with no factory splices. FC, at FC's own discretion, may use 'master-reels', or individual segment reels, as long as proper identification, handling and storage methods are utilized. All cable reels shall have factory-affixed reel identifiers.
- C. Materials and Construction:
 1. Materials used within a given cable shall be compatible with all other materials used in the same cable when such materials come into intimate contact. All cable components used shall have no adverse effect on optical transmission or on the mechanical integrity characteristics of the fiber placed in the cable. All materials used shall be non-toxic, non-corrosive, and shall present no dermal hazard.
 2. Minimum required material components applied to fiber optic cable construction shall be central core member, color-coded optical fiber, color-coded loose tube design with:

- a. Gel-filling, gel-filling around loose tube, inner jacket, pulling strength members, and outer jacket.
 - b. Or, designed to comply with ICEA S-104-696, "Standard for Indoor-Outdoor Optical Fiber Cable." ICEA-696
 - c. In addition, variations in sequence and construction structural components will be considered when necessary.
 - d. The fiber shall be manufactured by the outside vapor deposition (OVD) process.
- D. Central Core Member: A central core member shall be included to serve as a cable core foundation to reduce strain on the fibers but not to serve as a pulling strength member. Material of the central core member shall be non-metallic.
- E. Named Types:
- 1. 12-fiber cable shall contain single mode (SM) fibers, as required and as shown on drawings, listed for plenum or building riser applications, with water-swallowable strength yarns and a flame retardant outer jacket, Type Corning FREEDM One, or equal, for inside building only.
 - 2. 24-fiber, 36-fiber, 48-fiber or above, shall contain single mode (SM) fibers, as required and as shown on drawings. Cable core configuration shall be comprised of loose buffer tubes, each containing six fibers. Six fibers in each loose buffer tube shall be color coded using the first colors of the standard Munsell color code, Blue, Orange, Green, Brown. Loose buffer tubes shall be color coded using the standard Munsell color code, Blue, Orange, Green, and Brown.
- F. Loose Tube Buffering: Color-code coated fibers shall be surrounded with a loose tube buffering for protection from external mechanical and environmental influences. Loose tube buffering shall be color coded for the tube identification.
- G. Inner Jacket: Buffer tubes shall be located concentrically around the cable central core member and covered with a polyethylene inner jacket. Polyethylene inner jacket shall be polyethylene in accordance with ASTM D 4976. Space between the buffer tubes and inner jacket shall be filled with a gel compound, or swellable yarns to prevent moisture, or water intrusion in the inner jacket.
- H. Pulling Strength Member: Aramid type material shall be used as pulling strength members in the cable to provide pulling strength of at least 1800 Newton (400 pounds) for the cable, during the installation process.
- I. Cable Outer Jacket: Black, high-molecular weight, polyethylene materials in accordance with ASTM D 4976 shall be applied longitudinally over all the inner jacket and sheathing strength member to form the cable outer jacket. Outer jacket shall be smooth, concentric, non-nutrient to fungus, and free from holes, splits, blisters, or other imperfections.
- J. Overall outside diameter of any cable type shall not exceed 0.75 inch.

2.3 CABLE IDENTIFICATION SYMBOL

A. General:

1. An ID shall be hot stamped on the outer jacket of the fiber optic cable at periodic intervals shall be at least every 5 feet.
2. Color shall be white.

B. Identification Approach:

1. Some Cable identification is easily stamped on the cabling at the factory, while other information is not so easily accomplished.
 - a. Each cable shall have embossed on the outer jacket of the cable, in white lettering, the following; The Manufacturer's ID or Model Number of the cable. The Type of cable e.g SM. The number of fibers in the cable. The Footage Marker of the cable. All of the above shall be stamped on the cable at intervals of five (5) feet.
 - b. At FC option, each cable shall have the ISA Cable Identification Number, as shown on the drawings, either: (1) embossed on the outer jacket of the cable, in white lettering, or (2) alternately place onto the cable a printed label, of the wrap-on self-laminating type, which contains the unique ISA Cable Identification Number. If option 1 is used, Cable Identification stamping shall be at intervals of five (5) feet. If option 2 is used, Cable Identification tags shall be placed at each end of the cable within five (5) feet of the terminus and at the entrance and exit points of all intermediate points as follows: Pull-boxes, handholes, manholes, cable-tray, splice cases, etc.

C. Cable Reel Identifier:

1. Each cable reel shall be uniquely identified on the exterior of each fiber optic reel by the manufacturer. In addition, the beginning and ending cable reel footage identifiers shall be placed on the exterior of the reel by the manufacturer.
2. When preparing the Pulling Plan, the FC shall use this unique cable identifier, as well as the proposed starting and ending footages, for each conduit segment to be pulled.

2.4 REPLACEMENT CABLE

- A. In addition, a reel of each size (FO count), and type, of cable furnished by the FC, not less than .5 kilometers in length, shall be provided. This cable shall be turned over to the City representative immediately after on-reel, bi-directional, 'on-site OTDR testing is completed.

2.5 PRE-CONNECTED CABLE ASSEMBLY

- A. FC shall supply factory assembled pre-connectorized cable assembly to interface FO cables with the patch panel bulkhead feed-through receptacle. FC shall

terminate all fibers, used as well as spares. FC shall supply and install dust caps for all terminated fibers.

- B. Single fiber optic cable assembly shall be comprised of a single fiber connector terminated on the three (3) meter length of single fiber, single mode cable. Single fiber cable shall contain a buffered optical fiber.
- C. Connector/cable interface on the single cable assemblies shall be able to withstand a tensile force of 110 Newton (25 pounds) without detrimental effects on the connector loss characteristics.
- D. Each connectorized cable assembly shall have a loss of less than or equal to 0.5 dB

2.6 OPTICAL PATCH PANEL ASSEMBLIES

- A. All cable terminations shall be made in optical patch panel assemblies. Patch panel assemblies shall be of the pre-assembled chassis type with associated rack-mounting hardware.
- B. To facilitate the transition between outside plant cable and the pre-connectorized cable assemblies, the fibers shall be fusion spliced and housed in a splice tray within the patch panel assembly. Splice tray shall be positioned in the optical patch panel assembly per manufactures recommendation. Splice attenuation shall not exceed 0.2 db. Splice shall be covered with a protective sleeve.
- C. FO Patch Panels are to be located 'within' the Fiber Optic Terminal Cabinets (FOTC) enclosures as shown on drawings; typically located adjacent to the DCS PCM cabinet.

2.7 FIBER OPTIC TERMINAL CABINETS

- A. FOTCs shall be front access only.
- B. Cabinet's frame shall consist of vertical and horizontal tubular aluminum extrusions with a minimum wall thickness of .150. Front to rear aluminum extruded corners shall be at least .125 thick.
- C. Rear door, top panel, and side panels shall be a minimum 316 Stainless Steel.
- D. FOTC shall be NEMA 12 or NEMA 4X, based on Area Classification. Where Area Classifications dictate NEMA 4X, the cable entry shall be sealed with EYS type fittings and sealed only after final cable testing.
- E. Ten (10) feet of fiber shall be coiled prior to termination to Patch Panel within the FOTC. This requires cable handling and dressing mechanisms within the FOTC that shall be subject to City representative approval as part of the enclosure submittal.
- F. FOTC shall be floor mounted, or wall mounted, and seismically rated and braced.
- G. FOTCs shall provide for strain relief of incoming cables as well as providing connector panels and connector couplings adequate to accommodate the number of fibers to be terminated.

- H. All FOTCs shall incorporate radius control mechanisms to limit bending of the fibers to the manufacturer’s recommended minimums.
- I. Couplers shall be mounted on a panel that, in turn, snaps into the housing assembly.
- J. FOTCs shall have a common key lock that opens all FOTCs installed for this project, or a common City lockset as directed by City representative.
- K. FOTCs shall be rack-mounted, unless specified otherwise in the drawings. Sizes are 12-fiber, 24-fiber, 36-fiber, 48-fiber or 72-fiber.

2.8 SPLICE ORGANIZERS

- A. Single mode fibers shall be fusion spliced with a protective sleeve covering and stored in an organizer with a minimum of 450 millimeters (18 inches) spare coiled buffer tubing.

2.9 FIBER OPTIC CONNECTORS AND BREAKOUT KITS

A. Connectors:

- 1. FOT fiber optic single mode yellow connectors (LC/APC – angle polish) shall be suitable for optical circuits.
 - a. Connectors: Attenuation per mated pair shall not exceed 0.75 dB (individual) and 0.5 dB (average). They shall sustain a minimum of 200 mating cycles per EIA/TIA – 455-21 without violating specifications. Connectors shall meet the following performance criteria:

<u>Test (dB)</u>	<u>Procedure</u>	<u>Max. Attenuation Change</u>
Cable Retention	FOTP-6	0.2 dB
Durability	FOTP-21	0.2 dB
Impact	FOTP-2	0.2 dB
Thermal Shock	FOTP-3	0.2 dB
Humidity	FOTP -5	0.2 dB

- 2. Manufacturer: ACON, Sumitomo Electric, Tyco, or approved equal

B. Breakout Kits:

- 1. Heat-shrinkable, polymeric insulating material over the connection area and a high dielectric strength mastic to seal the ends against ingress of moisture and contamination.
- 2. Accommodate a range of cable sizes for both in-line and stub-type configurations.
- 3. Independent of cable manufacturer's tolerances.
- 4. Acceptable Manufacturer:

- a. Belden.
- b. Corning.
- c. Approved Equal.

2.10 FIBER OPTIC LINE/PATCH CABLES

- A. All fiber optic patch cords shall be duplex zip cords, factory terminated and 100 percent tested.
- B. All fiber optic patch cords shall match fiber optic panel termination connector, i.e., green SC/APC to green SC/APC for angle polish.

2.11 FIBER OPTIC INNER DUCT

- A. This specification applies to the following:
 - 1. Flexible, Plenum and Riser-rated inner duct
 - 2. Flexible, Plenum and Riser-rated MaxCell Cells
- B. Pull cord: Each inner duct shall come with pull cord. Pull cord shall be 1/4-inch polypropylene or equivalent with a minimum tensile strength of 1250 pounds. Pull cord shall be installed in the inner duct prior to delivery to the construction site. The pull cord shall extend 6 feet beyond the termination at each end.
- C. Conduit and inner duct plugs: The Fiber Optic conduit plugs will be Jack Moon Duct Plug from TYCO or equal. Inner duct will be affixed to the interior of the Duct Plug by an approved means, in accordance with MaxCell or TYCO technical bulletins.

2.12 ACCESSORIES

- A. Hardware: Provide cable clamps, strain reliefs, blocking and grommet kits, closures, and fan outs for complete installation.

PART 3 - EXECUTION

3.1 FACTORY TEST

- A. Fiber optical cable shall comply with the optical and mechanical test requirements of this section.
- B. The MANUFACTURER shall certify OTDR test, optical, and mechanical performance for each reel. Manufacturers' Certification shall be delivered with the fiber optic cable when it arrives.
 - 1. Factory testing documentation shall be submitted to the City representative upon receipt of cable, and before any on-site OTDR testing commences.
- C. Optical Performance:

1. Single-Mode Fibers in the Cable:
 - a. Optical attenuation of each optical fiber in the cable (reeled) shall be no greater than 0.5 dB/Km at 850 nm, plus or minus 50 nm, optical spectrum window. Attenuation shall be measured on completed cable reel length, and normalized linearly to 1 Km. Measurement method shall be in accordance with TIA 455-78B, at central wavelength 850 nm nominal.
 - b. Pulse dispersion of each optical fiber in the cable (reeled) shall be no greater than 3.5 picoseconds/nm-Km within the emissive region of 1285-1330 nm. Measurement method shall be in accordance with EIA 455-168A and EIA 455-169A.
 - c. Mode field diameter at 850 nm optical spectrum window shall be within 10 plus or minus 1 micrometer. Measurement method shall be in accordance with EIA/TIA 455-165A at central wavelength 850 nm nominal. When this requirement is not met, the fusion splice compatibility test shall be applied.
 - d. Cut-off wavelength for 850 nm optical spectrum window shall be within 1200 plus or minus 70 nm. Measurement method shall be in accordance with EIA 455-80B.

D. Mechanical Performance:

1. Minimum Bend Radius: Cable shall be able to withstand bending to a minimum radius of 10 times the cable outer diameter without tensile load applied, and of 20 times the cable outer diameter with maximum tensile load applied (during installation), without damage to cable components or degradation of the optical fiber performance at room temperature.
2. Tensile Strength: Fiber optical cable shall withstand a pull force of at least 1800 Newtons (400 pounds force per square inch) to be applied to the pulling strength member during the installation, and a tensile load of at least 300 Newtons during operation without incurring any damage or detriment to fiber optical cable and optical performance. Tensile strength test shall be in accordance with EIA 455-33A.
3. Flexing or Bending Cycles: Fiber optical cable shall withstand at least 20 bending cycles at minimum bend radius without damage to the fiber optic cable components or degrading optical performance. Cyclic flexing test shall be in accordance with TIA 455-104A.
4. Crush Resistance: Minimum crush resistance of the fiber optical cable shall be greater than 650 Newton/centimeter (cm) without damage to cable components or degrading optical performance. Crush resistance test shall be in accordance with EIA 455-41.
5. Impact Resistance: Fiber optical cable shall be capable of withstanding 20 impacts, at five Newton-meters force, without damage to cable components,

or degradation of optical performance. Impact resistance test shall be in accordance with EIA 455-25C.

6. Gel Filling Compound Drip Test: Optical cable shall be tested for the ability of the gel filling compound in the interior of the inner jacket and loose tube buffer to resist flow at the temperature range of minus 40 degrees C to 60 degrees C in accordance with EIA 455-81B.
7. Fluid Penetration: Optical cable shall be capable of preventing the entry and axial migration of pressurized water when subjected to fluid penetration testing in accordance with EIA 455-82B.

3.2 TEMPERATURE ENVIRONMENT

- A. Fiber optical cable shall comply with the mechanical performance requirements herein while used in duct applications where the temperature varies from minus 8 degrees C to plus 38 degrees C. Optical performance degradation shall be less than five percent of the optical performance requirements in the temperature range of minus 20 degrees C to plus 60 degrees C. Fiber optical cable shall not be damaged in storage where the temperature may vary from minus 40 degrees C to plus 65 degrees C.

3.3 FIBER SPLICES

- A. The use of fiber optic splicing is to be minimized. The FC shall perform all cable splicing with certified personnel approved by the City representative. Outside plant fiber splices shall be fusion type and made along the fiber route where shown on the design drawings, or when FC reel lengths and related cable 'budget' are not a concern. FC shall ensure that Splices shall exhibit an insertion loss not greater than 0.2 dB. All splice measurements shall be made at appropriate frequencies for cable type. All splices shall be mounted in trays within splice enclosures.
- B. Completed splice shall be covered with a protective sleeve heat shrink type to restore the protective properties of the fiber coating and buffering. Deviations to the splice, location and pulling plans, will be permitted upon approval by the City representative, and shall be provided at no additional cost to City.
- C. All fiber colors shall be continuous from end to end. No switching or staggering of color scheme within the cable at splice points shall be allowed.
- D. Cables shall be brought out of manhole, handhole or intermediate pull-box in a controlled environment to perform the fiber fusion splice operation. Splice shall be completed by returning the cable to the manhole, etc. such that the excess cable does not impede future entrance and utilization of the enclosure. Cable shall be secured within the enclosure at intervals not in excess of 3 ft. utilizing standard galvanize racking hardware, provided by the FC. Racking hardware shall maintain minimum bend radius requirements.
- E. Field verification of all cable measurements end-to-end, before installation, is required to avoid any and all mid-span splices.

3.4 CABLE TERMINATIONS

- A. In accordance with TIA 568-C.3.
- B. Fan out fiber cable to allow direct connectorization of connectors.
 - 1. Sleeve over individual fibers with transparent furcation tubes.
 - 2. At point of convergence of furcation tubes, provide strain relief with metal or high density plastic fan-out collar.
- C. Breakout Kits:
 - 1. Terminate cables using manufacturer supplied breakout kits.
 - 2. Terminate in accordance with manufacturer's recommendations.
- D. Slack:
 - 1. Fiber Centers, Hubs, and Switches: Minimum, 3-meter slack fiber at each end, coiled neatly in cable management equipment.
 - 2. Communications Management Outlets: Minimum, 1-meter slack fiber, coiled neatly in outlet box.
- E. Connectors:
 - 1. Terminate 100 percent fibers in each cable to specified connector.
 - 2. Connect into fiber management system.

3.5 CABLE DRESSING

- A. Lacing and Bundling:
 - 1. Lace and bundle individual optical fiber cables in panels and electrical equipment at intervals not greater than six inches, spread into trees and connected to their respective terminals.
 - 2. Lacing shall be made up with plastic cable ties.
 - 3. Lacing is not necessary in plastic panel wiring duct.
 - 4. Bundle individual optical fiber cables crossing hinges into groups not exceeding eight fibers and arrange so that they will be protected from chafing when the hinged member is moved.
- B. Slack:
 - 1. Provide slack in handholes.
 - 2. Slack shall be sufficient to allow cables to be routed along the walls of the box.
 - 3. Amount of slack shall be equal to largest dimension of the box or as indicated on the drawings, whichever is larger.
 - 4. Where plastic panel wiring duct is provided for wire runs, lacing is not required.

5. Do not use plastic panel wiring duct in handholes.
- C. Individual Fibers:
1. Break out individual fibers from multi-fiber cables utilizing Breakout Kits as specified by cable manufacturer.
 2. Terminate individual fibers with connectors as required by the utilization equipment.
 3. Install connectors using manufacturer's recommended tools.
- D. Unless otherwise indicated, bond armoring of multi-fiber cables to the chassis ground bus at the control panel or per NEC at other locations. Provide terminals for running grounding wires through junction boxes.
- E. Install and terminate cable in compliance with the manufacturer's recommendations.

3.6 UNDERGROUND CABLE INSTALLATION

- A. It is the responsibility of the FC to install all fiber optic cabling, in raceway, ductbanks, conduits, etc. provided and installed by others, under Division 26 of the specifications. It is the responsibility of the FC to inspect all raceway and ensure that raceway has been installed in accordance with bend radius requirements and that all raceway is mandreled and clean, ready of cable installation. When placing Fiber Optic cabling the FC shall ensure that proper roller stands and sheaves are used to prevent strain or damage to the cabling during installation.
- B. In the event that the FC's installation crews witness any anomaly to the fiber during installation they are to immediately stop installation and notify the City's representative.
- C. Securing Cable:
1. Immediately after cable placement, a permanent identification tag shall be attached to visible cable sections. Cables shall be checked to ensure that the markings are intact.
 2. Cables and equipment shall be supported and secured as indicated in the design drawings. Where the specific method of support is not shown, supports and fasteners shall be used to secure cables and equipment in position. Metallic supports and fasteners shall be Stainless Steel. All cables shall be routed along the interior sides of manholes and shall be secured such that no more than a 4" catenary is evident between fasteners.
 3. No fewer than four, and preferably eight (8), cable/racking hooks shall be required per manhole and shall be provided by the FC.
 4. Clamps and straps consisting of stainless steel clamps and black-nylon ty-wraps shall be used as necessary to properly secure the cable
 5. Sequential cable markings along the cable, prior to and after each end of splice point, shall be recorded on the sequential cable form and submitted for approval.

D. Bending:

1. Caution shall be used by the FC when bending cable to avoid kinks or other damage to the sheath. Bend radius shall be as large as possible with a minimum of 10 times the cable diameter. Minimum radius shall be increased when necessary to meet cable manufacturer's recommendation. Cables shall not rest against any sharp edges.
2. Minimum bending radii shall not be exceeded as specified by the cable manufacturer during placement.

E. Pulling:

1. Complete the pulling of optical fiber cable into conduit or trays without damaging or putting undue stress on the cable insulation.
2. Soapstone, talc or UL listed pulling compounds are acceptable lubricants for pulling optical fiber cable.
3. Grease is not acceptable.
4. Raceway/conduit construction shall be complete, cleaned, and protected from the weather before cable is placed.
5. Pulling lines shall be attached to both cable ends when cable is destined for bi-directional pull, and fitted with factory-installed pulling eyes. Cables not equipped with a pulling eye shall have the pulling line attached to the cable end by means of a cable grip. Core hitches shall not be used.
6. Cable reels shall be located and aligned so that the cable is pulled out from the top of the reel into the duct or conduit in a long, smooth bend without twisting. Cable shall not be pulled from the bottom of the reel. A cable feeder guide of proper dimensions shall be used at the mouth to guide the cable into the duct or conduit.
7. Rigging shall be set up at the pulling end so that the pulling line and cable exit on a line parallel with the duct or conduit to prevent either from rubbing against the edge or mouth. Cable ends shall not be pulled around sheave wheels. When the sheave or pulley cannot be positioned to obtain sufficient cable end slack for proper racking and splicing with the pulling line attached to the end of the cable, a split cable grip may be used to obtain the necessary slack.
8. Unless direct burial cable, conductors shall be protected from earth, concrete or asphalt during a pull by plastic or canvas tarp covering the ground.
9. The FC shall perform all cable installation in conformance with the cable manufacturer's installation guidelines. Do not exceed cable manufacturer's recommendations for maximum pulling tensions. Where indicated in the Pulling Plan cable tension shall be monitored with a manometer.

F. Lubricant:

1. The FC shall use pulling lubricant to minimize pulling tension and prevent sheath damage when pulling cables into ducts and conduits. Lubricant shall be applied to the cable sheath with a lubricator. When pulling has been completed, the exposed cable ends shall be wiped clean of lubricant.
2. Lubricants shall be compatible with and intended for use with plastic-sheathed cables. Soap and grease type lubricants shall not be allowed.
3. All equipment and the pulling set shall be checked to minimize interruptions once pulling begins. Cable shall be pulled without stopping until the required amount of the cable has been placed. When the pulling operation is halted before the pull is completed, the tension of the pulling line shall not be released. When pulling is resumed, the inertia of the cable shall be overcome by increasing the tension in small steps a few seconds apart until the cable is in motion. Cable shall be paid from the top of the reel by rotating the reel in the feed direction at the rate of pull. Cable shall not be stripped off the reel by hand-pulling.

G. Damage and Defects:

1. FC shall use a tension monitoring device (Manometer) to ensure that the maximum pulling tension that may be applied to the cable to be pulled into a conduit section is not exceeded, unless cable is being pulled by hand. Any damage to the cable due to exceeding the maximum tension will require a new cable furnished by the FC at FC's own cost.
2. Cable shall be carefully inspected by the FC for sheath defects or other irregularities as it is paid out from the reel. When defects are detected, pulling shall stop immediately and the cable section shall be repaired or replaced at the sole discretion of the City representative. A system of communications shall be maintained between pulling and feed locations so that pulling can be stopped instantly, when required.
3. Cable shall be hand guided through intermediate manholes and into the next duct section when making pull-through. Proper rigging shall be used in the intermediate manhole to keep the pulling line and cable aligned with the exit duct to prevent the line or cable from rubbing against the edge of the duct. Cables in pull-through manholes shall be set up and racked before the cable ends in adjacent manholes are set up and racked.
4. Cable ends pulled into manholes, vaults, or terminal locations that are not to be racked or otherwise permanently positioned immediately shall be tied in fixed positions to prevent damage to the cables and provide adequate working space.

H. Seal:

1. Ducts or inner duct in which cable is placed shall be sealed with appropriate plugs or seals as specified elsewhere. This material shall be inserted between the cable and the duct and in all unused ducts, in order to prevent damage to

the cable sheath and to prevent the entrance of dirt or water into the Ducts from the manhole or vault.

2. Cables shall be provided in continuous lengths as required to accomplish the required installation without splices from termination to termination, except where field splices are specifically shown on approved field installation design submittals.

3.7 CABLE INSTALLATION IN CABLE TRAYS

- A. Except where shown by the design engineer, fiber optic cables shall not be installed in the same cable tray with ac power cables containing power in excess of 208 volts to ensure physical safety of FC installers, and subsequent safety of City personnel.
- B. The cable tray pathways shall be as specified in Division 26, Electrical.
- C. Cables placed in cable trays shall be installed in a neat and orderly manner.
- D. Cables in vertical trays shall be individually retained with Velcro straps at a maximum of 6 ft. on center.
- E. Provide and install cable management and support as required.

3.8 CABLE INSTALLATION IN CONDUIT

- A. All conduits housing fiber optic cable shall be at least 3/4 inch in size. The conduit should be sized appropriately in accordance with the EIA/TIA 569A. Conduits are installed by others, under Division 26, Electrical.
- B. Any conduits housing fiber optic cable shall have an inside bend radius of at least ten times the internal diameter of the conduit or the manufacturers specified bend radius of the fiber, whichever is greater.
- C. All conduits housing fiber optic cable shall be terminated with an insulated bushing to prevent damage to the conductor during installation or shall be terminated with a Jack Moon (Tyco) sealing plug after cable installation.
- D. All conduits, and inner duct, installed for fiber optic cable must be installed by others with a nylon pull cord.
- E. All conduit and trays shall be supported to the structure, independent of other services. Refer to Division 26, Electrical, regarding conduit support.
- F. All conduits that are larger than two inches and will house fiber optic cable must be filled with inner duct or MaxCell equivalent cells prior to the installation of the fiber optic cable. See the following table:

Conduit Size	# of Inner ducts
3" conduit	3-1" inner ducts
4" conduit	3-1" plus 1-1/4" inner ducts
5" conduit	3-1" plus 2-1/4" inner ducts

3.9 BACKBONE CABLE SERVICE COILS

- A. Install backbone cable service coils with length of ten (10) feet and a coiled diameter as required by manufacturer at each end of all new fiber optic cables to control excess cable lengths before terminating fiber strands.
- B. Install backbone cable service coils in 24' x 24' x 6' NEMA 1 enclosure within four feet of cable entrance inside of room. Use four adhesive holders and hook and loop fasteners to bind fiber service coil in four places with separation of 90 degrees and secure the slack fiber to the interior of the junction box. Tie wraps are not permitted.

3.10 FIRE STOPPING

- A. Provide fireproof seals where required in accordance with the National Fire Protection Association (NFPA) and the National Electric Code (NEC), Article 200-221 and EIA/TIA 569 standards.
 1. Fireproofing around raceways or conduits shall be provided by others as called for on design drawings and Division 26, Electrical.

3.11 TESTING

- A. Pre-Installation Testing, Fiber Optic Cables
 1. The FC is responsible for conducting full pre-installation testing of the Fiber Optic Cabling in accordance with this section and section 1.04.B
 2. Pre-Installation testing will be accomplished, bi-directionally, utilizing an Optical Time Domain Reflectometer (OTDR) and will be accomplished on each fiber, of each cable while still on the shipping reel. Pre-installation testing will be accomplished without any apparatus, connectors, etc., with the exception of the OTDR Launch cord/cable, affixed to the fiber under test.
 3. Prior to commencement of pre-installation testing, the FC will submit a Testing Plan which will address testing methodology for both Pre-and Post Installation testing. This plan should specify all parameters under which the FC will be testing the cables. All test equipment, test procedures, and testing techniques shall be specified in the Test Plan
 4. Note: no fiber optic cable may be placed until:
 - a. The Test Plan is submitted and approved by City representative.
 - b. The Pre-Installation OTDR testing is complete for all cables.
 - c. The OTDR Test Report, CD/DVR, report software, etc. for Pre-Installation Testing has been submitted to the City representative.
 - d. The FC receives written notice that the City's representative is ready and in place (Approval to Proceed)
 5. The City's representative will witness all pre-installation fiber optic testing. The City's representative will perform no less than 25 percent spot-

witnessing of Pre-Testing and may, at FC's sole option, witness 100 percent of the testing.

6. During testing the FC will log each cable, by reel and/or cable identification number, and will provide a testing sign-off sheet for each reel tested. FC will continue to reference this same reel and/or Cable ID number in FC's pulling plan such that testing data can be tracked to each cable segment(s) for post-installation testing.
 7. During testing the City's representative may suspend testing at any time, if in FC's sole opinion, testing is not being conducted in accordance with this section, or the Testing Plan.
 8. During testing the City's representative may fail any reel of cable that has obvious flaws as determined by the OTDR. Should the cable flaw be within the first or last 10 percent of the reel length being tested, or if in the sole opinion of the City's representative there is sufficient usable length on the reel, the FC may be allowed to re-spool the usable cable and re-test it at another time. If in the sole opinion of the City's representative a cable reel is 'rejected', the FC shall replace, and retest, that length of rejected cable at the FC's sole expense.
 9. At the conclusion of Pre-Installation Testing the FC and the City representatives, will immediately sign each of the Reel Testing Sheets.
 10. At the conclusion of Pre-Installation Testing the FC will immediately download the OTDR data, in the presence of the City representative, and burn that data to CD/DVD for record purposes. One Copy of the Disk will be turned over to the City representative.
 11. The Hard Copy Report of the Pre-Installation OTDR Test will be provided in accordance with the Submittal Requirements in Section 1.03
- B. Post-Installation Testing Fiber Optic Cables:
1. The FC is responsible for conducting full Post-Installation testing of the Fiber Optic Cabling in accordance with this section.
 2. Post-Installation testing will be accomplished, bi-directionally, utilizing an Optical Time Domain Reflectometer (OTDR) and will be accomplished on each fiber, of each cable on the fully installed cable network. Post-Installation testing will be accomplished with each segment cable connectorized and attached to its respective bulkhead fitting at the Fiber Optic Patch Panel associated with each end of the cable. Additionally, the OTDR launch cord/cable will be affixed to the Patch Panel at one end of the fiber under test and a landing/cord cable at the other to make cable definition obvious.
 3. Prior to commencement of Post-Installation testing, the FC will have submitted a Testing Plan which will address testing methodology for Post Installation testing. This plan should specify all parameters under which the FC will be testing the cables.

4. The FC shall provide written notice of FC's intent to perform Post-Installation Testing of Fiber Optic Cabling a minimum of thirty (30) calendar days prior. Note: Submission of the Testing Plan or test reports does not constitute written notice for this purpose.
5. The FC shall not proceed with Post-Installation testing until he receives written notice that the City representative is ready and in place (Approval to Proceed).
6. The City's representative will witness 100 percent of the Post-Installation testing.
7. During testing the FC will log each cable segment by cross-referencing to the Pre-Installation testing real and/or cable identification number, and will provide a testing sign-off sheet for each Cable Segment tested.
8. During testing the City's representative may suspend testing at any time, if in FC's sole opinion, testing is not being conducted in accordance with this section or the Testing Plan.
9. During testing the City's representative may fail any Cable Segment that has obvious flaws as determined by the OTDR. Should the cable flaw be associated with connectorization or faulty Patch Panel Bulkheads, the FC will be given the opportunity to repair and retest that segment at a later time. If in the sole opinion of the City's representative a Cable Segment is 'rejected', the FC shall remove the defective cable, replace it with a new Pre-Tested cable, and retest that Cable Segment at the FC's sole expense.
10. At the conclusion of Post-Installation Testing the FC, and the City representative, will immediately sign each of the Cable Segment Testing Sheets.
11. At the conclusion of Post-Installation Testing the FC, will immediately download the OTDR data, in the presence of the City representative, and burn that data to CD/DVD for record purposes. One Copy of the Disk will be turned over to the City representative.
12. The Hard Copy Report of the Post-Installation OTDR Test will be provided in accordance with the Submittal Requirements in Section 1.03

3.12 TEST REQUIREMENTS

- A. Test equipment used for verifying installation testing shall be calibrated by a certified testing company within 30 days of use. Calibration certification shall be provided to the City's representative immediately prior to the start of testing.
- B. Single Mode OTDR Test: The OTDR shall conform to the following minimum requirements:
 1. Operating wavelengths: Single-mode at 850 and 1,300 nanometers plus or minus 20 nanometers in accordance with ANSI/TIA/EIA-526-7, Method A.1, Two Reference Jumper or the equivalent method. All single-mode links shall be certified with test tools using laser light sources at 850 nm and 1300 nm.

2. Attenuation Range (one way): minimum 5 dB at 1,300 nm
 3. Attenuation Resolution: 0.01 dB
 4. Accuracy: plus 0.5 dB.
 5. OTDRs shall have digital readout capability and shall have a means of providing a permanent record in the form of both electronic and hardcopy printout report displaying the OTDR trace graph.
 6. Test results:
 - a. Reflective events (connections) shall not exceed 0.5 dB.
 - b. Non-reflective events (splices) shall not exceed 0.3 dB.
 - c. End-to-End Attenuation Tests: An attenuation measurement test set shall consist of an optical power meter and an optical power source. Attenuation measurement test set shall be in accordance with the applicable National Bureau of Standards (NBS) standards for a stable optical source. Meter may be analog or digital. End-to-end attenuation test reading shall be included on the test reference loss. The attenuation/insertion loss test shall be in single-direction only, in accordance with TIA/EIA-526-7, Method A -1.
- C. Measurement test set shall conform to the following minimum requirements:
1. Operating wavelengths: Single-mode at 850 and 1,300 nanometers plus or minus 10 nanometers.
 2. Attenuation Range: at least 30 dB at 1,300 nm
 3. Attenuation Resolution: 0.01dB
 4. Accuracy: The accuracy of the attenuation measurement test set shall be plus or minus 5 percent.
 5. Optical source shall be capable of coupling sufficient power into the fiber so that the light received at the meter is within the meter delectability limits.
- D. End-to-End Bandwidth Tests:
1. Bandwidth test shall conform to the following minimum requirements:
 - a. Operating wavelengths: Single-mode at 850 and 1,300 plus or minus 10 nanometers
 - b. Bandwidth range: minimum 1000 megahertz
 - c. Bandwidth Resolution: 1 megahertz
 - d. Accuracy: plus or minus 0.5 megahertz
 - e. Measurement Method: Swept Frequency
- E. Magnified Optical End Face inspection:
1. Fiber end faces shall be inspected after connectorization but before termination at 250X or 400 X magnifications. 250X magnification are

suitable for inspecting single mode fibers. 400X magnification may be used for detailed examination of single mode fibers.

2. Scratched, pitted or dirty connectors shall be diagnosed and corrected.

END OF SECTION

SUPPLEMENTARY SPECIAL PROVISIONS
APPENDICES

APPENDIX A
MITIGATION MEASURES

Table
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
NON-PURE WATER COMPONENTS (SEWER INFLUENT PIPELINE) DISCUSSED IN SECOND PORTION OF THE TABLE, FOLLOWING 404 CONDITION FOR PURE WATER COMPONENTS

Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
MMRP							
MM-AQ-1 (construction BMPs)	Implementation of BMPs will comply with SDPCAD rules and regulations. Oversight is the responsibility of construction contractor's QSP. BMPs include covering materials and other adequate dust control measures. The CM team will be responsible for overseeing compliance and conducting storm water inspections.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	A storm water inspection will be conducted by the CM team within the first week of construction activity start up. Then inspections will be conducted quarterly, and within 24 hours of a significant rain event (rain event expected to exceed 0.50 inch). No frequency is specified in the MMRP. Frequency will be per City procedures.	Reporting is not specified in the MMRP. Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized. SWPPP inspections will be posted in VPM per City procedures, and stored in PMWeb as well.
MM-AQ-2 (construction NOx)	All diesel-fueled construction shall be equipped with Tier 3 or better diesel engines. Engine size of construction equipment should be the minimum size required for job. Construction equipment will be maintained in accordance with the manufacturer's specifications. The contractor is responsible for implementing these measures. The CM team will be responsible for overseeing compliance.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	CM team will inspect equipment upon delivery/arrival on site. No frequency is specified in the MMRP.	Reporting is not specified in the MMRP. Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
MM-AQ-3 (odor reduction)	Construction contractor will install relief valves and odor control systems per construction plan specs. CM team will be responsible for overseeing compliance.		X		At air/vacuum relief valves at high points along wastewater force main.	Inspections will be conducted by CM team during installation. Contractor will provide information to CM team on when installation is planned. No frequency is specified in the MMRP.	Reporting is not specified in the MMRP. Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
MM-BIO-2 (habitat revegetation)	Contractor will revegetate areas of temporary disturbance following the guidance in the Conceptual Habitat Revegetation Plan and as shown on Sheet C-199C of the 100 percent design drawings.		X	X	48-inch pipe between STA 48+45 to STA 51+36; 30-inch pipe between STA 714+31 to STA 716+86	Contractor will apply erosion control hydroseed following the completion of construction activities in Tecolote Creek.	EMs will oversee implementation of the hydroseeding and will document completion in daily reports.
MM-BIO-3 (nesting birds)	Biological EMs will conduct surveys for nesting birds if suitable habitat will be removed during the avian breeding season (February 1–September 15). Surveys will occur within 10 days prior to the start of construction. Biological EM will oversee compliance. Biological EM will report findings to EPM and CM team. CM team will inform ECM of results.	X	X		48-inch pipe between STA 48+45 to STA 51+36; 30-inch pipe between STA 714+31 to STA 716+86.	Within 10 days of removal of habitat during the avian breeding season (February 1–September 15).	EPM will provide nesting bird survey report to City ECM.
MM-BIO-8 (wetland permits)	City's ECM will provide evidence to MMC that the 404, 401, and 1600 permits have been obtained. The NCPW Project's 404, 401, and 1600 permits have been issued.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	One-time requirement to send proof to MMC.	City ECM to email City MMC with proof of the issued permits.
MM-BIO-9a (retention letter for a qualified biologist)	The EPM will provide the City's ECM with a retention letter noting that HELIX has been retained for the biological monitoring. The City ECM will provide the letter to City MMC.	X			N/A – procedural measure	Once, prior to start of construction.	The City's ECM will provide the retention letter to City MMC stating that HELIX has been retained.

Table 5-2 (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
NON-PURE WATER COMPONENTS (SEWER INFLUENT PIPELINE) DISCUSSED IN SECOND PORTION OF THE TABLE, FOLLOWING 404 CONDITION FOR PURE WATER COMPONENTS

Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
MMRP (cont.)							
MM-BIO-9b (pre-construction meeting)	The EPM and Lead EM will attend the pre-construction meeting and discuss the Project's biological monitoring program, including mitigation requirements.	X			N/A – procedural measure	Once, prior to start of construction.	None
MM-BIO-9c (documentation)	The EPM and ECM will demonstrate that required biological documentation has been completed. The EPM will include information in the retention letter demonstrating that the documentation is complete. The City ECM will send the retention letter to City MMC.	X			N/A – procedural measure	ECM will provide documentation to MMC.	ECM will provide documentation to MMC when required and as needed.
MM-BIO-9d (BCME)	The EPM and Lead EM will compile BCME and provide it to the ECM. The ECM will provide it to City MMC.	X			N/A – procedural measure	Once, prior to start of construction.	ECM will provide the BCME to the City MMC.
MM-BIO-9e (construction fencing)	The biological EM will supervise placement of construction fencing (or equivalent) along the limits of disturbance adjacent to sensitive habitats and verify compliance with any other project condition as shown in the BCME.	X			48-inch pipe between STA 48+45 to STA 51+36; 30-inch pipe between STA 714+31 to STA 716+86.	Daily during fence placement.	Daily construction monitoring reports.
MM-BIO-9f (on-site education)	The lead EM will conduct a tailboard training on the first day of construction to conduct an on-site educational session. Subsequent trainings conducted by Lead EM or EMs.	X			N/A – procedural measure	Once, on the first day of construction, prior to start of construction. Subsequent tailboard trainings will be conducted on an as-needed basis.	Daily construction monitoring reports.
MM-BIO-9g (biological monitoring)	The biological EM will be present to oversee biological compliance in areas within, or adjacent to sensitive biological resources.		X		48-inch pipe between STA 48+45 to STA 51+36; 30-inch pipe between STA 714+31 to STA 716+86.	Daily when construction activity is occurring in areas identified in the BMCE.	Daily construction monitoring reports.
MM-BIO-9h (cover trenches)	The EM will verify that all steep-walled trenches and excavations are covered overnight or at the end of a shift. The EM will be available to help move wildlife from trenches and excavation areas.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Daily when construction activity is occurring in areas identified in the BMCE.	Daily construction monitoring reports.
MM-BIO-9i (nighttime construction)	Shielded lights will be used in areas where nocturnal animals have the potential to occur. Nighttime lighting is subject to City Outdoor Light Restrictions per LDL Section 142.0740. The Biological monitor will document compliance.		X		48-inch pipe between STA 48+45 to STA 51+36; 30-inch pipe between STA 714+31 to STA 716+86.	Daily when construction activity is occurring at night in areas identified in the BMCE.	Daily construction monitoring reports.
MM-BIO-9j (BMPs/Erosion/Runoff)	Contractor will comply with the SWPPP for this package. Contractor's QSP will be responsible for SWPPP compliance. CM team includes a SWPPP monitor who will oversee contractor compliance.	X	X	X	Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Inspection to occur following installation. Following initial inspection, inspection frequency will be dictated by the SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.
MM-BIO-9k (toxics/project staging areas/equipment storage)	Projects that use chemicals, or toxins that could have an impact on habitats/flora/fauna shall incorporate measures to reduce impacts caused by the application and/or drainage of such materials in the MHPA. Trash, oil, staging areas, materials, etc., will stay within construction limits. Biological EMs will oversee compliance.		X		Portions of the package area within 300 feet of a MHPA. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Inspection frequency dictated by the SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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		Pre-construction	During Construction	Post-construction			
MMRP (cont.)							
MM-HAZ-1 (construction fire protection plan)	Contractor will prepare a Construction Fire Prevention/Protection Plan. The CM team will review and approve the plan. Contractor will send the plan to City Fire Marshal.	X	X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Plan approval to occur prior to implementation of site preparation activities.	Contractor will be responsible for any reporting during construction, as specified in the Plan. CM team will oversee compliance with the Plan.
MM-HAZ-4 (hazardous substances encounter)	If hazardous materials are encountered, contractor will follow procedures outlined in the City's "Whitebook" (Part 1, Section 7-22). When encountering groundwater contaminated with petroleum, follow requirements of Section 7.8.6.6 of the "Whitebook." Contractor will notify RE. RE will notify City's Environmental Service Department, Hazardous Materials Management Program.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Per occurrence. Contractor will notify RE immediately (within 15 minutes) following encounter of hazardous materials.	Reporting procedures to follow City's "Whitebook."
MM-HIS-3 (archaeological monitoring)	EPM and PI will provide MMC and ECM with a verification letter confirming that HELIX was retained for the historical resources monitoring. PI will conduct site-specific records prior to the start of construction and provide a letter of verification and AME to MMC and ECM. During construction, historical EMs will be on site full time during soil-disturbing and grading/excavation/trenching activities that could result in impacts to archeological resources as identified in the AME.	X	X	X	Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Retention of PI and document verification will need to occur prior to the start of construction. AME is a one-time submittal submitted prior to site preparation start. Monitoring will be daily during site preparation where shown within the AME during grading, excavation, or trenching activities.	The City's ECM will provide the retention letter to City MMC stating that a PI has been retained. ECM will also provide MMC with the AME. Daily construction monitoring forms will be filled out by historical EMs. Additional reporting is required if a discovery is found, which includes the PI providing written documentation to MMC within 24 hours of the discovery.
MM-NOI-1 (construction noise BMPs)	Contractor will comply. All noise-producing equipment and vehicles using internal combustion engines shall be equipped with noise-reducing features. Minimize idling and follow construction area speed limits. Electrical powered equipment is preferred over non-electric equipment.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Inspections will be conducted by CM Team within first week of construction activity start up. Then inspections will be conducted quarterly. No frequency is specified in the MMRP.	Reporting is not specified in the MMRP. Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM Team to PMWeb where they will be stored and organized.

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
NON-PURE WATER COMPONENTS (SEWER INFLUENT PIPELINE) DISCUSSED IN SECOND PORTION OF THE TABLE, FOLLOWING 404 CONDITION FOR PURE WATER COMPONENTS

Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
MMRP (cont.)							
MM-NOI-2 (Noise Abatement and Control permit)	Construction activities shall not occur between 7 p.m. and 7 a.m., on legal holidays, or on Sundays unless authorized via permit issued by the Noise Abatement and Control Administrator. Project CM will coordinate and construction contractor will comply. Contractor cannot work during these periods without receiving approval from City Project PM.	X			Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00). Holiday and Sunday work not anticipated. Nighttime work is anticipated to occur between STA 20+50 to STA 184+00 (48-inch pipe) and STA 685+87 to 851+00 (30-inch pipe).	Frequency is not specified in the MMRP. Documentation of compliance will occur via daily construction monitoring forms, which document hours of work.	Daily construction monitoring reports.
MM-NOI-3 (night work measures)	Nighttime work will be planned to minimize the number and type of operating equipment, restrict movement of equipment adjacent to noise-sensitive receivers, and minimize noise from backup alarms. Construction contractor will comply. Requires coordination with City's Project CM. CM team will oversee compliance.		X		Where nighttime work will occur adjacent to sensitive receptors: STA 20+50 to STA 184+00 (48-inch pipe) and STA 685+87 to 851+00 (30-inch pipe).	Frequency is not specified in the MMRP. Documentation of compliance will occur via daily construction monitoring forms, which document hours of work.	Daily construction monitoring reports.
MM-PU-1 (coordination with utility providers)	City PUD will consult with other City departments and other utility providers to avoid interference with utilities. This will be handled by the City's Project CM, or City's Senior CM.	X			N/A – procedural requirement	One-time verification prior to the start of construction.	N/A
CDFW – SAA # 1600-2018-0135-R5 (issued October 31, 2018; expires August 31, 2023)							
Administrative Measure 1.1 (Documentation at Project Site)	SAA, extensions and amendments to SAA, and related material will be readily available on the project site at all times. Access to these items to CDFW or other state, federal, or local agencies shall be unhindered. Contractor to maintain the SAA in the construction trailer.		X		N/A – procedural requirement	Contractor to provide at the construction trailer at all times.	N/A
Administrative Measure 1.2 (Providing Agreement to Persons at Project Site)	CM team will provide copies of the SAA, and any extensions and amendments to the SAA to all personnel working on the project. This will be accomplished by having these documents available on PMWeb and at the construction trailer.	X			N/A – procedural requirement	CM team will provide SAA to Contractor prior to start of construction	N/A
Administrative Measure 1.3 (Notification of Conflicting Provisions)	City ECM will need to notify CDFW if there is a provision within the SAA that might conflict with a provision imposed on the project by another local, state, or federal agency. This will be handled by the ECM.	X			N/A – procedural requirement	N/A	N/A
Administrative Measure 1.4 (Project Site Entry)	CDFW can enter the project site to verify compliance with the agreement.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Whenever activity is occurring within CDFW jurisdictional areas.	N/A

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
CDFW – SAA # 1600-2018-0135-R5 (issued October 31, 2018; expires August 31, 2023) (cont.)							
Administrative Measure 1.5 (Notification Prior to Work)	City ECM will notify CDFW in writing at least five days prior to the start of construction and at least five days prior to completion of construction activities within Tecolote Creek. ECM will be responsible for these notifications.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Five days prior to the start of construction activities. Five days prior to the completion of construction activities.	City ECM will provide CDFW written notification.
Avoidance and Minimization Measure 2.1 (Minimize Disturbance to Stream)	Disturbance of vegetation (if present) shall not exceed CDFW-approved limits. All work within the concrete channel will be restored to pre-impact conditions.		X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A	Daily construction monitoring reports will verify compliance.
Avoidance and Minimization Measure 2.2 (Work Area Boundary)	Work limits within Tecolote Creek to be delineated via temporary fencing, flagging, staking, etc. Following the completion of construction activity in the area, the temporary fencing, flagging, etc. are required to be removed.	X		X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Biological EM will verify delineation measure(s) are installed at the appropriate location within seven days of the start construction. Once work in the area is complete, they will verify within seven days that the delineation measure(s) have been removed. Frequency not specified in SAA.	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.3 (Breeding Season Precautions)	If vegetation removal or potentially disruptive activities occur between January 15 – September 15 within CDFW habitat, pre-construction nesting bird surveys will be conducted by Biological EMs. If an active nest is located, the EM will provide an adequate setback buffer to protect the nesting birds and will demarcate the setback buffer using flagging tape or other means.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	One survey within three days of the removal of vegetation within Tecolote Creek that occurs between January 15-September 15.	EPM will provide nesting bird survey report to City ECM. Survey reports are not required to be submitted to CDFW, unless CDFW requests a copy.
Avoidance and Minimization Measure 2.4 (Seasonal Restrictions – Vegetation Removal)	Remove vegetation within Tecolote Creek between September 16 – January 14. Vegetation may be removed by hand within Tecolote Creek between January 15 – September 15 if a nesting bird survey is conducted and no active nests are documented. If an active nest is found, a setback buffer from the nest will be established. Biological EM would conduct the pre-construction survey and oversee compliance with this measure.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	One survey within three days of start of the removal of vegetation within Tecolote Creek that occurs between January 15-September 15.	EPM will provide nesting bird survey report to City ECM. The City ECM will provide the survey report to CDFW, if required. Daily Monitoring Report would document clearing.
Avoidance and Minimization Measure 2.5 (Leave Wildlife Unharmd)	Wildlife encountered during construction will not be harmed and will be allowed to leave the construction area. Biological EM will oversee compliance. This includes physically relocating non-listed species from the limits of construction. CM team will notify ECM. If state-listed species are encountered, the biological EM will notify EPM and CM team. CM team will notify ECM. ECM will notify CDFW.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.6 (Wildlife Sheltering in Supplies or Equipment)	Operators will check for wildlife prior to operating equipment or moving supplies. If any wildlife is observed, operators will coordinate removal directly with a Biological EM. Biological EMs will inspect equipment and supplies as part of their daily monitoring activities.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.

Table (cont.)
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(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
CDFW – SAA # 1600-2018-0135-R5 (expires August 31, 2023) (cont.)							
Avoidance and Minimization Measure 2.7 (Protected Species)	State-listed species, fully protected species, and species of special concern that are not considered covered species under the MSCP need to be avoided and protected. The Biological EM will oversee compliance in the field and report any findings to the EPM and CM team. CM team will notify ECM. ECM will notify CDFW.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.8 (Notification to CNDDDB)	If a protected species is observed in Tecolote Creek, the biological EM will complete a CNDDDB form within five days of the sighting.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Per encounter.	CNDDDB Field Survey Form will be filled out by Biological EM and distributed to EPM and CM team. CM team will provide form to ECM, who in turn will submit to CDFW. Also documented on daily construction monitoring report.
Avoidance and Minimization Measure 2.9 (Native Tree Avoidance)	Native trees cannot be removed within Tecolote Creek. However, trimming and/or de-limbing is allowed. Biological EM will oversee compliance.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.10 (Herbicide Approved for Use Near Water)	Herbicide must be approved for use in an aquatic environment. Contractor will provide the CM team a notification of intent to apply herbicide at least seven days prior to application planned within Tecolote Creek. EPM will review and provide feedback/approval to CM team. Field verification will be done by Biological EM prior to application.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.11 (Herbicide Use in Conformance with Applicable Laws)	Herbicide use will comply with all state, federal, and local laws. Biological EM will oversee compliance.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.12 (Stream Diversion)	If diversion is needed within Tecolote Creek, the diversion will need to occur around or through the work area. Contractor will provide water diversion plan to CM team for review and approval at least five days prior to diversion. Biological EM will oversee compliance in the field along with CM team.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports. Any notable observations and action items will also be captured in inspection reports completed by the CM team.
Avoidance and Minimization Measure 2.13 (Temporary Fills)	If a temporary access ramp needs to be built within Tecolote Creek, it will need to be built from materials that will cause little or no siltation, such as clean gravel, and shall be removed upon completion. Biological EM will oversee compliance.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily construction monitoring reports.
Avoidance and Minimization Measure 2.14 (Poured Concrete)	Poured concrete shall be excluded from the wetland portion of Tecolote Creek for a period of 14 days after it is poured. Restored concrete shall utilize Type II or Type V Portland cement conforming to ASTM C150 with a chemical admixture of calcium chloride in conformance with ASTM D98. Contractor will comply, and CM team will oversee compliance.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to VPM where they will be stored and organized.

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
CDFW – SAA # 1600-2018-0135-R5 (expires August 31, 2023) (cont.)							
Avoidance and Minimization Measure 2.15 (Minimize Turbidity and Siltation)	Implementation of BMPs in conformance of SWPPP and/or at direction of QSP. Intent is to minimize turbidity and siltation associated with construction activities to get into Tecolote Creek. CM team will be responsible for overseeing compliance.		X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to VPM where they will be stored and organized.
Avoidance and Minimization Measure 2.16 (Remove Structures)	Stage materials outside areas where they could be washed away. CM team will be responsible for overseeing compliance, with support from Biological EMs. EMs will note compliance on daily construction monitoring reports.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Daily Monitoring Report uploaded to PMWeb by Biological EM. Any notable observations and action items will also be captured in inspection reports completed by the CM team.
Avoidance and Minimization Measure 2.17 (Operating Equipment and Vehicle Leaks)	Vehicles/equipment driven and/or operated within or adjacent to Tecolote Creek will need to be checked and maintained daily to prevent leaks of materials that could harm aquatic life. If leak, spill, or release occurs, it must be cleaned immediately, and the material must be properly disposed. CM team will be responsible for overseeing compliance, with support from biological EMs. EMs will note compliance on daily construction monitoring reports.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily. Also per event (applicable when there is a spill, leak, or release that could be harmful to aquatic life).	Biological EMs will document compliance in Daily Monitoring Reports. In the event of a spill, leak, or release, contractor will be responsible for documenting cleanup and disposal. CM team will oversee compliance. Reports documenting cleanup and disposal will be uploaded by the CM team to VPM where they will be stored and organized. Biological EM will document in Daily Construction Reports uploaded to PMWeb. Biological EM will document in Daily Construction Reports uploaded to PMWeb.
Avoidance and Minimization Measure 2.18 (Equipment Maintenance and Fueling)	Fueling is not allowed within or near Tecolote Creek. CM team will be responsible for overseeing compliance, with support from biological EMs. EMs will note compliance on daily construction monitoring reports.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Any notable observations and action items will also be captured in inspection reports completed by CM team. These reports will be uploaded by the CM team to VPM where they will be stored and organized. Additionally, Biological EM will document in Daily Construction Reports uploaded to PMWeb. Biological EM will document in Daily Construction Reports uploaded to PMWeb.

Table (cont.)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
CDFW – SAA # 1600-2018-0135-R5 (expires August 31, 2023) (cont.)							
Avoidance and Minimization Measure 2.19 (Stationary Equipment)	Stationary equipment needs secondary containment. CM team will be responsible for overseeing compliance, with support from biological EMs. EMs will note compliance on daily construction monitoring reports.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Any notable observations and action items will also be captured in inspection reports completed by CM team. These reports will be uploaded by the CM team to VPM where they will be stored and organized. Additionally, Biological EM will document in Daily Construction Reports uploaded to PMWeb. Biological EM will document in Daily Construction Reports uploaded to PMWeb.
Avoidance and Minimization Measure 2.20 (Hazardous Substances)	Prevention of hazardous substances (asphalt, paint, oil, etc.) from entering Tecolote Creek. CM team will be responsible for overseeing compliance, with support from biological EMs. EMs will note compliance on daily construction monitoring reports.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily	Any notable observations and action items will also be captured in inspection reports completed by CM team. These reports will be uploaded by the CM team to VPM where they will be stored and organized. Additionally, Biological EM will document in Daily Construction Reports uploaded to PMWeb. Biological EM will document in Daily Construction Reports uploaded to PMWeb.
Compensatory Measure 3.2	City PUD will need to mitigate at a minimum 5:1 ratio for impacts beyond those authorized in SAA # 1600-2018-0135-R5. Biological EMs will notify CM team. CM team will notify ECM.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – Procedural Measure	Daily Construction Reports.
RWQCB – 401 WQC # R9-2018-0084 (issued December 18, 2018; expires March 18, 2022)							
General Condition A (Term of Certification)	Water Quality Certification No. R9-2018-0084 (Certification) shall expire upon the expiration or retraction of the CWA section 404 (33 USC Title 33, section 1344) permit issued by the USACE for this Project (March 18, 2022), or five years from date of Certification issuance (December 18, 2023), whichever occurs first.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	ECM has notified RWQCB of the start of construction. ECM will notify RWQCB in writing once work has been completed. Correspondence will be stored on Document Manager. Documentation of correspondence will be stored on Document Manager.
General Condition B (Duty to Comply)	The City PUD must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.	X	X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition C (General Waste Discharge Requirements)	The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification (Water Quality Order No. 2003-0017-DWQ).		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.

Table (cont.)
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RWQCB – 401 WQC # R9-2018-0084 (issued December 18, 2018; expires March 18, 2022) (cont.)							
General Condition D (Project Conformance with Application)	The City PUD shall construct, implement, and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.
General Condition E (Project Conformance with Water Quality Control Plans or Policies)	Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the CWA (33 USC section 1313).	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	Compliance will be documented in quarterly and annual reports submitted to the RWQCB.
General Condition F (Project Modification)	The City PUD must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	One-time notification/modification to RWQCB if the modification will impact areas under RWQCB jurisdiction. If there is a proposed change at the Tecolote Creek crossing, CM team will coordinate with EPM to help determine if the change is considered a significant or material effect of the findings, conclusion, or conditions of the certification. CM team will inform the ECM of proposed modification. ECM will notify RWQCB and receive written approval before modification is implemented.	ECM will notify RWQCB in writing. Any correspondence with RWQCB will be uploaded to Document Manager.
General Condition G (Certification Distribution Posting)	During Project construction, the City PUD must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition H (Inspection and Entry)	The City PUD must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative) to access the Project, and allow access to records that must be kept as a condition of this Certification.		X		Tecolote Creek. Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	N/A – procedural measure	N/A
General Condition I (Enforcement Notification)	In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under State law.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure. If violation occurs, CM team will be notified immediately. CM team will notify ECM.	Any violation will be reported to the RWQCB by the ECM. Correspondence will be stored on Document Manager.

Table (cont.)
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RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
General Condition J (Certification Actions)	This Certification may be modified, revoked and reissued, or terminated for cause. The filing of a request by City PUD for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition K (Duty to Provide Information)	The City PUD shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	ECM will provide RWQCB with required information within a reasonable timeframe. The number of days to respond was not specified.	N/A
General Condition L (Property Rights)	This Certification does not convey any property rights of any sort, or any exclusive privilege.				Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition M (Petitions)	Members of the public can petition the State Water Board if aggravated by actions of the San Diego RWQCB as they pertain to 401 WQC # R9-2018-0084.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
Construction BMP A (Approvals to Commence Construction)	The City PUD shall not commence Project construction until all necessary federal, state, and local approvals are obtained.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	All approvals need to be in place prior to start of construction.	The 401 Certification does not require approvals to be sent to RWQCB. Internal tracking will be completed using the Master Compliance Matrix located on PMWeb.
Construction BMP B (Personnel Education)	Prior to the start of the Project, and annually thereafter, City PUD must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	EPM will provide environmental training prior to the start of construction. EPM will provide refresher trainings at least once per year thereafter.	Environmental training sign-in sheets will be stored in Document Manager. General compliance with this measure will be documented in annual progress reports.
Construction BMP C (Spill Containment Materials)	City PUD and their contractors must, at all times, maintain appropriate types and sufficient quantities of materials on site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the U.S. and/or State.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	CM team will inspect prior to contractor starting work in Tecolote Creek.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.
Construction BMP D (General Construction Storm Water Permit)	Prior to start of Project construction, the City PUD must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity (General Construction Storm Water Permit) and any reissuance.	X	X		Tecolote Creek. Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Contractor will obtain coverage and comply with the General Permit. CM team will oversee compliance with the General Permit. SWPPP will be finalized prior to start of construction within Tecolote Creek. General Permit conditions will be outlined in the SWPPP.	N/A

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
NON-PURE WATER COMPONENTS (SEWER INFLUENT PIPELINE) DISCUSSED IN SECOND PORTION OF THE TABLE, FOLLOWING 404 CONDITION FOR PURE WATER COMPONENTS

Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
Construction BMP E (Waste Management)	The City PUD and their contractors must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination, or nuisance. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state, and local laws and regulations.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will manage waste appropriately and CM team will oversee compliance. Inspection frequency not specified in 401; inspection frequency to be specified in SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.
Construction BMP F (Waste Management)	Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the U.S. and or State, or adjacent to such waters in any manner that may permit its being transported into the waters, is prohibited.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will manage waste appropriately and CM team will oversee compliance. Inspection frequency not specified in 401; inspection frequency to be specified in SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.
Construction BMP G (Downstream Erosion)	Discharges of concentrated flow during construction or after Project completion must not cause downstream erosion or damage to properties or stream habitat.		X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Inspection frequency dictated by the SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS.
Construction BMP H (Construction Equipment)	All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Inspections of equipment to be used in Tecolote Creek will be conducted by CM team prior to the start of construction within Tecolote Creek. CM team will be responsible for overseeing compliance with construction equipment inspections and secondary containment. Inspections should occur weekly during grading, then less frequent as construction proceeds. Following grading, inspection frequency will be determined by CM Team. Frequency will be based on how the contractor complies during the grading phase.	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized. Any notable observations will be captured in daily monitoring reports uploaded to PMWeb (when biological monitor oversees construction activity within Tecolote Creek).

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
Construction BMP I (Process Water)	Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the U.S. and/or State or placed in locations that may be subjected to storm water runoff flows. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Frequency of CM Team oversight will be dictated by the SWPPP. In addition, frequency will be daily when a biological monitor is present.	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized. Any notable observations will be captured in daily monitoring reports uploaded to PMWeb (when biological monitor oversees construction activity within Tecolote Creek).
Construction BMP J (Surface Water Diversion)	All surface waters, including ponded waters, must be diverted away from areas of active grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of the receiving water quality objectives. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	If this action is needed, the construction contractor will notify CM team. CM team will conduct daily inspections of diversions to confirm compliance with this measure.	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized. Any notable observations will be captured in daily monitoring reports uploaded to PMWeb (when biological monitor oversees construction activity within Tecolote Creek).
Construction BMP K (Revegetation and Stabilization)	All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. After completion of grading, all areas must be re-vegetated with native species appropriate for the area. The revegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Using the Three-week Look-ahead schedule, the contractor will determine when inactivity within Tecolote Creek is scheduled. CM team will verify measures are in place within 14 days of inactivity.	Compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
Construction BMP L (Hazardous Materials)	Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the U.S. and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Frequency of CM Team oversight will be dictated by the SWPPP. Biological EMs will provide additional oversight.	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized. Any notable observations will be captured in daily monitoring reports uploaded to PMWeb (when Biological EM oversees construction activity within Tecolote Creek).
Construction BMP M (Vegetation Removal)	Removal of vegetation must occur by hand, mechanically, or through application of U.S. Environmental Protection Agency (USEPA)-approved herbicides deployed using applicable BMPs to minimize adverse effects to beneficial uses of waters of the U.S. and/or State.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Biological EM will conduct daily monitoring of vegetation removal in Tecolote Creek.	Daily construction monitoring reports uploaded to PMWeb.

Table (cont.)
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(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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		Pre-construction	During Construction	Post-construction			
RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
Construction BMP N (Limits of Disturbance)	The City PUD and/or their contractors shall clearly define the limits of Project disturbance to waters of the U.S. and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will determine limits. Biological EM will verify Biological EM will verify fenced limits prior to construction within Tecolote Creek.	Daily construction monitoring reports uploaded to PMWeb.
Construction BMP O (On-site Qualified Biologist)	The City PUD shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the U.S. and/or State to ensure compliance with the Certification requirements.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Biological EMs will monitor work within and adjacent to Tecolote Creek. Monitoring frequency not specified in measure. Biological EMs will monitor daily during vegetation removal and at least weekly during the remainder of construction. Biological EMs will monitor daily during vegetation removal and at least weekly during the remainder of construction.	The City's ECM will provide the retention letter to City MMC stating that HELIX has been retained. Monitoring will be documented via daily construction monitoring reports uploaded to PMWeb.
Construction BMP P (Beneficial Use Protection)	The City PUD and their contractors must take all necessary measures to protect the beneficial uses of waters of Tecolote Creek. If an unauthorized discharge to surface waters occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately, and the San Diego Water Board shall be notified. Associated Project activities may not resume without approval from the San Diego Water Board.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Any unauthorized discharges must be immediately reported to the CM team and EPM. CM team and EPM will inform ECM. ECM will verbally notify RWQCB within 24 hours, and provide written notification within five days.	CM team with support from EPM to provide written summary to ECM to indicate location, amount, cause, and follow-up items. ECM will provide written summary to RWQCB. Project activities cannot resume without written authorization from the RWQCB.
Construction BMP Q (Groundwater Dewatering)	If groundwater dewatering is required, the City PUD shall enroll in and comply with the requirements of San Diego Water Board Order No. R9-2015-0013 NPDES No. CAG919003, General Waste Discharge Requirements For Groundwater Extraction Discharges to Surface Waters within the San Diego Region or its successor permit.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will enroll in General Permit if dewatering is needed. CM team, with support of Biological EMs, will oversee compliance.	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized. Any notable observations will be captured in daily monitoring reports uploaded to PMWeb (when Biological EM oversees construction activity within Tecolote Creek).
Post-Construction BMP A (Post-construction Discharges)	The City PUD shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or stream habitats.			X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Post-construction BMPs will be implemented by contractor prior to project completion. CM team will verify.	Any notable observations and action items will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
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		Pre-construction	During Construction	Post-construction			
RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
Post-Construction BMP B (Storm Drain Inlets)	All storm drain inlet structures within the Project boundaries must be stamped or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.		X	X	All storm drain inlet structures within the Project boundaries	Contractor will implement prior to contract completion. CM team will verify.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
Post-Construction BMP C (Post-construction BMP Design)	The Pure Water consultant design team designed the project in conformance with the requirements for priority development projects as well as the most current BMP Design Manual for the City. The Contractor will be responsible for developing and implementing a SWPPP, which will conform to these requirements.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Frequency not specified in this condition. CM team will review and approve SWPPP within 30 days prior to start of construction.	SWPPP will provide post-construction design measures.
Post-Construction BMP D (Post-construction BMP Maintenance)	The post construction BMPs must be designed, constructed, and maintained in accordance with the most recent California Storm Water Quality Association (CASQA) ² guidance.			X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Frequency of oversight will be dictated by the SWPPP and conducted by CM team.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
Project Impacts and Compensatory Measure A (Project Impact Avoidance and Minimization)	Project must avoid and minimize adverse impacts to waters of the U.S. and/or State to the maximum extent practicable.	X	X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will fence limits along Tecolote Creek. Biological EM will verify Biological EM will verify fence location and will monitor during construction. Contractor will restore to pre-project conditions and revegetate with native species (if native habitat impacted). CM team will verify.	Biological EM will document in Daily Construction Reports uploaded to PMWeb. Biological EM will document in Daily Construction Reports uploaded to PMWeb.
Project Impacts and Compensatory Measure E (Temporary Project Impact Areas)	The City PUD must restore all areas of temporary impacts. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.			X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will implement prior to contract completion. CM team will verify.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
Monitoring and Reporting F (Discharge Commencement Notification)	The Applicant must notify the San Diego Water Board in writing at least five days prior to the start of Project construction.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	At least five days prior to the start of construction associated with this package.	ECM will provide written notification to RWQCB at least five days prior to start of construction.
Monitoring and Reporting G (Geographic Information System Data)	The City PUD must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction. GIS metadata must also be submitted.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Within 30 days of the start of construction associated with this package.	Biological EMs will collect the GPS data and EPM will send to ECM.

Table (cont.)
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(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
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RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
Monitoring and Reporting H (Annual Project Progress Reports)	The City PUD must submit annual reports describing status of BMP implementation, compensatory mitigation, and compliance with the 401 certification prior to March 1 of each year. Monitoring period is January 1 to December 31 of each year.		X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Annually, by March 1.	EPM will prepare a single annual progress report that addresses all of North City and the compensatory mitigation site on behalf on the ECM. Report will be prepared in accordance with Reporting Requirements J, K, L, and M of the Pure Water 401 Certification (ECM will finalize and send to RWQCB. Copies of annual reports will be stored in Document Manager).
Monitoring and Reporting I (Final Project Completion Report)	The City PUD must submit a Final Project Completion Report to the San Diego Water Board within 30 days of completion of the Project.			X	Entire Pure Water North City project	Within 30 days of completion of the overall Pure Water North City project.	EPM will prepare a draft of the final project completion report within 14 days of completion of the overall Pure Water North City project. EPM will provide the report to ECM; ECM will finalize and send to the RWQCB. Report will be consistent with Monitoring and Reporting Requirements J, K, L, and M of the Pure Water 401 Certification.
Notification Requirement A (Twenty-Four Hour Non-Compliance Reporting)	The City PUD shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within 24 hours from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.	X	X	X	Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	CM team will be notified immediately after incident. CM team will be notified immediately after incident. CM team, with support from the EPM, will then notify the ECM with a written summary to indicate location, amount, cause, and follow-up items. ECM will notify RWQCB within 24 hours verbally and within five days for written notification.	ECM will provide the report to RWQCB. Correspondence will be uploaded in Document Manager.
Notification Requirement B (Hazardous Substance Discharge)	Any person who causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall immediately notify the County of San Diego, and immediately notify the State Water Board or the San Diego Water Board of the discharge.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will notify CM team immediately. Contractor and CM team will implement emergency measures to stop the discharge and begin cleanup. As soon as reporting is feasible, the CM team, with support from the EPM, will provide a verbal summary to ECM. ECM will provide verbal notification to RWQCB and County of San Diego. Written documentation will be provided by CM team and EPM to ECM who will provide to RWQCB and County of San Diego.	Agency reporting will be uploaded in Document Manager.

Table (cont.)
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RWQCB – 401 WQC # R9-2018-0084 (expires March 18, 2022) (cont.)							
Notification Requirement C (Oil or Petroleum Discharge)	Any person who causes or permits any oil or petroleum product to be discharged in or on any waters of the State, shall immediately notify the California Office of Emergency Services. This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to CWA section 311, or the discharge is in violation of a Basin Plan prohibition.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will notify CM team immediately. Contractor and CM team will implement emergency measures to stop the discharge and begin cleanup. As soon as reporting is feasible, the CM team, with support from the EPM, will provide a verbal summary to ECM. ECM will provide verbal notification to RWQCB and County of San Diego. Written documentation will be provided by CM team and EPM to ECM who will provide to RWQCB and County of San Diego.	Agency reporting will be uploaded in Document Manager.
USACE – 404 # SPL-2017-00649-CJA (issued December 21, 2018; expires March 18, 2022 [or March 18, 2023 if work commenced prior to expiration date])							
Special Condition 1 (SANDER Mitigation Site)	Prior to initiating construction in waters of the U.S., at the SANDER mitigation site, the City PUD shall submit a set of final grading/construction plans to the USACE Regulatory Division. Work within waters of the U.S. is not authorized until USACE notifies the City PUD in writing. Implementation of mitigation cannot initiate until USACE approves final grading/construction plans. City ECM will provide USACE with required documents.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	ECM will send final grading/construction plans to USACE. Written approval needs to be provided by USACE prior to initiating construction within waters of the U.S.	Written approval from USACE will be uploaded to PMWeb and compliance matrix will be updated with the date of approval.
Special Condition 2 (Endangered Species)	The USACE permit does not authorize take of any threatened or endangered species. Biological EM will oversee compliance.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily when construction activity is occurring within Tecolote Creek.	Daily construction monitoring reports will be uploaded by biological EMs to PMWeb.
Special Condition 3 (Cultural Discoveries)	Any cultural discoveries require immediate work stoppage and notification of USACE Archeology Staff within 24 hours. Historical EM will oversee compliance.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily when ground disturbance activity is occurring within Tecolote Creek.	Daily construction monitoring reports uploaded by historical EMs to PMWeb.
Nationwide Permit (NWP) 33 (Temporary Construction, Access, and Dewatering)	Allows temporary fill or dewatering associated with construction activities within Tecolote Creek. However, measures must be taken to minimize flooding and maintain downstream flows. Following construction, any temporary fill must be removed from Tecolote Creek, and Tecolote Creek must be restored to pre-construction elevations.		X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will fence limits along Tecolote Creek. Biological EM will verify Biological EM will verify fence location and will monitor during construction. Contractor will remove temporary fill and restore to pre-construction. CM team will verify.	Biological EM will document in Daily Construction Reports uploaded to PMWeb.
NWP 39 (Commercial and Industrial Developments)	Authorizes the temporary discharge of 0.03 acre of fill into Tecolote Creek.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – Procedural measure	N/A

Table (cont.)
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		Pre-construction	During Construction	Post-construction			
USACE – 404 # SPL-2017-00649-CJA (cont.)							
General Condition 2 (Aquatic Life Movements)	No activity may substantially disrupt life cycle movements of aquatic life indigenous to the waterbody. All permanent and temporary crossings of waterbodies shall be constructed to maintain low flows to sustain the movement of those aquatic species. Biological EM will oversee compliance.		X		N/A	Monitoring will be conducted for the entire duration of construction activity occurring within Tecolote Creek. Daily during vegetation clearing; at least weekly following vegetation clearing.	Daily construction monitoring reports will be uploaded by biological monitors to PMWeb.
General Condition 4 (Migratory Bird Breeding Areas)	Activities in waters of the U.S. that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Construction limits in Tecolote Creek will be fenced by contractor; Biological EMs will verify fence locations and will monitor during construction.	EPM will provide nesting bird survey report(s) to City ECM.
General Condition 6 (Suitable Material)	No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.).		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	CM team will track compliance initially within first week of work within Tecolote Creek. Frequency to be conducted monthly thereafter until work within the creek is complete.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
General Condition 8 (Adverse Effects From Impoundments)	If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	If activities described in this measure are needed, the construction contractor will notify CM team. CM team will conduct daily inspections of diversions to confirm compliance with this measure.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
General Condition 9 (Management of Water Flows)	The pre-construction open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	The construction contractor will notify CM team if there is an activity that has potential to affect pre-construction open waters. CM team will conduct daily inspections of diversions to confirm compliance with this measure.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
General Condition 10 (Fills Within 100-Year Floodplain)	The activity must comply with applicable Federal Emergency Management Agency-approved state or local floodplain management requirements.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Placement of fill will be consistent with state and local floodplain requirements. CM team will oversee compliance through weekly inspections. Contractor's QSP will complete inspections. CM team will oversee compliance through weekly inspections.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
General Condition 12 (Soil Erosion and Sediment Controls)	Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary highwater mark or high tide line, must be permanently stabilized at the earliest practicable date.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will implement SWPPP and contractor's QSP will inspect. CM team will oversee compliance through weekly inspections.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.

Table (cont.)
PURE WATER COMPONENTS: SOUTHERN MORENA PIPELINE SEGMENT
(48-INCH WASTEWATER FORCE MAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE)
NON-PURE WATER COMPONENTS (SEWER INFLUENT PIPELINE) DISCUSSED IN SECOND PORTION OF THE TABLE, FOLLOWING 404 CONDITION FOR PURE WATER COMPONENTS

Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
USACE – 404 # SPL-2017-00649-CJA (cont.)							
General Condition 13 (Removal of Temporary Fills)	Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.		X	X	Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will remove temporary fills and restore Tecolote Creek to pre-construction elevation. CM team will oversee compliance through post-construction inspection.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
General Condition 14 (Proper Maintenance)	Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Contractor will maintain temporary fill during construction. CM team will oversee compliance through weekly inspections.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
General Condition 15 (Single and Complete Project)	The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition 17 (Tribal Rights)	No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition 18 (Endangered Species)	No activity can occur that is likely to directly or indirectly impact threatened or endangered species including destruction or modification of critical habitat unless FESA Section 7 consultation addressing the effects of the proposed activity has been completed. No listed species would be affected by the project and the NWP verification letter does not include special conditions related to endangered species.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A
General Condition 19 (Migratory Birds and Bald and Golden Eagles)	The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Biological EM will oversee compliance.		X		Entire package area.	Biological EM will conduct pre-construction nesting bird surveys in accordance with the project's mitigation measures.	Daily construction monitoring reports will be uploaded by biological EMs to PMWeb.
General Condition 21 (Discovery of Previously Unknown Remains and Artifacts)	If Contractor discovers any previously unknown historic, cultural, or archeological remains and artifacts, they must immediately notify the district engineer. Historical EMs will oversee compliance. EMs will notify CM team. CM team will notify ECM and PI.		X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	Daily in areas where grading, excavation, and trenching activities occur.	Daily construction monitoring forms. Additional reporting is required if a discovery is found, which includes the PI providing written documentation to MMC within 24 hours of the discovery.
General Condition 23 (Mitigation)	No mitigation was required for temporary impacts to 0.03 acre of non-wetland waters of the U.S. in Tecolote Creek.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A	N/A
General Condition 25 (Water Quality)	The City obtained a 401 Water Quality Certification for the North City Project. The NWP verification letter did not require additional water quality management measures.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – procedural measure	N/A

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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
USACE – 404 # SPL-2017-00649-CJA (cont.)							
General Condition 27 (Regional Case-By-Case Basis)	The activity must comply with any regional conditions that may have been added by the Division Engineer. The project complies with the 10 regional conditions for the LA District, which were included in the 404 permit.	X	X		Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – Procedural measure.	The 404 permit verification letter will be available in PMWeb and/or Document Manager.
General Condition 28 (Use of Multiple Nationwide Permits)	The NWP verification letter authorizes work associated with Tecolote Creek in accordance with NWPs 33 and 39.	X			Tecolote Creek. 48-inch pipe between STA 49+55 to STA 50+77; 30-inch pipe between STA 714+86 to STA 716+07.	N/A – Procedural measure.	The 404 permit verification letter will be available in PMWeb and/or Document Manager.
General Condition 29 (Transfer of Nationwide Permit Verifications)	If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate USACE district office to validate the transfer.	X	X		Entire North City Project	N/A – Procedural measure.	Letter to the appropriate USACE district office. If necessary, ECM will send letter request.
General Condition 30 (Compliance Certification)	Each permittee who receives an NWP verification letter from the USACE must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation.				Entire North City Project	ECM will send signed certification to USACE within 30 days of completion of authorized work within the overall North City Project.	Signed certification documenting completion of the authorized activity
General Condition 32 (Pre-construction notification [PCN])	Where required by the terms of the NWP, City PUD must notify the district engineer by submitting a PCN as early as possible.	X			Entire North City Project	The city already submitted a PCN as part of the permitting process.	Already completed.
City of SD SDP – Permit # 2092309 (expires April 10, 2028)							
Standard Requirement 1	Permit must be utilized within 10 years (120 months) of issuance. Permit must be utilized by April 10, 2028.		X	X	N/A – procedural measure	N/A	N/A
Standard Requirement 2	Activities associated with the project cannot be initiated until the PUD signs and returns the permit to DSD and is then recorded in the office of the San Diego County Recorder.	X			N/A – procedural measure	N/A	Signed April 2018 and recorded.
Standard Requirement 3	The project must comply with terms and conditions of the SDP unless authorized by the appropriate City decision maker.	X	X	X	N/A – procedural measure	N/A	N/A
Standard Requirement 4	The SDP is a covenant running with the subject property and all conditions within the SDP and related documents shall be binding upon the City/PUD and any successor(s) of interest.	X	X	X	N/A – procedural measure	N/A	N/A
Standard Requirement 5	The SDP is not a stand-alone document. The continued use of the SDP is subject to the regulations of the City and any other applicable government agency.	X	X	X	N/A – procedural measure	N/A	N/A
Standard Requirement 6	SDP does not authorize PUD to violate any federal, state, or city laws. Environmental oversight is ultimately the responsibility of the ECM to oversee compliance. EPM, CM Team, and other essential personnel will aid in compliance as tailored to their specific role on the project.	X	X	X	N/A – procedural measure	N/A	N/A

Table (cont.)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
City of SD SDP – Permit # 2092309 (expires April 10, 2028) (cont.)							
Standard Requirement 8	Pure Water consultant design team is preparing the final construction plans in conformance with Exhibit “A,” dated April 10, 2018. Any changes to construction plans are prohibited unless appropriate application(s) or amendment(s) have been granted. Any proposed changes will be need to involve the consultant design team, CM Advisor, Senior CM, and ECM prior to any applications being submitted to DSD.	X	X		N/A – procedural measure	N/A	N/A
Standard Requirement 9	City PUD is required to comply with each and every condition within the SDP in order to maintain the entitlements granted by the SDP.	X	X	X	N/A – procedural measure	N/A	N/A
Standard Requirement 13	Reduce issues to driveway access to office buildings and apartments/condos. To do this, keep work within each segment to under 90 days to the extent feasible. Keep disruption and noise to a minimum.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	CM team will indicate within the Three-week Look-ahead schedule whether work is planning to occur adjacent to development. CM team will work with contractor to facilitate this requirement. This includes monthly inspections by CM team.	Reporting is not specified in the SDP. Inspection reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
Environmental Requirement 14	MMRP conditions apply to the SDP.	X	X	X	N/A – procedural measure	N/A	N/A
Environmental Requirement 15	Mitigation measures within MMRP shall be noted on construction plans and specifications under the heading “Environmental Mitigation Requirements.” Plans will be checked by the EPM, assisted by CM Team. ECM will give final approval. MMRP items must be on plans in order to initiate construction.	X			Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Once, prior to start of site preparation activities.	Construction plans with MMRP mitigation measures provided to ECM.
Environmental Requirement 16	Prior to NTP, all conditions of the MMRP shall be adhered to, to satisfaction of the RE. This will be verified by the EPM who will notify CM Team. ECM will give final approval.	X			Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	N/A	N/A
Engineering Requirement 18	Exported material shall be exported to a legal disposal site in accordance with the “Green Book.” Construction contractor will comply. City Project CM will ensure compliance.	X	X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Contractor will provide CM Team with disposal site location prior to hauling.	Contractor will file Affidavit of Legal Disposal upon closeout of contract.
Engineering Requirement 20	All public improvements shall be constructed per Exhibit “A” and satisfactory to the RE.	X	X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	N/A	N/A

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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
City of SD SDP – Permit # 2092309 (expires April 10, 2028) (cont.)							
Engineering Requirement 21	The project shall incorporate any construction BMPs necessary to comply with Chapter 14, article 2, Division 1 (Grading Regulations) of the SDMC, into the construction plans or specifications. CM Team will verify that plans/specs contain applicable information.	X	X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Contractor will install and CM team will inspect following installation of BMPs. Following initial inspection, inspection frequency will be dictated by the SWPPP.	Reporting dictated per the Construction General Permit. Contractor's QSP will upload reports to SMARTS. City CM team will save inspection reports in VPM.
Engineering Requirement 22	The project shall incorporate any construction BMPs necessary to comply with Chapter 14, Article 2, Division 1 (Grading Regulations) of the SDMC, into the construction plans or specifications.	X	X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Contractor will install and CM team will inspect following installation of BMPs. Following initial inspection, inspection frequency will be dictated by the SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS. City CM team will save inspection reports in VPM.
Engineering Requirement 23	Preparation of a technical report by the design team will be reviewed/approved by the City CM or CM team. Report is based on the storm water standards in effect at the time of the construction permit issuance.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Prior to the start of site preparation activities.	Storm Water Quality Management Plan prepared by the City will be uploaded to Document Manager.
Engineering Requirement 24	Development of this project shall comply with all storm water construction requirements of the State Construction General Permit, Order No. 2009-0009DWQ, or subsequent order, and the Municipal Storm Water Permit, Order No. R9-2013-0001, or subsequent order. In accordance with Order No. 2009-0009DWQ, or subsequent order, a Risk Level Determination shall be calculated for the site and a SWPPP shall be implemented concurrently with the commencement of grading activities. Responsibility during construction falls on the QSP provided by the contractor. Contractor's QSD will prepare SWPPP.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Contractor will install and CM team to inspect following installation of BMPs. Following initial inspection, inspection frequency will be dictated by the SWPPP.	Reporting dictated per the Construction General Permit. QSP will upload reports to SMARTS. City CM team will save inspection reports in VPM.
Engineering Requirement 25	City's Project CM will determine if extra water trucks are needed to control fugitive dust in certain areas.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Frequency not specified. CM team will oversee dust compliance on a daily basis.	If additional trucks are determined to be necessary, the inspection report will reflect this need. Inspection report will be uploaded to PMWeb.
Engineering Requirement 30	Reduce the need for tree removal in the parkways, medians, and public right-of-way. CM team will provide oversight.	X	X		Tree removal and preservation are noted on the construction drawings.	Contractor will notify CM team when work is planned in parkways, medians, and the public right-of-way. Additionally, contractor will notify CM team if tree removal is anticipated within these areas. CM team will oversee compliance on a weekly basis.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.

Table (cont.)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
City of SD SDP – Permit # 2092309 (expires April 10, 2028) (cont.)							
Planning/Historic Design Requirement 33	Changes in project scope or alignment will require review and approval by DSD Plan-Historic Staff. The Contractor, EPM, and CM team will provide written request to ECM to justify need and potential impacts. ECM will submit the request to DSD.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	As needed, dependent upon whether changes in scope and/or alignment are requested by CM team.	CM team will prepare a report documenting where the proposed changes are located, what the changes will entail, and why they are necessary. This document will be provided to the ECM, who will then forward to DSD Plan-Historic Staff. Report will be stored in Document Manager.
Planning/Historic Design Requirement 34	Any land required for construction of any facility must be acquired prior to construction.	X			Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	N/A	N/A
Transportation Requirement 35	Right-of-way improvements shall be in conformance with Exhibit A of the SDP and to the satisfaction of the RE. This section contains mitigation measures found in the MMRP. Applicable MMRP measures include MM-PU-1, MM-TRAF-1, and MM-HIS-3. Contractor will provide plans of right-of-way improvements to the RE, who is part of the CM team. CM team and EPM will oversee compliance.		X		Entire 48-inch pipe associated with package B1 (STA 10+00 to STA 184+00); Entire 30-inch pipe associated with package B1 (STA 674+00 to STA 851+00).	Contractor will notify CM team when work is planned in parkways, medians, and the public right-of-way. CM team will oversee compliance on a weekly basis.	Documentation of compliance will be captured in inspection reports. These reports will be uploaded by the CM team to PMWeb where they will be stored and organized.
Addendum to Mitigated Negative Declaration (MND) No. 255100, Project # 583432/WBS # B-10627.02.02							
Historical Resources (archeological monitoring)	EPM and PI will provide MMC and ECM with a verification letter confirming that HELIX was retained for the historical resources monitoring. PI will conduct site-specific records prior to the start of construction and provide a letter of verification and AME to MMC and ECM. During construction, historical EMs will be on site full time during soil-disturbing and grading/excavation/trenching activities that could result in impacts to archeological resources as identified in the AME.	X	X	X	Entire 36-inch water transmission main and entire 16-inch water distribution main.	Retention of PI and document verification will need to occur prior to the start of construction. AME is a one-time submittal submitted prior to site preparation start. Monitoring will be daily during site preparation where shown within the AME during grading, excavation, or trenching activities.	The City's ECM will provide the retention letter to City MMC stating that a PI has been retained. ECM will also provide MMC with the AME. Daily construction monitoring forms will be filled out by historical EMs. Additional reporting is required if a discovery is found, which includes the PI providing written documentation to MMC within 24 hours of the discovery.

Table (cont.)
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Environmental Mitigation Measure	Description of Mitigation Measure	Timing of Mitigation			Location	Frequency	Reporting
		Pre-construction	During Construction	Post-construction			
Addendum to MND No. 255100, Project # 583432/WBS # B-10627.02.02 (cont.)							
Paleontological Resources (paleontological monitoring)	Requires a paleontological PI and monitors if construction would occur within a formation with a moderate to high resource potential. PI will conduct site-specific records prior to the start of construction and provide a letter of verification and PME to MMC and ECM. Monitor will need to comply with the discovery notification process and determination of significance. Measure also requires the preparation and Submittal of Draft Monitoring Report. However, this will be the responsibility of the contractor associated with the construction component of the NCWRP expansion site.	X	X	X	Entire 36-inch water transmission main and entire 16-inch water distribution main.	Retention of PI and document verification will need to occur prior to the start of construction. PME is a one-time submittal submitted prior to site preparation start. Monitoring will be daily during site preparation where shown within the PME during grading, excavation, or trenching activities.	The City's ECM will provide the retention letter to City MMC stating that a PI has been retained. ECM will also provide MMC with the AME. Daily construction monitoring forms will be filled out by historical EMs. Additional reporting is required if a discovery is found, which includes the PI providing written documentation to MMC within 24 hours of the discovery. Draft Monitoring Report will be submitted within 90 days following completion of monitoring. PI will submit the report to MMC through RE. MMC will return draft report to PI via RE for revision (no timeline specified in MMRP). PI will submit revised draft to MMC via RE for final approval (no timeline specified in MMRP).
CDFW – SAA # 1600-2018-0135-R5							
Same condition as Pure Water components of the B1 package. See above. Permit applies to STA 2+00 to STA 184+00 (36-inch pipe) and STA 1+01 to STA 168+01 (16-inch pipe).							
RWQCB – 401 WQC # R9-2018-0084 (expires March 19, 2022)							
Waiting on permit							
USACE – 404 # SPL-2017-00649-CJA							
Same condition as Pure Water components of the B1 package. See above. Permit applies to STA 2+00 to STA 184+00 (36-inch pipe) and STA 1+01 to STA 168+01 (16-inch pipe).							

APPENDIX B
FIRE HYDRANT METER PROGRAM

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

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.)

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 2 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

- 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.

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 3 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

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.

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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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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.

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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="text"/>	<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>			

Fire Hydrant Meter Removal Request	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: \$ 936.00 Fees Amount: \$ 62.00
Meter Serial #	Meter Size: 05 Meter Make and Style: 6-7
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) and thermoplastic (Diagonal Stripe)
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
34. Pavement Marking (Thermo)
35. Flex Post (Delineator)

APPENDIX D

SAMPLE CITY INVOICE WITH CASH FLOW FORECAST

City of San Diego, CM&FS Div., 9753 Chesapeake Drive, SD CA 92123

Project Name:
Work Order No or Job Order No.
City Purchase Order No.
Resident Engineer (RE):
RE Phone#: Fax#:

Contractor's Name:
Contractor's Address:

Contractor's Phone #:
Contractor's fax #:
Contact Name:

Invoice No.
Invoice Date:
Billing Period: (To)

Item #	Item Description	Contract Authorization				Previous Totals To Date		This Estimate		Totals to Date	
		Unit	Price	Qty	Extension	%/QTY	Amount	% / QTY	Amount	% / QTY	Amount
1					\$ -		\$ -		\$ -	0.00	\$ -
2					\$ -		\$ -		\$ -	0.00%	\$ -
3					\$ -		\$ -		\$ -	0.00%	\$ -
4					\$ -		\$ -		\$ -	0.00%	\$ -
5					\$ -		\$ -		\$ -	0.00%	\$ -
6					\$ -		\$ -		\$ -	0.00%	\$ -
7					\$ -		\$ -		\$ -	0.00%	\$ -
8					\$ -		\$ -		\$ -	0.00%	\$ -
5					\$ -		\$ -		\$ -	0.00%	\$ -
6					\$ -		\$ -		\$ -	0.00%	\$ -
7					\$ -		\$ -		\$ -	0.00%	\$ -
8					\$ -		\$ -		\$ -	0.00%	\$ -
9					\$ -		\$ -		\$ -	0.00%	\$ -
10					\$ -		\$ -		\$ -	0.00%	\$ -
11					\$ -		\$ -		\$ -	0.00%	\$ -
12					\$ -		\$ -		\$ -	0.00%	\$ -
13					\$ -		\$ -		\$ -	0.00%	\$ -
14					\$ -		\$ -		\$ -	0.00%	\$ -
15					\$ -		\$ -		\$ -	0.00%	\$ -
16					\$ -		\$ -		\$ -	0.00%	\$ -
17	Field Orders				\$ -		\$ -		\$ -	0.00%	\$ -
					\$ -		\$ -		\$ -	0.00%	\$ -
	CHANGE ORDER No.				\$ -		\$ -		\$ -	0.00%	\$ -
					\$ -		\$ -		\$ -	0.00%	\$ -
	Total Authorized Amount (including approved Change Order)				\$ -		\$ -		\$ -	Total Billed	\$ -

SUMMARY

A. Original Contract Amount	\$ -	I certify that the materials have been received by me in the quality and quantity specified _____ Resident Engineer _____ Construction Engineer
B. Approved Change Order #00 Thru #00	\$ -	
C. Total Authorized Amount (A+B)	\$ -	
D. Total Billed to Date	\$ -	
E. Less Total Retention (5% of D)	\$ -	
F. Less Total Previous Payments	\$ -	
G. Payment Due Less Retention	\$0.00	
H. Remaining Authorized Amount	\$0.00	

Retention and/or Escrow Payment Schedule

Total Retention Required as of this billing (Item E)	\$0.00
Previous Retention Withheld in PO or in Escrow	\$0.00
Add'l Amt to Withhold in PO/Transfer in Escrow:	\$0.00
Amt to Release to Contractor from PO/Escrow:	

Contractor Signature and Date: _____

NOTE: CONTRACTOR TO CALCULATE TO THE 2ND DECIMAL PLACE.

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



Engineering & Capital Projects

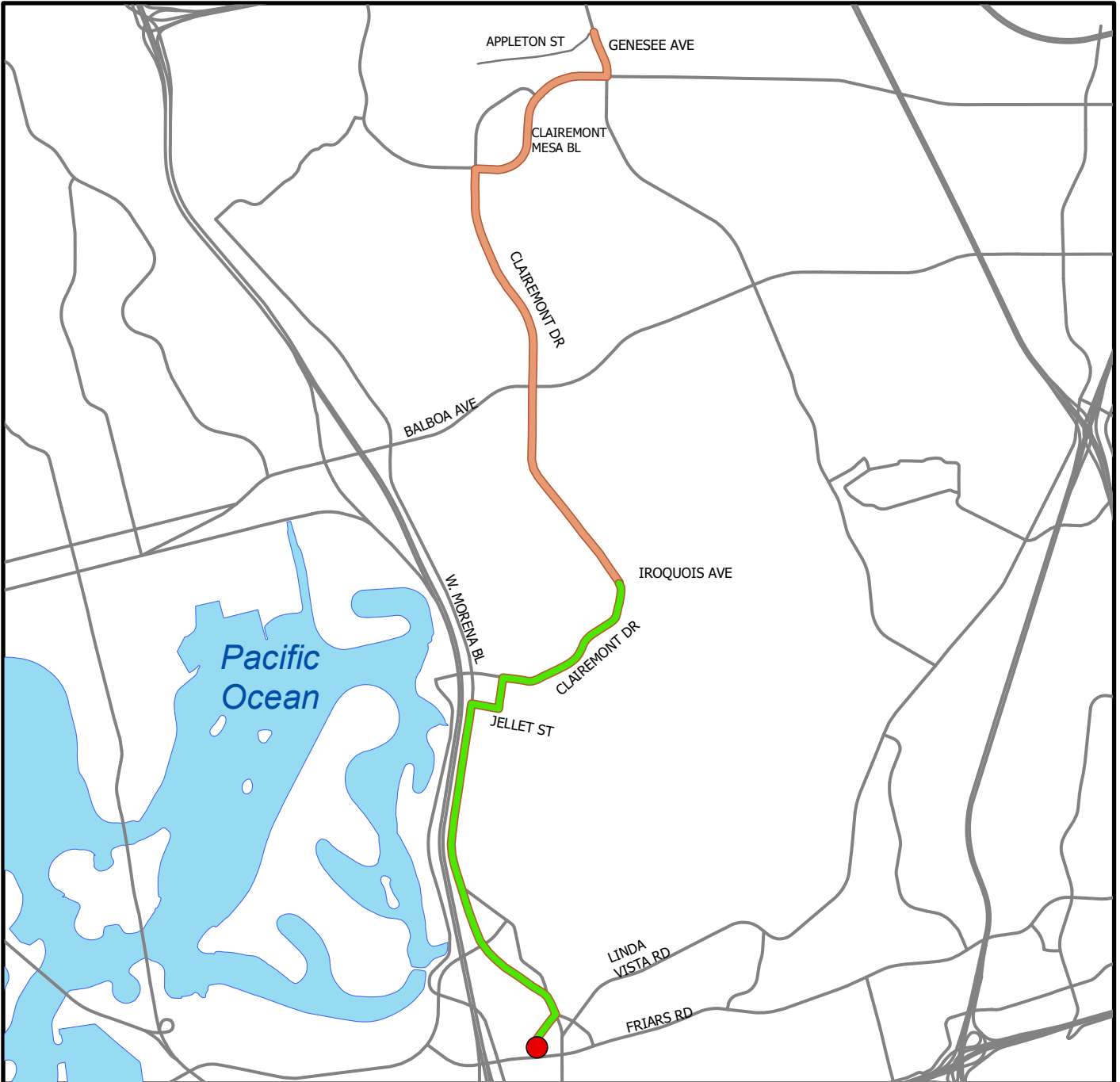
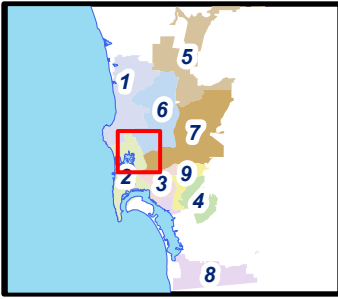
Pure Water Program, Morena Conveyance South, and Morena Conveyance Middle Location Map

SENIOR ENGINEER
REYHANEH MARTIN
(858)-243-5036

PROJECT MANAGER
JUAN ELLI BERMUDO
858-614-5802

PROJECT ENGINEER
ALLAN ABUTIN
858-292-6420

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



Legend

- Morena Pump Station
- Middle Alignment
- Southern Alignment
- Major Roads



COMMUNITY NAME: Mission Valley, Linda Vista, Clairemont, La Jolla

COUNCIL DISTRICT: 2, 6, 7

WBS NO: B15141

Date: 12/6/2021

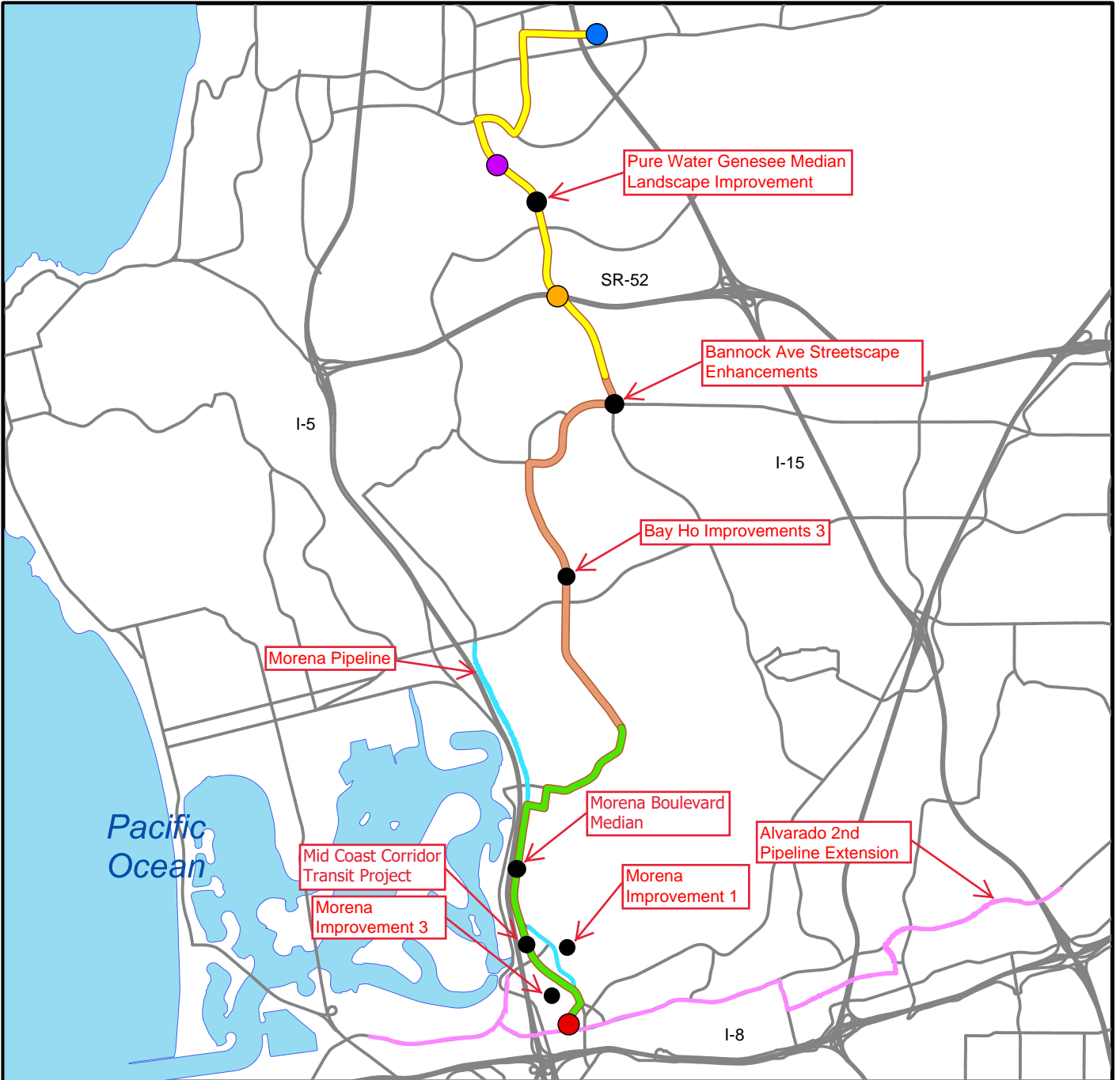
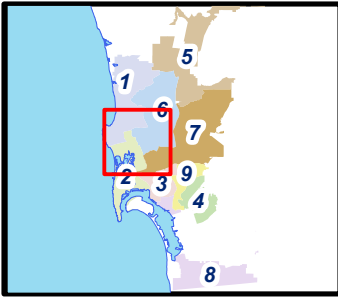


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APPENDIX F
ADJACENT PROJECT MAP

**Pure Water Program, Morena Conveyance South,
and Morena Conveyance Middle Adjacent Map**

SENIOR ENGINEER REYHANEH MARTIN (858)-243-5036	PROJECT MANAGER JUAN ELLI BERMUDO 858-614-5802	PROJECT ENGINEER ALLAN ABUTIN 858-292-6420	FOR QUESTIONS ABOUT THIS PROJECT Call: (619) 533-4207 Email: engineering@sandiego.gov
--	--	--	---



Legend

- | | |
|---------------------|------------------------|
| Morena Pump Station | NCWRP |
| Middle Conveyance | Tunnel #2 |
| Major Roads | Tunnel #1 (52 Freeway) |
| Southern Conveyance | |
| Northern Conveyance | |



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APPENDIX G

CONTRACTOR'S DAILY QUALITY CONTROL INSPECTION REPORT

City of San Diego
Rubber Polymer Modified Slurry
Contractor's Daily Quality Control Inspection Report

Project Title: _____ Date: _____

Ambient Temperature (Start of Work): _____ Time: _____

Environmental Considerations: _____

Locations (Address Range/Cross Streets):

1. _____
2. _____
3. _____

Approved Mix Design: _____

Material Suppliers: _____

RPMS Type(s): _____

Slurry Machine #'s: _____

Estimated Cure Time (Break) of Slurry: _____

Pre-Mix (Per 100 Counts)

Gate Setting/Emulsion %: _____

Aggregate Weight: _____

Cement % (by weight of aggregate): _____

Crumb Rubber % (by volume of cement): _____

Machine Inspection

Leaks: _____

Sprayers: _____

Emulsion Filter: _____

Carbon Black: _____

Spreader Box Inspection

Cleanliness: _____

Augers: _____

Rubbers: _____

Fabric: _____

Runners: _____

City of San Diego
Rubber Polymer Modified Slurry
Contractor's Daily Quality Control Inspection Report

Project Conditions

Crack Fill: _____

Asphalt Deficiencies: _____

Cleanliness: _____

Impediments/Other: _____

Communication to Client/ Resident Engineer

Crack Fill: _____

Asphalt Deficiencies: _____

Cleanliness: _____

Impediments/Other: _____

Test Lab

Tech: _____ Time on Site: _____

Notes

QCP Administrator Signature:

Date Signed:

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

SAMPLE CERTIFICATION LETTER FOR AMERICAN IRON AND STEEL (AIS) COMPLIANCE

SAMPLE CERTIFICATION LETTER

The following information is provided as a sample letter of **step** certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. XXXX
2. XXXX
3. XXXX

Such process took place at the following location:

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

APPENDIX I

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), and as follows:

Project Name:		WBS No.:		Watershed No.	
Qualified Person Conducting Tests:		signature			

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 ¹	Category ² (Select one)	Notification ³ (Select all that apply)	BMPs in Place ⁴ (Select all that apply)	Volume ⁵ (gal)	Sampling ⁶ (take samples at 10 mins, 50-60 mins & last 10 mins)				Exceedence ⁷			Notes Report exceedence to RE & complete page 2 of 2
					Measure	Unit	Time	Result	Limit	No	Yes	
Inlet Location Start Date: Time: End Date: Time:	Superchlorinated <small>(Chlorine added for disinfection)</small>	TSW <small>(All Categories)</small>	Sweep flow path <small>(gutter, street, etc.)</small>	Total	Chlorine	mg/L			0.1 mg/L= Exceedence			
	Large Volume <small>(≥ 325,850 gal)</small>	PUD <small>(All Categories)</small>	Dechlorination <small>(diffusers, chemicals, etc.)</small>				Reused <small>(if any)</small>					
	Well Dev/Rehab <small>(Not Typical)</small>	Water Board <small>(Large Volume Only)</small>	Inlet Protection		Turbidity	NTU			20 NTU= Exceedence 225 NTU= Exceedence for Ocean			
	Small Volume/Other <small>(No Sampling Required)</small>	County <small>(≥100,000 gal & within ¼ mile of ocean/bay; or if enters the County's MS4)</small>	Erosion Controls									
			Sediment Controls		pH	Unit			Range 6.5 to 8.5			

Event #2												
Discharge Location ¹	Category ² (Select one)	Notification ³ (Select all that apply)	BMPs in Place ⁴ (Select all that apply)	Volume ⁵ (gal)	Sampling ⁶ (take samples at 10 mins, 50-60 mins & last 10 mins)				Exceedence ⁷			Notes Report exceedence to RE & complete page 2 of 2
					Measure	Unit	Time	Result	Limit	No	Yes	
Inlet Location Start Date: Time: End Date: Time:	Superchlorinated <small>(Chlorine added for disinfection)</small>	TSW <small>(All Categories)</small>	Sweep flow path <small>(gutter, street, etc.)</small>	Total	Chlorine	mg/L			0.1 mg/L= Exceedence			
	Large Volume <small>(≥ 325,850 gal)</small>	PUD <small>(All Categories)</small>	Dechlorination <small>(diffusers, chemicals, etc.)</small>				Reused <small>(if any)</small>					
	Well Dev/Rehab <small>(Not Typical)</small>	Water Board <small>(Large Volume Only)</small>	Inlet Protection		Turbidity	NTU			20 NTU= Exceedence 225 NTU= Exceedence for Ocean			
	Small Volume/Other <small>(No Sampling Required)</small>	County <small>(≥100,000 gal & within ¼ mile of ocean/bay; or if enters the County's MS4)</small>	Erosion Controls									
			Sediment Controls		pH	Unit			Range 6.5 to 8.5			

Instructional Notes found on the Page 2 of 2

Submit completed Form to RE

Receiving Water Monitoring

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

Event #1	
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.	
4) If any answers are YES, Notify the RE immediately for further action	

Event #2	
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.	
4) If any answers are YES, Notify the RE immediately for further action	

Instructional Notes

- 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	When to Notify	Email
TSW	3 days prior to all discharges	SWPPP@SanDiego.gov
PUD	3 days prior to all discharges	CompReports@SanDiego.gov Rdavenport@SanDiego.gov
San Diego Water Board	3 days prior to Large Volume discharges	SanDiego@WaterBoards.ca.gov Ben.Neill@WaterBoards.ca.gov
County of San Diego	3 days prior if 100,000 gal and within 1/4 mile of ocean/bay	DEH: Joseph.Palmer@SDCounty.ca.gov Dominique.Edwards@SDCounty.ca.gov
	3 days prior if enter county MS4 or unincorporated County	WPP: Nicholas.DeValle@SDCounty.ca.gov LUEG.Watersheds@sdcounty.ca.gov

- 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 or 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 the notes
- 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 min, 50-60 min, last 10 min
Large Volume	Chlorine Turbidity	first 10 min, 50-60 min, last 10 min
Well Dev/Rehab	Chlorine Turbidity	first 10 min, 50-60 min, last 10 min
Small Volume/Other	None required	N/A

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

Measure	Method	Limit
Chlorine	Field Measure	0.10 mg/L-Cl
Turbidity	Visual Estimate	20 NTU for inland waters
		225 NTU for ocean 100 NTU for wells
pH	Field Measure	6.5 - 8.5

APPENDIX J
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) _____

UNNA 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 ¹

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.

¹ 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 ³
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Chemical	Quantity <input type="checkbox"/> GAL <input type="checkbox"/> LBS <input type="checkbox"/> FT ³
Clean-Up Procedures & Timeline:	
Completed By:	Phone:
Print Name:	Title:

EMERGENCY RELEASE FOLLOW - UP NOTICE REPORTING FORM

A	BUSINESS NAME	FACILITY EMERGENCY CONTACT & PHONE NUMBER () -	
B	INCIDENT DATE MO DAY YR	TIME OES NOTIFIED (use 24 hr time)	OES CONTROL NO.
C	INCIDENT ADDRESS LOCATION	CITY / COMMUNITY	COUNTY ZIP
D	CHEMICAL OR TRADE NAME (print or type)		CAS Number
D	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"/>	
D	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
D	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
E	ACTIONS TAKEN		
F	KNOWN OR ANTICIPATED HEALTH EFFECTS (Use the comments section for addition information)		
F	<input type="checkbox"/> ACUTE OR IMMEDIATE (explain) _____		
F	<input type="checkbox"/> CHRONIC OR DELAYED (explain) _____		
F	<input type="checkbox"/> NOTKNOWN (explain) _____		
G	ADVICE REGARDING MEDICAL ATTENTION NECESSARY FOR EXPOSED INDIVIDUALS		
H	COMMENTS (INDICATE SECTION (A - G) AND ITEM WITH COMMENTS OR ADDITIONAL INFORMATION)		
I	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.		
I	REPORTING FACILITY REPRESENTATIVE (print or type) _____		
I	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 K
SWPPP CONSTRUCTION BMP MAINTENANCE LOG

SWPPP Construction BMP Maintenance Log

Examples of construction BMP maintenance activities include but are not limited to tasks listed below. The contractor is ultimately responsible for compliance with the Storm Water Standards Manual and/or the Construction General Permit, and for ensuring all BMPs function per manufacturer's specifications. Use the attached log to schedule and document maintenance activities. The log shall be kept with the project SWPPP document at all times.

Construction BMP Maintenance Activities

- Maintain stabilized construction entrances/exits
- Redress gravel/rock to full coverage and remove any sediment accumulation
- Remove and replace geotextile/compost blanket/plastic with holes or tears
- Redress and restabilize erosion or rilling greater than 1-inch deep
- Reapply hydraulic stabilization products to full coverage
- Remove and replace silt fence/fiber roll/gravel bags/etc. with holes or tears
- Reinstall or replace silt fence/fiber roll/etc. with sags
- Remove sediment accumulation from perimeter controls
- Remove sediment accumulation from storm drain inlet protection and check dams
- Remove sediment accumulation from energy dissipators
- Repair or remove any vehicle/equipment that leaks
- Remove any accumulation in drip pans or containment
- Empty concrete washouts when they reach 75% capacity
- Empty waste disposal containers when they reach 95% capacity

Construction BMP Maintenance Log

Project Title:

WBS/IO No:

WDID:

Scheduled Date/Time	Completion Date/Time	Location	Maintenance Tasks Performed	Logged By

APPENDIX L

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 402-2, "Protection", of the 2018 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:



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

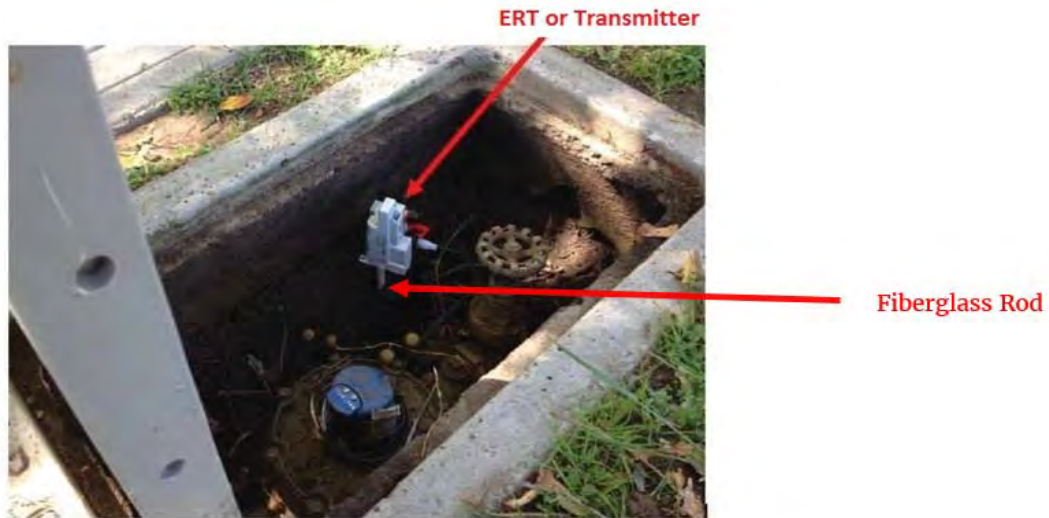


Photo 6 below is an example of disturbance that shall be avoided:

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

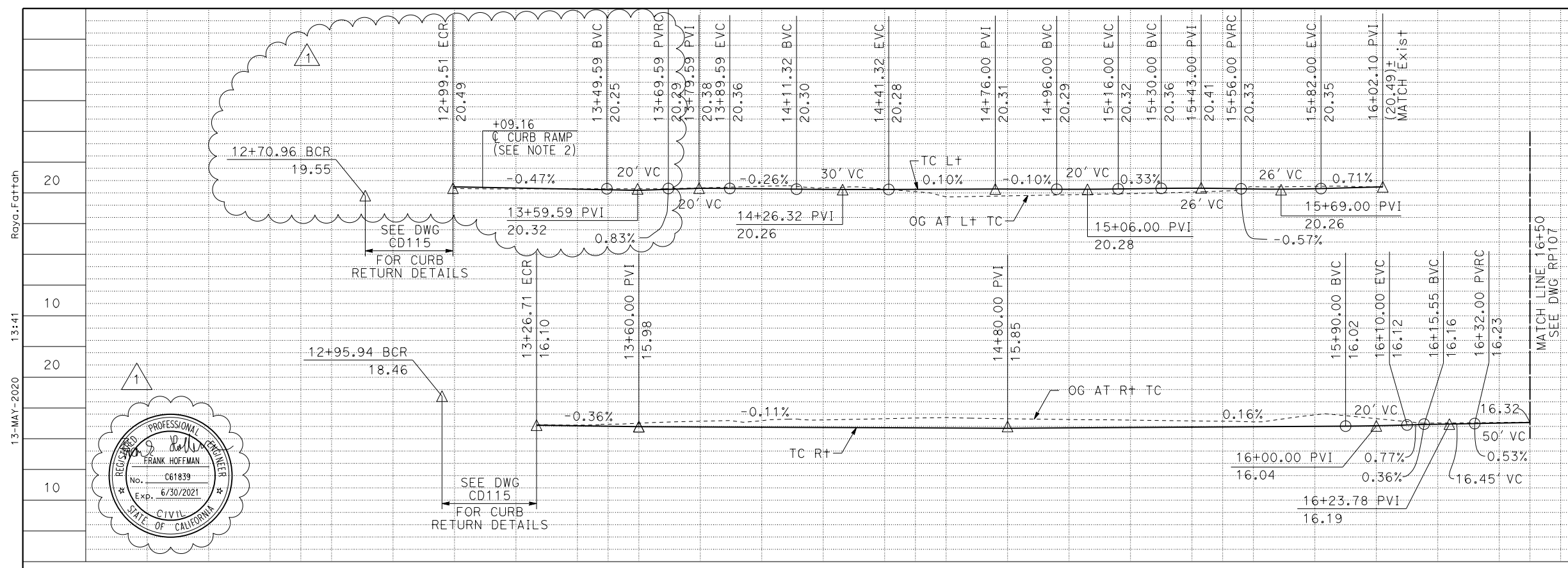
Photo 9



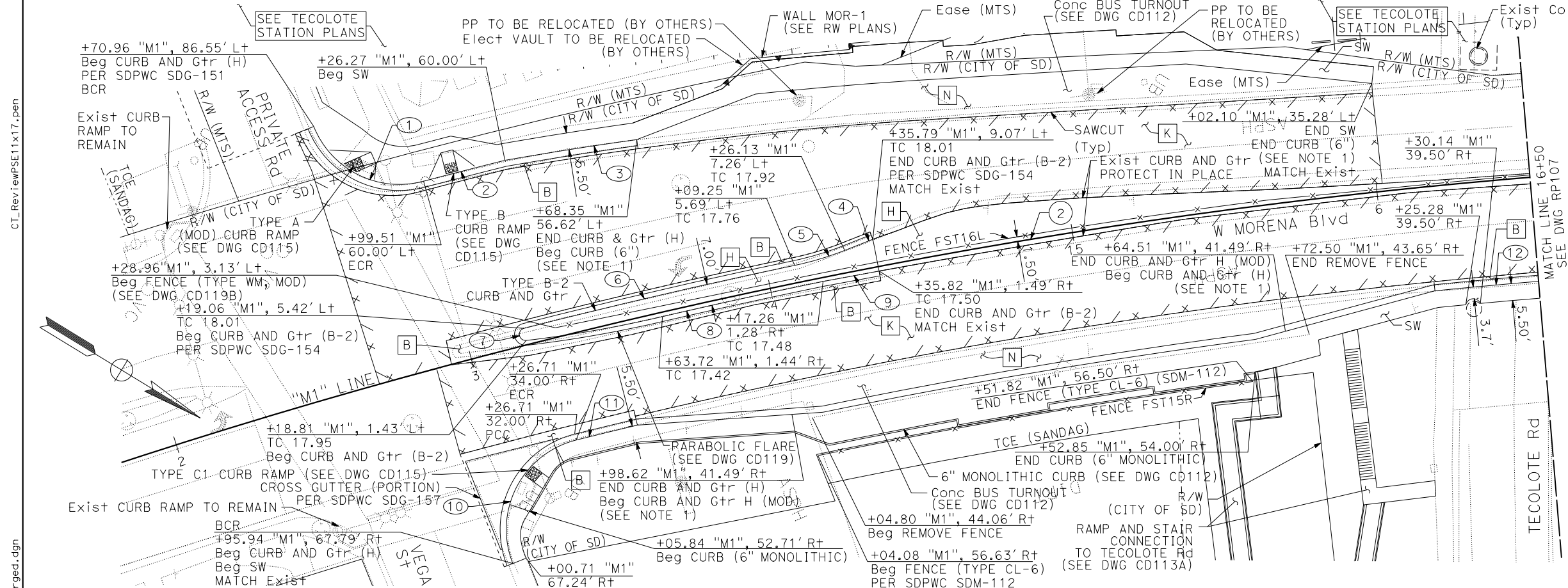
If you encounter any bad installations, disconnected/broken/buried endpoints, or inadvertently damage any AMI devices or cables, notify the Resident Engineer immediately. The Resident Engineer will then immediately contact the AMI Project Manager, Arwa Sayed, at (619) 362-0121.

APPENDIX M
MID COAST CORRIDOR TRANSIT PROJECT

CITY OF SAN DIEGO, CALIFORNIA Development Services Department SHEET 62 OF 779 SHEETS					I.O. No. 24006243 PROJECT NO. 446391
FOR CITY ENGINEER					DATE 10-14-16
DESCRIPTION	BY	APPROVED	DATE	FILMED	V.T.M.
ORIGINAL	KHA				
					1860-6267 NAD83 COORDINATES
					220-1707 LAMBERT COORDINATES
CONTRACTOR		DATE STARTED		39076-62-D	
INSPECTOR		DATE COMPLETED			



STATION	12	13	14	15	16	TOTAL
---------	----	----	----	----	----	-------



CENTERLINE DATA					
No.	DELTA OR BEARING	RADIUS	TANGENT	LENGTH (ON THIS SHEET)	REMARKS
2	35°22'57"	2000.00'	637.94'	468.76'	1235.08' (TOTAL LENGTH)

CURB AND GUTTER DATA					
No.	DELTA OR BEARING	RADIUS	TANGENT	LENGTH (ON THIS SHEET)	REMARKS
1	82°59'24"	30.00'	26.54'	43.45'	
2	00°46'00"	2060.00'	13.78'	27.57'	
3	02°39'49"	1235.00'	21.84'	43.68'	
4	S 52°58'02" E	--	--	9.86'	
5	09°45'22"	100.00'	8.53'	17.03'	
6	02°35'55"	1994.00'	45.23'	90.44'	
7	172°27'42"	2.00'	30.36'	6.02'	
8	01°32'34"	1987.00'	49.26'	98.52'	
9	N 41°54'52" W	--	--	18.55'	
10	97°42'03"	30.00'	34.33'	51.16'	
11	00°35'53"	1966.00'	10.26'	20.52'	
12	05°16'46"	1966.00'	90.64'	33.87'	181.16' (TOTAL LENGTH)

- NOTES:
- SEE DWG CD112 FOR ADDITIONAL DETAILS ON TYPE AND LOCATION OF CURB AND GTR.
 - SEE DWG CD115 FOR ELEVATION DETAILS AT CURB RAMP.

No.	DATE	REVISION	BY	CHK	APRV
1	04/27/20	CCO# 4152		FH	MSS FEO
0	10/14/16	ISSUED FOR CONSTRUCTION		NK	HRS FEO

Kimley»Horn
401 B STREET, SUITE 600 SAN DIEGO, CA 92101
TEL (619) 234-9411

DESIGNED BY Nickz, A. DATE 09/16
DRAWN BY Vianzon, J. DATE 09/16
CHECKED BY Hoffmann, F. DATE 09/16
SANDAG Owsiany, F. DATE 09/16

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT
FINAL PLANS
STREET IMPROVEMENT PLANS
WEST MORENA Blvd AT TECOLOTE Rd
STA 12+70.96 TO STA 16+50

SCALE
HORIZ: 1"=20'
VERT: 1"=5'

SANDAG CONTRACT NO. 5008600.4
DRAWING NO. SHEET NO. RP106 415

CITY OF SAN DIEGO, CALIFORNIA Development Services Department SHEET 63 OF 779 SHEETS					I.O. No. 24006243 PROJECT NO. 446391
FOR CITY ENGINEER			10-14-16 DATE		V.T.M.
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	KHA				
(D)-CHANGE	KHA				
					1860-6267 NAD83 COORDINATES
					228-1707 LAMBERT COORDINATES
CONTRACTOR			DATE STARTED		39076-63-D
INSPECTOR			DATE COMPLETED		

wsdpw04-pw-svc

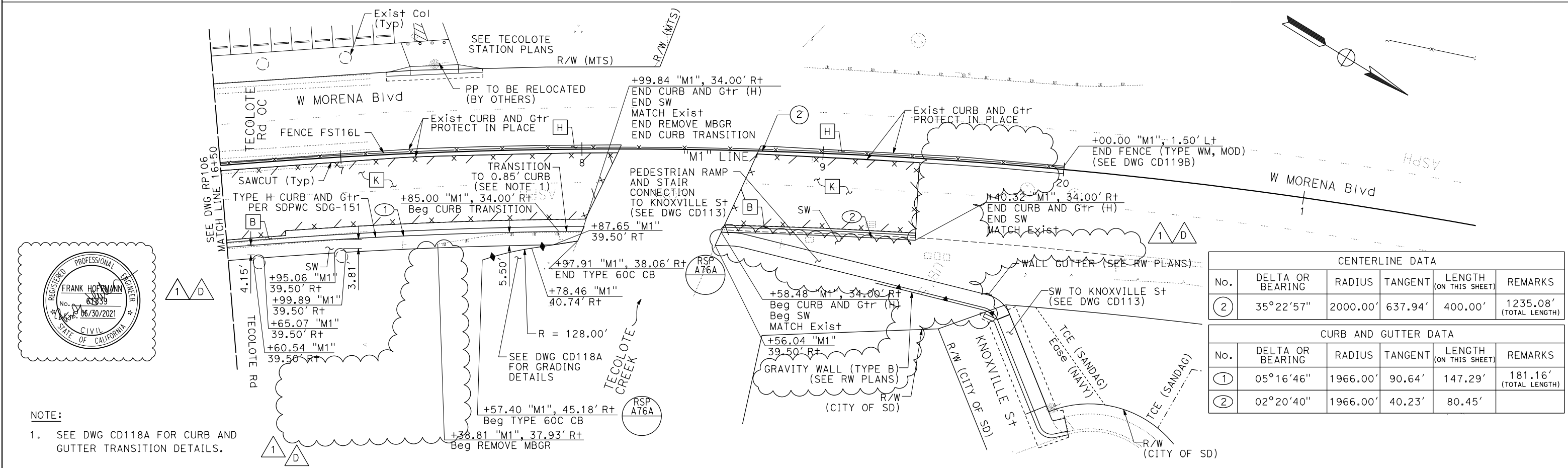
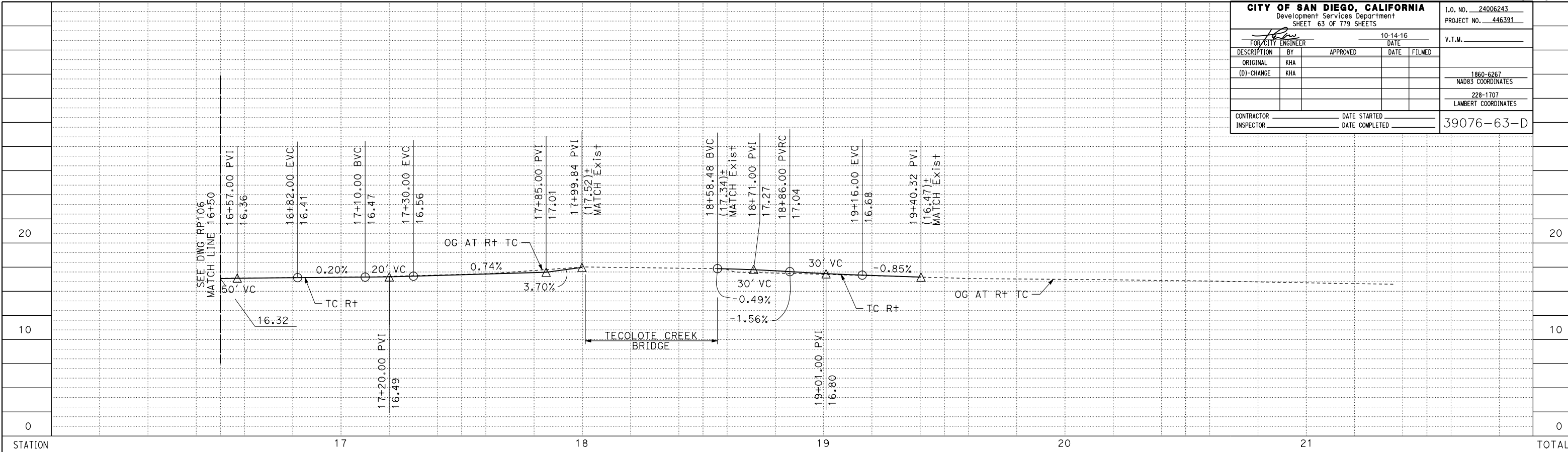
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STATION

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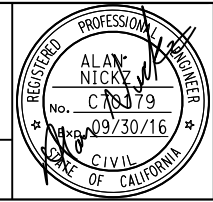
NOTE:
1. SEE DWG CD118A FOR CURB AND GUTTER TRANSITION DETAILS.

CENTERLINE DATA					
No.	DELTA OR BEARING	RADIUS	TANGENT	LENGTH (ON THIS SHEET)	REMARKS
2	35°22'57"	2000.00'	637.94'	400.00'	1235.08' (TOTAL LENGTH)

CURB AND GUTTER DATA					
No.	DELTA OR BEARING	RADIUS	TANGENT	LENGTH (ON THIS SHEET)	REMARKS
1	05°16'46"	1966.00'	90.64'	147.29'	181.16' (TOTAL LENGTH)
2	02°20'40"	1966.00'	40.23'	80.45'	

Kimley»Horn

401 B STREET, SUITE 600 SAN DIEGO, CA 92101
TEL (619) 234-9411



DESIGNED BY Nickz, A. DATE 09/16
DRAWN BY Corcoran, C. DATE 09/16
CHECKED BY Hoffmann, F. DATE 09/16
SANDAG Owsiany, F. DATE 09/16



401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900



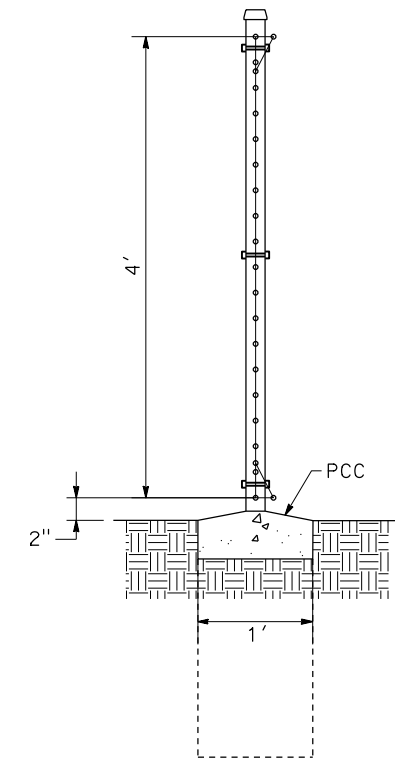
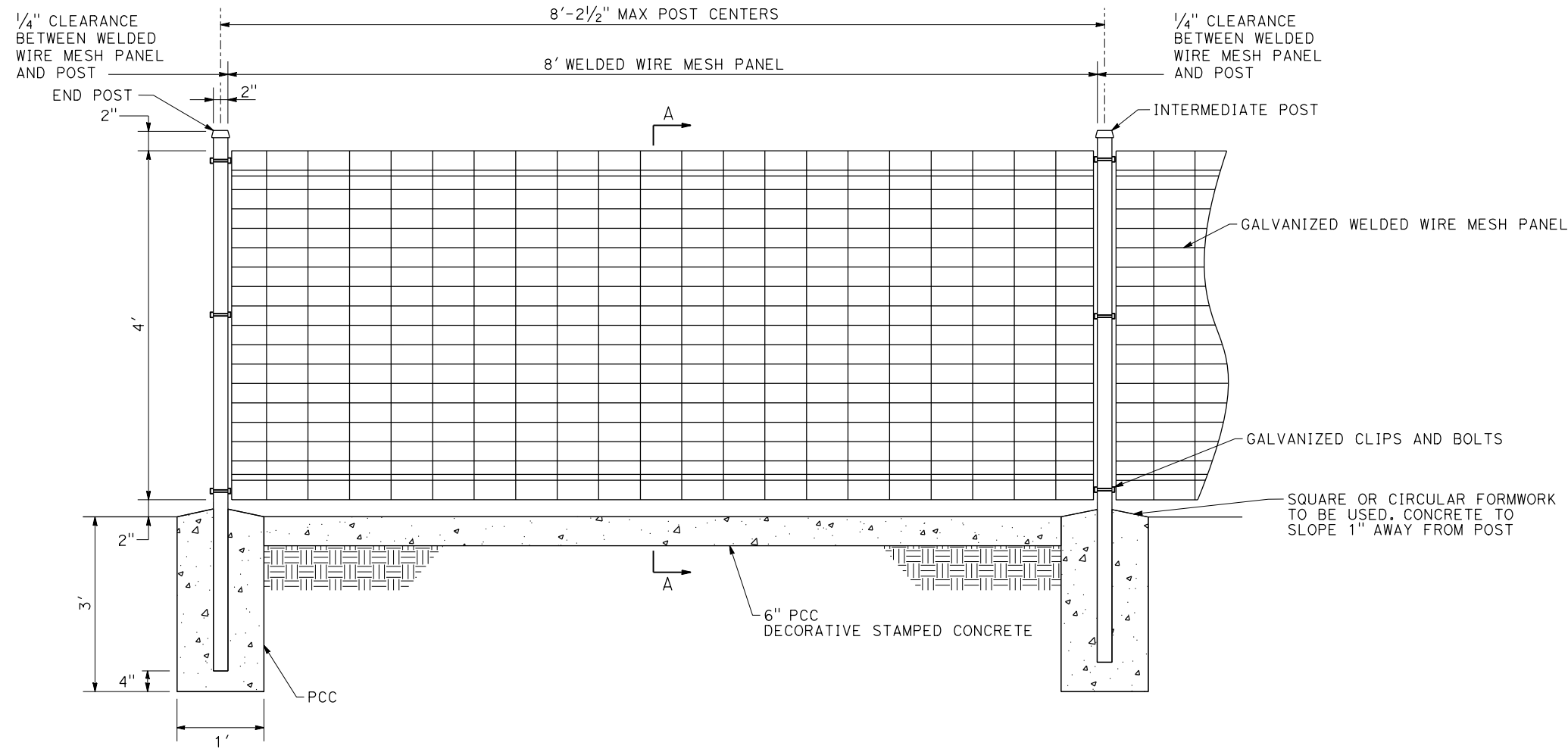
MID-COAST CORRIDOR TRANSIT PROJECT
FINAL PLANS

STREET IMPROVEMENT PLANS
WEST MORENA Blvd AT TECOLOTE Rd
STA 16+50 TO STA 20+00

SCALE HORIZ: 1"=20' VERT: 1"=5'
SANDAG CONTRACT NO. 5008600.4
DRAWING NO. SHEET NO. RP107 416

NOTES:

1. ALL MATERIAL MUST BE GALVANIZED.
2. METAL POSTS MUST COMPLY WITH ASTM A 702.
3. EACH POST MUST BE CLASS B STEEL AND HAVE A LENGTH OF AT LEAST 7 FEET.
4. WELDED WIRE MESH PANELS MUST COMPLY WITH ASTM A 116, CLASS 1.
5. PANELS MUST BE 96"x48" WITH 9 GAGE WIRES AT 1" HORIZONTAL AND 2" VERTICAL CENTERS.
6. GALVANIZED CLIPS, BOLTS, AND NUTS MUST BE COMMERCIAL QUALITY.
7. CLIPS AND HOG RINGS MUST BE AT LEAST 9 GAGE.
8. NUTS MUST BE SPOT WELDED TO BOLTS AS AN ANTI-THEFT DETERRENT.
9. FENCE (TYPE WM, MODIFIED) TO BE MAINTAINED BY MTS.



SECTION A-A

CITY OF SAN DIEGO, CALIFORNIA Development Services Department SHEET 114 OF 779 SHEETS				I.O. NO. 24006243
FOR CITY ENGINEER				PROJECT NO. 446391
DESCRIPTION	BY	APPROVED	DATE	V.T.M.
ORIGINAL	KHA		10-14-16	
AS-BUILTS				1854-6267 NAD83 COORDINATES
CONTRACTOR				214-1707 LAMBERT COORDINATES
INSPECTOR				39076-114-D

No.	DATE	REVISION	BY	CHK	APRV
0	10/14/16	ISSUED FOR CONSTRUCTION	NK	HRS	FEO

Kimley»Horn
 401 B STREET, SUITE 600 SAN DIEGO, CA 92101
 TEL (619) 234-9411

REGISTERED PROFESSIONAL ENGINEER
 ALAN NICKZ
 No. 93020
 Exp. 9/30/2016
 CIVIL
 STATE OF CALIFORNIA

DESIGNED BY Nickz, A. DATE 09/16
 DRAWN BY Jacobson, E. DATE 09/16
 CHECKED BY Hofmann, F. DATE 09/16
 SANDAG Owsiany, F. DATE 09/16

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

SANDAG

401 B STREET, SUITE 800
 SAN DIEGO, CA 92101-4231
 (619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
 FINAL PLANS
 STREET IMPROVEMENT DETAILS
 FENCE (TYPE WM, MODIFIED)

MID-COAST CORRIDOR TRANSIT PROJECT		SCALE
FINAL PLANS		NO SCALE
STREET IMPROVEMENT DETAILS		SANDAG CONTRACT NO. 5008600.4
FENCE (TYPE WM, MODIFIED)		DRAWING NO. SHEET NO. CD119B 487

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APPENDIX N

LCP TRACKER THIRD PARTY USER AGREEMENT



Third Party User Agreement

LCPtracker, Inc., a California corporation with a place of business located at 117 East Chapman, Orange, California 92866 ("LCPtracker"), and Parsons-Black & Veatch Joint Venture, a joint venture governed by the laws of the state of California ("Parsons B&V JV") are willing to provide you, [NAME OF CONTRACTOR/CONSULTANT] _____ with a place of business located at [ADDRESS OF CONTRACTOR/CONSULTANT] _____ ("Third Party User") with a limited license (subject to the terms of this Agreement) to the Licensed Software Services (as defined below), pursuant to the Master Subscription Software as a Service License Agreement between Parsons B&V JV and LCPtracker dated March 5, 2021 (the "Master Agreement"), but only on the condition that Third Party User accepts and complies with all the terms in this Third Party User Agreement (this "Agreement") which is entered into as of [insert date of signature by Contractor/Consultant] _____, 2021 (the "Effective Date") and governs the license and use of Licensed Software Services (defined below). LCPtracker and Third Party User therefore agree as follows:

1. DEFINITIONS.

"Affiliate" means any entity which directly or indirectly controls, is controlled by, or is under common control with the subject entity. "Control," for purposes of this definition, means direct or indirect ownership or control of more than fifty percent (50%) of the voting interests of the subject entity.

"Applicable Law" means all federal, state, local and other laws, rules and regulations, ordinances, interpretive letters and other official releases of or by any governmental authority, decrees, orders and codes as the same are promulgated, supplemented and or amended from time to time and as are, or may be, applicable to a Party's performance of its obligations under the Agreement, including any applicable law relating to the privacy or processing, protection, collection, use, disclosure or distributions of personally identifiable information or personally identifiable healthcare information about an individual as more particularly described in any such applicable law. "Applicable Law" includes, without limitation, the California Privacy Rights Act.

"Third Party Data" means all Third Party User's or its Users' electronic data or information entered into any Licensed Software Services.

"Documentation" means the online user guides, training material and other documentation for the applicable Licensed Software Services, accessible via login and updated from time to time.

"Licensed Software Services" means any LCPtracker software as a service products and related services that are provided to Third Party User (and listed at Exhibit 1) by LCPtracker or Parsons B&V JV online, including associated offline components, as described in the Documentation. "Licensed Software Services" excludes non-LCPtracker applications and Licensed Software Services are only to be used for the certain Pure Water Program projects detailed in Exhibit 1 (the "Pure Water Projects").

"Malicious Code" means viruses, worms, time bombs, Trojan horses and other harmful or malicious code, files, scripts, agents or programs.

“Subscription Term” means the applicable license term detailed at Exhibit 1.

"Users" means persons or entities who are authorized by Third Party User to use the Licensed Software Services for the Pure Water Projects pursuant to a Licensed Software Schedule, and who have been entered as a user in the Licensed Software Services by Third Party User, Parsons B&V JV, or LCPtracker, and is listed as a subcontractor to Third Party User in the Licensed Software Services. Users include Third Party User (or User) employees, consultants, contractors and agents. Use of the Licensed Software Services is solely for the benefit of Third Party User and its Users for the Pure Water Projects, and Third Party User remains liable for any breach by itself or any of its Users of the terms of this Agreement (which Users are governed in their use of the Licensed Software Services in the same way as Third Party is governed hereunder). For the avoidance of doubt, any persons or entities who are authorized by Third Party User to use the Licensed Software Services are Users. Third Party User must ensure that Users not share their user identification or passwords.

2. SUBSCRIPTION LICENSED SOFTWARE SERVICES

2.1. Provisions of Licensed Software Services. LCPtracker shall make the Licensed Software Services available to Third Party User pursuant to this Agreement during the Subscription Term specified in Exhibit 1.

2.2. Limitations. Licensed Software Services are licensed and not purchased. All rights not expressly granted herein are reserved by LCPtracker and/or its licensors and/or suppliers. Without limiting the generality of the preceding sentence, Third Party User receives no rights and will not: (i) modify , port, translate, localize or create derivative works based on the Licensed Software Services, (ii) use, copy, rent, lease, market, distribute or sublicense the Licensed Software Services except as otherwise permitted hereunder; (iii) reverse engineer, decompile, or disassemble the Licensed Software Services; (iv) disclose the results of benchmark or other performance test run on the Licensed Software Services to any third party without LCPtracker’s prior written consent (which results are LCPtracker Confidential Information). This Agreement grants no additional express or implied license, right or interest in any copyright, patent, trade secret, trademark, invention or other intellectual property right of LCPtracker. Third Party User will not remove, or allow to be removed, any LCPtracker copyright, trade secret or other proprietary rights notice from any LCPtracker product.

3. USE OF THE SERVICES

3.1. Third Party User Responsibilities. Third Party User may permit any number of Users (unless otherwise set forth in Exhibit 1) to use the Licensed Software Services for the purposes of uploading the appropriate data for Third Party User’s use for the specified Pure Water Projects in accordance with Exhibit 1. Each User shall access and use the Licensed Software Services (i) in accordance with the terms of this Agreement, Exhibit 1 and the Documentation, and (ii) through a unique and reasonably secure username and password. If a two-factor authentication login system is provided, it is required to be used. Third Party User shall (i) be responsible for the administration of user identifications and passwords and it’s Users' compliance with this Agreement and shall require Users to acknowledge their understanding of and compliance with the restrictions and responsibilities related to the use of the Licensed Software Services, including, without limitation, protecting their user identification and passwords; (ii) use commercially reasonable efforts to prevent unauthorized access to or use of the Licensed Software Services, and notify LCPtracker promptly of any such unauthorized access or use, and (iii) use the Licensed Software Services only in accordance with the Documentation, Applicable Laws. Third Party User shall not (a) make the Licensed Software Services available to anyone other than Users, (b) sell,

resell, rent or lease the Licensed Software Services, (c) use the Licensed Software Services to store or transmit infringing, libelous, or otherwise unlawful or tortious material, or to store or transmit material in violation of third-party privacy rights, (d) use the Licensed Software Services to store or transmit Malicious Code, (e) interfere with or disrupt the integrity or performance of the Licensed Software Services or third-party data contained therein, or (f) attempt to gain unauthorized access to the Licensed Software Services or their related systems or networks. Third Party User is solely responsible for its and its Users' legal compliance in its use of the Licensed Software Services and LCPtracker shall have no liability for Third Party Users, or the Users' input or implementation of the Licensed Software Services.

4. [INTENTIONALLY OMITTED]

5. PROPRIETARY RIGHTS

5.1. Reservation of Rights in Licensed Software Services. Subject to the limited rights expressly granted hereunder, LCPtracker reserves all rights, title and interest in and to Licensed Software Services and its underlying software covered by this Agreement, including but not limited to all related intellectual property rights. No rights are granted to Third Party User hereunder other than as expressly set forth herein. The Licensed Software Services are licensed and not sold to Third Party User. Third Party User is granted a limited, revocable, non-transferable (except in accordance with this Agreement) and non-exclusive right to access and use the specified Licensed Software Services solely for the Third Party User's internal business purposes, subject to the terms and conditions of this Agreement, the LCPtracker documentation and Exhibit 1 for the applicable Subscription Term(s).

5.2. Restrictions. In addition to the restrictions set forth in Section 3 above, Third Party User shall not (i) permit any third party to access the Licensed Software Services except as permitted herein, (ii) create derivative works based on the Licensed Software Services, (iii) copy, frame or mirror any part or content of the Licensed Software Services, (iv) reverse engineer the Licensed Software Services, or (v) access the Licensed Software Services in order to (a) build a competitive product or service, or (b) copy any features, functions or graphics of the Licensed Software Services.

5.3. Suggestions. Any suggestions, enhancement requests, recommendations or other feedback relating to the operation of the Licensed Software Services provided by Third Party User or its Users ("**Feedback**"), during and after the Subscription Term is and remains the intellectual property of LCPtracker and LCPtracker has all rights therein to exploit and commercialize any Feedback as LCPtracker chooses without compensation or other consideration to Third Party User or its Users.

5.4. Federal Government End Use Provisions. LCPtracker provides the Licensed Software Services, including related software and technology, for ultimate federal government end use solely in accordance with the following: Government technical data and software rights related to the Licensed Software Services include only those rights customarily provided to the public as defined in this Agreement. This customary commercial license is provided in accordance with FAR 12.211 (Technical Data) and FAR 12.212 (Software) and, for Department of Defense transactions, DFAR 252.227-7015 (Technical Data - Commercial Items) and DFAR 227.7202-3 (Rights in Commercial Computer Software or Computer Software Documentation). If a government agency has a need for rights not conveyed under these terms, it must negotiate with LCPtracker to determine if there are acceptable terms for transferring such rights, and a mutually acceptable

written addendum specifically conveying such rights must be included in any applicable contract or agreement.

5.5. Service Provider. Use of Third Party Data. LCPtracker, as a service provider on behalf of Third Party User, shall not access, use, process or retain Third Party Data except as necessary to perform its obligations under this Agreement and Exhibit 1 or as otherwise in strict accordance with the written instructions of Third Party User except and only to the extent that such Third Party Data is deidentified or in the aggregate and such is prevented from being re-identified and accessed or acquired by unauthorized parties. Upon termination of Licensed Software Services, LCPtracker shall comply with Third Party User's direction as set forth in Section 11.1.

"Termination." All Licensed Software Services that are provided depend on the accuracy of information submitted by Third Party User or its Users. LCPtracker is not responsible for any errors due to inaccurate information.

6. CONFIDENTIALITY

6.1. Definition of Confidential Information. As used herein, "**Confidential Information**" means all information disclosed by a party ("**Disclosing Party**") to the other party ("**Receiving Party**"), whether orally or in writing, that is designated as confidential or that reasonably should be understood to be confidential given the nature of the information and the circumstances of disclosure. Third Party User Confidential Information shall include Third Party Data; LCPtracker Confidential Information shall include all Licensed Software Services; and Confidential Information of each party shall include the terms and conditions of this Agreements, as well as business and marketing plans, technology and technical information, product plans, pricing and designs, and business processes disclosed by such party. However, Confidential Information (other than Third Party Data) shall not include any information that (i) is or becomes generally known to the public without breach of any obligation owed to the Disclosing Party, (ii) was known to the Receiving Party prior to its disclosure by the Disclosing Party without breach of any obligation owed to the Disclosing Party, (iii) is received from a third party without breach of any obligation owed to the Disclosing Party, or (iv) was independently developed by the Receiving Party without access or reference to the Disclosing Party's Confidential Information.

6.2. Protection of Confidential Information. The Receiving Party shall (i) use the same degree of care that it uses to protect the confidentiality of its own confidential information of like kind (but in no event less than reasonable care), (ii) not use any Confidential Information of the Disclosing Party for any purpose outside the scope of this Agreement, and (iii) except as otherwise authorized by the Disclosing Party in writing, limit access to Confidential Information of the Disclosing Party to those of its and its Affiliates' employees, contractors and agents who need such access for purposes consistent with this Agreement and who have signed confidentiality agreements with the Receiving Party containing protections no less stringent than those contained herein. Neither party shall disclose the terms of this Agreement to any third party other than its Affiliates that have a need to know and their legal counsel and accountants without the other party's prior written consent.

6.3. Compelled Disclosure. The Receiving Party may disclose Confidential Information of the Disclosing Party if it is compelled by law to do so, provided the Receiving Party gives the Disclosing Party prior notice of such compelled disclosure (to the extent legally permitted) and reasonable assistance, at the Disclosing Party's cost, if the Disclosing Party wishes to contest the disclosure. If the Receiving Party is compelled by law to disclose the Disclosing Party's Confidential Information

as part of a civil proceeding to which the Disclosing Party is a party, and the Disclosing Party is not contesting the disclosure, the Disclosing Party will reimburse the Receiving Party for its reasonable cost of compiling and providing secure access to such Confidential Information.

7. WARRANTIES AND DISCLAIMERS

7.1. Warranties. LCPtracker warrants that (i) LCPtracker has validly entered into this Agreement and has the legal power to do so, (ii) the Licensed Software Services shall perform materially in accordance with the Documentation, (iii) LCPtracker will not transmit Malicious Code to Third Party User, provided it is not a breach of this subpart (iii) if Third Party User or a User uploads a file containing Malicious Code into the Licensed Software Services and later downloads that file containing Malicious Code. For any breach of a warranty above, Third Party User exclusive remedy shall be as provided in Section 11.1 (Termination for Cause).

7.2. Third Party User Warranties. Third Party User represents and warrants that Third Party User has all rights and necessary authority to enter into this Agreement and the person signing this Agreement on behalf of Third Party User has the necessary authority to do so. Third Party User acknowledges that Third Party User is solely responsible for the content uploaded into the Licensed Software Services included in Third Party Data or by any User authorized by Third Party User and warrants that Third Party User shall comply with all Applicable Law with regard to its use of the Licensed Software Services and content and shall require all Users to acknowledge and agree to the use obligations and restrictions under this Agreement. The parties acknowledge and agree that during the term of this Agreement, Third Party User or other third parties on its behalf may disclose certain Third Party Data, including personally identifiable data regarding employees or other individuals, to LCPtracker for the benefit of Third Party User and Parsons B&V JV. Third Party User represents and warrants to LCPtracker that: (i) each of Third Party User and such other third parties are authorized to collect, use and disclose the Third Party Data to LCPtracker for use and storage pursuant to this Agreement; (ii) such disclosure, use or storage does not and shall not violate Applicable Law (including for the avoidance of doubt all privacy rules including the CCPA and CPRA), the rights of any third party or, if applicable, such Third Party User's agreements with or privacy notices to individuals with respect to whom the Third Party Data relates; and (iii) Third Party User shall not request LCPtracker to use, store, disclose or otherwise process Third Party Data in any manner that would not be permissible under Applicable Law or, if applicable, Third Party User's agreements with or privacy notices to individuals with respect to whom the Third Party Data relates, if done by Third Party User.

7.4. Third Party User Obligations. Third Party User shall: (i) safeguard the usernames, passwords and other security data, methods and devices furnished by Parsons B&V JV or LCPtracker to Third Party User in connection with the Service and prevent unauthorized access to or use of the Service and promptly notify LCPtracker or Parsons B&V JV if it becomes aware of any such unauthorized access or that the security of its usernames or passwords has been compromised; (ii) be responsible for Third Party User networks, equipment and system security required or appropriate in connection with the Service; and (iii) have sole responsibility for the accuracy, quality, integrity, legality, reliability and appropriateness of all Third Party Data.

7.3. Disclaimer. EXCEPT AS EXPRESSLY PROVIDED HEREIN, LCPTRACKER MAKES NO OTHER WARRANTIES OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, AND SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, TO THE MAXIMUM EXTENT

PERMITTED BY APPLICABLE LAW.

8. MUTUAL INDEMNIFICATION

8.1. Indemnification by LCPtracker. LCPtracker shall defend Third Party User against any claim, demand, suit, or proceeding made or brought against Third Party User by a third party alleging that the use of the Licensed Software Services as permitted hereunder infringes or misappropriates the intellectual property rights of a third party (a "**Claim Against Third Party User**"), and shall indemnify Third Party User for any damages, reasonable attorney fees and costs finally awarded against Third Party User as a result of, and for amounts paid by Third Party User under a court-approved settlement of a Claim Against Third Party User; provided that Third Party User (a) promptly provides LCPtracker written notice of the Claim Against Third Party User; (b) allows LCPtracker sole control of the defense and settlement of the Claim Against Third Party User (provided that LCPtracker may not settle any Claim Against Third Party User unless the settlement unconditionally releases Third Party User of all liability); and (c) provides to LCPtracker all reasonable assistance, at LCPtracker's expense. In the event of a Claim Against Third Party User, or if LCPtracker reasonably believe the Licensed Software Services may infringe or misappropriate a third party's intellectual property rights, LCPtracker may, in LCPtracker's sole discretion and at no cost to Third Party User, (i) modify the Licensed Software Services so that they are no longer infringing, without breaching LCPtracker warranties under "LCPtracker Warranties" above, (ii) obtain a license for Third Party User's continued use of the Licensed Software Services in accordance with this Agreement, or (iii) if neither of the foregoing is commercially practicable despite LCPtracker using all reasonable efforts and if Third Party User is not permitted to continue using the Licensed Software Services, then this Agreement will terminate with respect to such infringing Licensed Software Services.

8.2. Indemnification by Third Party User. Third Party User shall defend LCPtracker against any claim, demand, suit or proceeding made or brought against LCPtracker by a third party alleging that Third Party Data, or Third Party User's or its Users' use of the Licensed Software Services in a manner not permitted hereunder (i) infringes or misappropriates the intellectual property rights of a third party or (ii) violates Applicable Law (a "**Claim Against LCPtracker**"), and shall indemnify LCPtracker for any damages, attorney fees and costs finally awarded against LCPtracker as a result of, or for any amounts paid by LCPtracker under a court-approved settlement of, a Claim Against LCPtracker; provided that LCPtracker (a) promptly give Third Party User written notice of the Claim Against LCPtracker; (b) give Third Party User sole control of the defense and settlement of the Claim Against LCPtracker (provided that Third Party User may not settle any Claim Against LCPtracker unless the settlement unconditionally releases LCPtracker of all liability); and (c) provide to Third Party User all reasonable assistance, at Third Party User expense.

8.3. Exclusive Remedy. THIS SECTION 8 STATES THE INDEMNIFYING PARTY'S SOLE LIABILITY TO, AND THE INDEMNIFIED PARTY'S EXCLUSIVE REMEDY AGAINST, THE OTHER PARTY FOR ANY TYPE OF CLAIM DESCRIBED IN THIS SECTION.

9. LIMITATION OF LIABILITY

9.1. Limitation of Liability. LCPTRACKER'S LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT OR ANY SCHEDULE HEREUNDER (WHETHER IN CONTRACT OR TORT OR UNDER ANY OTHER THEORY OF LIABILITY) SHALL NOT EXCEED \$25,000.

9.2. Exclusion of Consequential and Related Damages. EXCEPT FOR (i) A BREACH OF THE LICENSE GRANT HEREUNDER BY THIRD PARTY USER, (ii) A BREACH OF THE CONFIDENTIALITY

OBLIGATIONS BY EITHER PARTY, (iii) DEATH, PERSONAL INJURY OR TANGIBLE PROPERTY DAMAGE CAUSED BY A PARTY, (iv) VIOLATION OF LAW OR (v) A PARTY'S INDEMNIFICATION OBLIGATIONS (COLLECTIVELY, THE "EXCLUSIONS"), IN NO OTHER EVENT SHALL EITHER PARTY HAVE ANY LIABILITY TO THE OTHER PARTY FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR, CONSEQUENTIAL DAMAGES HOWEVER CAUSED, WHETHER IN CONTRACT, TORT OR UNDER ANY OTHER THEORY OF LIABILITY, AND WHETHER OR NOT THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, IN NO EVENT, INCLUDING WITH REGARD TO THE EXCLUSIONS, SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY LOST PROFITS OR REVENUES OR, COVER OR PUNITIVE DAMAGES HOWEVER CAUSED, WHETHER IN CONTRACT, TORT OR UNDER ANY OTHER THEORY OF LIABILITY, AND WHETHER OR NOT THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING DISCLAIMERS SHALL NOT APPLY TO THE EXTENT PROHIBITED BY APPLICABLE LAW.

10. TERM

10.1. Term of Agreement. This Agreement commences on the date of this Agreement and continues until termination as provided below, or upon termination of the Master Agreement, whichever occurs first.

11. TERMINATION

11.1. Termination for Cause. LCPtracker may terminate this Agreement (i) effective immediately upon written notice to Third Party User if Parsons B&V JV directs LCPtracker to cease providing Third Party User access to the Service, and (ii) effective immediately upon written notice to Third Party User if Third Party User or one of its Users materially breaches this Agreement and such breach is incapable of cure, or with respect to a material breach capable of cure, Third Party User does not cure such breach within 30 days after receipt of written notice of such breach.

11.2. Automatic Termination and Actions Following. In addition, this Agreement shall terminate immediately and automatically upon (i) any termination or expiration of the Master Agreement or (ii) the termination or expiration of a License Product Schedule under which the license for the Licensed Software Services in Exhibit 1 is granted. Upon any termination or expiration of this Agreement, Third Party User and its Users shall no longer be permitted to use the Licensed Software Services and Third Party User shall destroy or return (as directed by LCPtracker) all Confidential Information of LCPtracker (including Documentation) related to such Exhibit 1 and an officer of Third Party User shall certify the same in writing within thirty (30) days of such termination.

11.2. Surviving Provisions. All Sections intended by their nature to survive termination, including, without limitation, Section 6 "Confidentiality", shall survive any termination or expiration of this Agreement.

12. GOVERNING LAW AND JURISDICTION

12.1. General. Each party agrees that this Agreement shall be governed by and construed under the laws of the State of California without regard to the conflicts of law provisions thereof, or any other provisions which would result in the application of a different body of law and to the exclusive jurisdiction of the applicable courts for San Diego County, California. The parties agree that the United Nations Convention on Contracts for the International Sales of Goods is expressly excluded from this Agreement.

13. GENERAL PROVISIONS

13.1. Notices. Any notice required or permitted to be delivered pursuant to this Agreement, and any permission and approval required hereunder shall be in writing and shall be deemed to have been given: (i) upon delivery, if delivered in person, (ii) upon electronic confirmation of delivery if sent by electronic mail, or (iii) three (3) business day after deposit in the United States mail, registered or certified mail, return receipt requested, postage prepaid, in each case addressed to the addressee set out in the first paragraph of this Agreement or to such other address as may be specified by either Party hereto upon notice given to the other Party in accordance with this Section.

13.2. Severability. If a provision of the Agreement or portion thereof is found to be invalid or unenforceable under Applicable Law, it shall be, to the extent practicable, conformed to meet the original intention of the parties, and shall not invalidate the remainder of such provision or the remaining provisions of the Agreement.

13.3. Export Compliance. The Licensed Software Services and other technology the LCPtracker makes available, and derivatives thereof may be subject to export laws and regulations of the United States and other jurisdictions. Third Party User shall not, and further shall not permit Users to, access or use Services in a U.S.- embargoed country or in violation of any U.S. export law or regulation.

13.4. Anti-Corruption. Third Party User acknowledges that it has not received or been offered any illegal or improper bribe, kickback, payment, gift, or thing of value from any LCPtracker employees or agents in connection with this Agreement. Reasonable gifts and entertainment provided in the ordinary course of business do not violate the above restriction. If Third Party User learns of any violation of the above restriction, Third Party User will use reasonable efforts to promptly notify LCPtracker in writing.

13.5. Relationship of the Parties. The parties are independent contractors. This Agreement does not create a partnership, franchise, joint venture, agency, fiduciary or employment relationship between the parties.

13.6. No Third-Party Beneficiaries. There are no third-party beneficiaries to this Agreement.

13.7. Waiver. No failure or delay by either party in exercising any right under this Agreement shall constitute a waiver of that right.

13.8. Attorney Fees. The prevailing party shall be entitled to all expenses, including attorneys' fees and costs, incurred in connection with any dispute hereunder including mediation, arbitration, lawsuit, appeal, bankruptcy proceedings or other actions.

13.9. Assignment. Neither party may assign any of its rights or obligations hereunder, whether by operation of law or otherwise, without the prior written consent of the other party (not to be unreasonably withheld). Notwithstanding the foregoing, either party may assign this Agreement in its entirety, without consent of the other party, to its Affiliate or in connection with a merger, acquisition, corporate reorganization, or sale of all or substantially all of its assets not involving a direct competitor of the other party, provided that the assignee agrees in writing to be bound by the terms of this Agreement. A party's sole remedy for any purported assignment by the other party in breach of this paragraph shall be, at the non-assigning party's election, termination of this Agreement upon written notice to the assigning party.

13.10. Entire Agreement. This Agreement, including all exhibits and addenda hereto, constitutes the entire agreement between the parties and supersedes all prior and contemporaneous agreements, proposals or representations, written or oral, concerning its subject matter. No modification, amendment, or waiver of any provision of this Agreement shall be effective unless in writing and either signed or accepted electronically by the party against whom the modification, amendment or waiver is to be asserted. However, to the extent of any conflict or inconsistency between the provisions in the body of this Agreement and any exhibit or addendum hereto, the terms of such exhibit or addendum. Notwithstanding any language to the contrary therein, no terms or conditions stated in a Third Party User purchase order or other order documentation shall be incorporated into or form any part of this Agreement, and all such terms or conditions shall be null and void.

13.11. Counterparts; Electronically transmitted Documents and Signatures. This Agreement may be executed in one or more counterparts; each of which shall be deemed an original and all of which together shall constitute one and the same instrument, it being understood that the Parties need not sign the same counterpart. An electronic signature or a manual signature on this Agreement which image, in either case is transmitted electronically, shall constitute an original signature for all purposes. The delivery of this Agreement, including signature pages may be transmitted or exchanged by the Parties by way of exchanging (a) signed originals, (b) facsimile transmission, (c) by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, including sending in portable document format (pdf) via email, or (d) any combination of any such means, and the Parties hereby adopt as original any such documents received. Delivery of such documents by facsimile or by any other electronic means shall have the same effect as physical delivery of the paper bearing the original signature.

[SIGNATURES BEGIN ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, authorized representatives of the parties have executed this Agreement effective as of the Effective Date defined above.

LCPtracker, Inc.

THIRD PARTY USER: [Name of 3rd Party User]

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

EXHIBIT 1

Limited use license in accordance with the Agreement for the following construction projects: [*Morena Pump Station*]
(the “**Pure Water Projects**”)

Name of Software	License Duration
LCPtracker Pro	From activation in the Licensed Software Services until termination by Parsons B&V JV or LCPtracker with 30 days notice to Third Party User, or the date of termination of the Master Agreement, whichever occurs first.

For the avoidance of doubt, the only Users that are permitted to use the Licensed Software Services are those working on the Pure Water Projects.

ATTACHMENT F

RESERVED

ATTACHMENT G
CONTRACT AGREEMENT

CONTRACT AGREEMENT

CONSTRUCTION CONTRACT

This Phase-Funded contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and _____, herein called "Contractor" for construction of **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)**. Bid No. **K-22-1797-DBB-3-A**; in the total amount _____ (\$ _____), which is comprised of the Base Bid _____, consisting of an amount not to exceed \$ _____ for Phase I and \$ _____ for Phase II (**add additional phases as needed**).

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 **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)** on file in the office of the City Clerk as Document No. **B-15141**, as well as all matters referenced therein.
2. The City wishes to construct this Project on a Phase-Funded basis. In accordance with Whitebook section 7-3.10, the City is only obligated to pay for Phase I; Contractor cannot begin, nor is the City financially liable for any additional Phases, unless and until Contractor is issued a Notice to Proceed for each additional Phase by the City.
3. 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 **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)**, Bid Number **K-22-1797-DBB-3-A**, San Diego, California.
4. 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 (See WHITEBOOK, Section 7-3.10, Phased Funding Compensation).
5. 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.
6. This contract is effective as of the date that the Mayor or designee signs the agreement and is approved by the City Attorney in accordance with San Diego Charter Section 40.

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 Resolution No. R - _____ or Municipal Code _____ authorizing such execution.

THE CITY OF SAN DIEGO

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By _____

By _____

Print Name: _____

Print Name: _____

Mayor or designee

Deputy City Attorney

Date: _____

Date: _____

CONTRACTOR

By _____

Print Name: _____

Title: _____

Date: _____

City of San Diego License No.: _____

State Contractor's License No.: _____

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: _____

ATTACHMENT H
ESCROW BID DOCUMENTS

1. ESCROW BID DOCUMENTS

1.1. Definition and Purpose

The Escrow Bid Documents (EBD) are a compilation of all the documentary information generated in preparation of bid prices for this project. EBDs will be used to assist in the negotiation of price adjustments and variations and in the settlement of disputes, claims and other controversies. They will not be used for pre-award evaluation of the Contractor's anticipated methods of construction or to assess the Contractor's qualifications for performing the Work.

1.2. General

- 1.2.1.** All bidders shall submit a copy of the EBD within 4 working days of the bid opening.
- 1.2.2.** The successful bidder agrees, as a condition of award of the Contract, that the Escrow Bid Documents constitute the only complete documentary information used in preparation of his bid. No other bid preparation information shall be considered in resolving disputes.
- 1.2.3.** Nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract.

1.3. Ownership

- 1.3.1.** The EBDs are and shall always remain the property of the Contractor subject only to joint review by the City and the Contractor, except as provided for herein.
- 1.3.2.** The City stipulates and expressly acknowledges that the EBDs, as defined herein, constitute trade secrets. This acknowledgment is based on the City's express understanding that the information contained in the EBDs is not known outside the Contractor's business, is known only to a limited extent and only by a limited number of employees of the Contractor, is safeguarded while in the Contractor's possession, and is extremely valuable to competitors by virtue of its reflecting the Contractor's contemplated techniques of construction.
- 1.3.3.** The City acknowledges that EBDs and the information contained therein are made available to the City only because such action is an express prerequisite to award of the Contract. The City acknowledges that the EBDs include a compilation of information used in the Contractor's business, intended to give the Contractor an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. The City agrees to safeguard the EBDs and all information contained therein to the fullest extent permitted by law.

- 1.3.4. The City agrees to safeguard the EBDs and all information contained therein from any California Public Act Request to the fullest extent permitted by law.

1.4. Format and Contents

- 1.4.1. Bidders may submit EBDs in their usual cost estimating format. It is not intended that extra work is required in preparing the bid but to ensure that the EBDs will be adequate to enable complete and proper understanding and proper interpretation for their intended use. The EBDs shall be in the English language only.
- 1.4.2. The EBDs shall clearly itemize the estimated costs of performing the work of each item contained in the Bid Schedule. Items should be separated into sub-items as required to present a complete and detailed cost estimate and allow a detailed cost review. The EBDs shall include all quantity take-offs, crews, equipment, calculations of rates of production and progress, copies of quotations from sub-contractors and suppliers, and memoranda, narratives, consultants reports, add/deduct sheets and all other information used by the Contractor to arrive at the prices contained in the bid. Estimated costs shall be broken down into the Contractor's usual estimate categories such as direct labor, repair labor, equipment operation, equipment ownership, expendable materials, permanent material and subcontract costs as appropriate. Plant and equipment and indirect costs should be detailed in the Contractor's usual format. The Contractor's allocation of plant and equipment, indirect costs, contingencies, mark-up and other items to each bid item shall be clearly indicated.
- 1.4.3. The EBDs shall clearly show in calculations, text, or both, the relationship between baseline indications presented in the Contract Documents and assumptions that form the basis for the Contractor's means, methods, equipment selection, rates of production, and costs.
- 1.4.4. All costs shall be identified. For bid items where the extended amount is less than \$10,000, estimated unit costs are acceptable without a detailed cost estimate, provided that labor, equipment, materials and subcontracts, as applicable, are included and provided that indirect costs, contingencies, and mark-up, as applicable, are allocated.
- 1.4.5. Bid Documents provided by the City should not be included in the EBDs unless needed to comply with the above requirements.

1.5. Submittal

- 1.5.1. All bidders shall submit their EBDs within 4 working days of the bid opening. The EBDs shall be submitted in a sealed container (e.g., sealed envelope, box or carton sealed with tape, locked strongbox, etc.), and the container shall be clearly marked on the outside with the Bidder's name, date of submittal,

project name, Contract Number and the words "Escrow Bid Documents". The EBDs shall be submitted to:

Purchasing & Contracting Department, Public Works Division
525 B Street, Suite 750 (7th Floor)
San Diego, California, 92101
Attention: Stephen Samara

- 1.5.2.** The EBDs shall be signed by an individual authorized by the bidder to execute the bid, stating that the material in the Escrow Bid Documentation constitutes all the documentary information used in the preparation of the bid and that he or she has personally examined the contents of the EBDs submission and has found that the documents are complete:

"ESCROW BID DOCUMENT CERTIFICATION"

THE UNDERSIGNED HEREBY CERTIFIES THAT THE BID DOCUMENTATION CONTAINED HEREIN CONSTITUTES ALL THE INFORMATION USED IN PREPARATION OF THE BID AND THAT I HAVE PERSONALLY EXAMINED THESE CONTENTS AND HAVE FOUND THAT THIS BID DOCUMENTATION IS COMPLETE.

SIGNATURE: _____

NAME: _____
(Print)

TITLE: _____

FIRM: _____

DATE: _____

- 1.5.3.** Prior to award of the contract, the EBDs of the apparent low bidder will be examined, organized and inventoried by representatives of the City, and members of the Contractor’s staff who are knowledgeable in how the bid was prepared. This examination is to ensure that the EBDs are authentic, legible, and complete (as defined in 1.4). It will not include review of and will not constitute approval of proposed construction methods, estimating assumptions, or interpretations of the contract documents. Examination will not alter any condition(s) or term(s) of the Contract.
- 1.5.4.** If the Contract is not awarded to the apparent low bidder, the EBDs of the next apparent low bidder to be considered for award shall be processed, as described above.
- 1.5.5.** The City may reject the bid as non-responsive and ineligible for further consideration if the necessary EBDs are not submitted.
- 1.5.6.** If the bidder's proposal is based on subcontracting any part of the Work, each subcontractor whose total subcontract price exceeds five percent of the total contract price proposed by the bidder, shall provide separate EBDs to be included with those of the bidder. These documents will be opened and examined in the same manner and at the same time as the examination described above for the apparent successful bidder. The failure to submit subcontractor EBDs may render contractor’s bid non-responsive.
- 1.5.7.** If the Contractor wishes to substitute a subcontractor for a portion of the Work which exceeds five percent of the total contract price proposed by the bidder after award, the City retains the right to require the Contractor to submit EBDs from the subcontractor before the subcontract is approved. This section is not intended to and shall not be interpreted as a waiver by the City of any of the

requirements or provisions of public contract code section 4100 et seq. known as the Subletting and Subcontracting Fair Practices Act.

1.6. Storage

1.6.1. Absent a request from the Contractor to place the EBDs in possession of a third-party escrow agent the EBDs will be stored by the City of San Diego, Engineering & Capital Projects Department, Contracts Division. Upon written request from the Contractor, the EBDs shall be placed in escrow with a mutually agreeable institution for the life of the Contract, unless examination is required, which shall be conducted in accordance with this section. The cost of storage by third-party escrow agent will be borne by the Contractor.

1.7. Examination

1.7.1. The EBDs shall be examined by both the City and the Contractor, at any time deemed necessary by either the City or the Contractor, to assist in the negotiation of price adjustments and change orders, or the settlement of disputes.

1.7.2. Examination of the EBDs is subject to the following conditions:

1.7.2.1. As trade secrets, the EBDs are proprietary and confidential as described above

1.7.2.2. The City and the Contractor shall each designate, in writing to the other party a minimum of ten days prior to examination, representatives who are authorized to examine the EBDs. No other person shall have access to examine the EBDs.

1.7.2.3. Examination of the EBDs will take place only in the presence of duly designated representatives of both the City and the Contractor.

1.7.2.4. As escrow bid documents shall be examined by both the City and the Contractor to assist in the negotiation of price adjustments and change orders or the settlement of disputes as either party sees fit.

1.8. Final Disposition

1.8.1. The EBDs will be returned to the awarded Contractor upon completion and final settlement of the contract.

1.8.2. The EBDs submitted by unsuccessful bidders will be returned unopened, unless opened as provided for above, following execution of the Contract.

ATTACHMENT I
PROJECT LABOR AGREEMENT (PLA)

CITY OF SAN DIEGO
PROJECT LABOR AGREEMENT
FOR CONSTRUCTION OF PURE WATER PROGRAM
PHASE I PROJECTS

Effective Date: June 16, 2020

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CITY OF SAN DIEGO
PROJECT LABOR AGREEMENT
FOR CONSTRUCTION OF PURE WATER PROGRAM
PHASE I COVERED PROJECTS

This Project Labor Agreement (hereinafter, “PLA” or “Agreement”) is entered into this 16th day of June, 2020 by and between the San Diego Building and Construction Trades Council (hereinafter “Council”), and the signatory Craft Unions (hereinafter, together with the Council, collectively, the “Union” or “Unions”), and the Contractors performing work on Covered Projects that are subject to this Agreement. The City of San Diego is not a signatory Party to this Agreement, but shall be considered a “negotiating party” and will be responsible for implementing and administering the Agreement as described herein together with the Council, Unions and Contractors.

ARTICLE 1

RECITALS

WHEREAS, the City desires the completion of the Pure Water Program Phase I Projects in a professional, safe, efficient, and economical manner, without undue delay or work stoppage; and

WHEREAS, the successful completion of the City’s Pure Water Program Phase I Projects are of the utmost importance to the rate payers and the City; and

WHEREAS, the Parties have pledged their full commitment to work towards a mutually satisfactory completion of the Pure Water Program Phase I Projects; and

WHEREAS, large numbers of workers of various skills will be required in the performance of the construction work on the Pure Water Program Phase I Projects, including workers affiliated with and/or represented by the Unions; and

WHEREAS, it is recognized that on construction projects with multiple contractors and bargaining units on the job site at the same time over an extended period of time, the potential for work disruption is substantial without an overriding commitment to maintain continuity of work; and

WHEREAS, the Parties agree that by establishing and stabilizing wages, hours, and working conditions for the workers employed on the Pure Water Program Phase I Projects, a

satisfactory, continuous, and harmonious relationship will exist among labor and management that will lead to the efficient and economical completion of Covered Projects; and

WHEREAS, in recognition of the special needs of the Project Work and to maintain a spirit of harmony, labor-management relations, peace, and stability during the term of this PLA, the Parties agree to establish effective and binding methods for the settlement of all misunderstandings, disputes and grievances without any strikes, slowdowns, work interruptions, or disruption of Project Work, and the Contractors agree not to engage in any lockout.

WHEREAS, the City places high priority upon the development of comprehensive programs for the recruitment, training, and employment of City Residents and Targeted Workers, and also recognizes the ability of local Apprenticeship Programs to provide meaningful and sustainable careers in the building and construction industry. The Parties will encourage City Residents and Targeted Workers to participate in Project Work through programs and procedures jointly developed to prepare and encourage such individuals for entrance into Apprenticeship Programs and formal employment on the Project Work through the referral programs sponsored and/or supported by the Parties to this PLA.; and

WHEREAS, the Project Work will provide opportunities for Disadvantaged Business Enterprises to participate as Contractors, subcontractors, or suppliers, and the Parties therefore agree that they will cooperate with all efforts of the City, the Project Labor Coordinator, and other organizations retained by the City for this purpose, to encourage and assist the participation of Disadvantaged Business Enterprises in the Project Work. Specifically, all Parties understand that the City has established and quantified goals which place a strong emphasis on the utilization of Disadvantaged Business Enterprises on the Project. Each Party agrees that it shall participate in outreach programs and provide education, and assistance to businesses not familiar with working on projects of this scope. Further, the Parties shall ensure that the provisions of this PLA do not inadvertently establish impediments to participation of such Disadvantaged Business Enterprises, City Residents and Targeted Workers.

WHEREAS, it is further understood that the City is a real party in interest to this Agreement and shall actively administer and enforce the obligations of this PLA to ensure that the benefits of this Agreement flow to all signatory Parties, craft persons working under it, and the rate payers and residents of the City. The City will send a letter to the Council to signify that the City will be performing its obligation under this Agreement and will designate a "Project Labor Coordinator," either from its own staff and/or an independent contractor acting on behalf of the City, to monitor and enforce compliance with this PLA. In addition, this letter will state that the City will include and incorporate this Agreement into each Covered Project's construction documents. The Project Labor Coordinator, as the authorized representative of the City, will assist with the development and implementation of the programs referenced in this PLA, all of which are critical to fulfilling the intent and purposes of the Parties and this PLA.

NOW, THEREFORE, IT IS AGREED BETWEEN AND AMONG THE PARTIES AS FOLLOWS:

ARTICLE 2

DEFINITIONS

Capitalized terms utilized in this PLA which are not otherwise defined herein shall have the meanings ascribed to said terms below.

“Agreement” means this Project Labor Agreement (PLA).

“Applicable Prevailing Determination” means the prevailing wage determinations applicable to Project Work pursuant to the State of California Labor Code.

“Apprentice” means an apprentice properly registered in an Apprenticeship Program for the entire time they are employed on a Covered Project.

“Apprenticeship Program” as used in this PLA shall be defined as an apprenticeship program certified by the State of California.

“City” means the City of San Diego and its departments delivering the Covered Projects.

“City Resident” means a City of San Diego permanent resident at the time of initial employment on a Covered Project or a Veteran residing anywhere.

“Contractor” means any contractor to whom the City awards a Construction Contract for Project Work and all subcontractors utilized by such Contractors for Project Work. The term “Contractor” includes any individual, firm, partnership, corporation, owner operator, or combination thereof, including joint ventures, that has entered into a contract with the City for Project Work, or any subcontractor who has signed a contract with a Contractor or another subcontractor for Project Work.

“Core Employees” are defined in Article 4, Section 4.6 (e).

“Council” means the San Diego County Building & Construction Trades Council.

“Covered Contract” means a contract awarded to a Contractor by the City for a Pure Water Program Phase I Project identified in Appendix A.

“Covered Project” or “Project Work” means a Pure Water Program Phase I Project that is identified in Appendix A and is limited to the construction site of work.

“Disadvantaged Business Enterprise” means a firm that has been certified via the Department of Transportation, but also includes: Minority Business Enterprises or Woman Business Enterprises certified by the Department of Transportation or the California Public Utilities Commission; and Small Local Business Enterprises or Emerging Local Business Enterprises certified by the City.

“Prime Contractor” means the prime Contractor awarded a Covered Contract in privity directly with the City.

“Project Labor Coordinator” means the designee of the City, either from its own staff and/or an independent entity acting on behalf of the City, to monitor compliance with this Agreement and assist with developing, implementing and administering the requirements, policies and programs referenced herein.

“Schedule A’s” means the local master labor agreements of the Unions.

“Targeted Worker” means any individual qualifying for one (1) or more of the following Targeted Worker categories:

- (a) Is a Veteran, or is the eligible spouse of a “Veteran of the United States armed forces, under Section 2(a) of the Jobs for Veterans Act (38 United States Code [U.S.C.] 4215[a]);
- (b) At initial time of employment on a Covered Project, is an Apprentice with less than ten (10) percent of the work hours required for graduation to become a Journeyman;
- (c) Has no high school diploma or general education diploma (GED);
- (d) Is homeless or has been homeless within the last year;
- (e) Is a former foster youth;
- (f) Is a custodial single parent;
- (g) Is experiencing protracted unemployment (receiving unemployment benefits for at least three [3] months);
- (h) Is a current recipient of government cash or food assistance benefits;
- (i) Has a documented income at or below 100 percent of the Federal Poverty Level;

(j) Is formerly incarcerated with a history of involvement with the criminal justice system.

“Union” or “Unions” means any labor organization signatory to this Agreement acting in their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have, through their officers, executed this Agreement.

“Veteran” means a veteran or the eligible spouse of a veteran of the United States armed forces, under Section 2(a) of the Jobs for Veterans Act (38 U.S.C. 4215[a]);

ARTICLE 3

SCOPE OF THE AGREEMENT

Section 3.1 This PLA is limited to covering all onsite construction work within the scope of each Covered Contract.

Section 3.2 Exclusions. Items specifically excluded from the scope of this PLA include the following:

(a) Work of non-manual employees including but not limited to, superintendents, supervisors, staff engineers, quality control and quality assurance personnel, timekeepers, mail carriers, clerks, office workers, messengers, guards, safety personnel, emergency medical and first aid technicians, and other professional, engineering, administrative, supervisory, and management employees; and

(b) All offsite manufacturing, fabrication, deliveries, maintenance, and handling of materials, equipment, or machinery, and the offsite hauling of materials of any kind to or from the Covered Project site. However, any lay down or storage areas for equipment or material and manufacturing (i.e. prefabrication) sites dedicated solely for the project, and the movement of materials or goods between locations on a Covered Project site are within the scope of the PLA. On-site fabrication work includes work done for the Project in temporary yards or areas near the Project. On-site construction shall also include the site of any batch plant constructed solely to supply materials to the Project; and

(c) All employees of the City, Project Labor Coordinator, design teams (including, but not limited to, architects, engineers, and master planners), or any other consultants for the City (including, but not limited to, project managers and

construction managers and their employees where not engaged in Project Work) and their subconsultants, and other employees of professional service organizations, not performing manual labor within the scope of this PLA. Notwithstanding the foregoing, however, this exclusion shall not apply to the classifications for Surveyors and/or Building/Construction Inspectors and/or Field Soils and Material Testers (Inspectors) unless they are City employees. This inclusion applies to the scope of work defined in the State of California Wage Determination for Surveyors and/or Building/Construction Inspectors and/or Field Soils and Material Testers (Inspectors). This shall also specifically include such work where it is referred to by utilization of such terms as “quality control” or “quality assurance.” Every Inspector performing under these classifications on Covered Projects pursuant to a professional services agreement, a contract entered into directly with the City, or a contract with a Contractor shall be bound to all applicable requirements of this Agreement; and

(d) Any work performed on or near or leading to or into a site of work covered by this PLA and undertaken by state, county, city, or other governmental bodies, or their contractors (other than work within the scope of this PLA undertaken by contractors to the City); or by private utilities, or their contractors; and

(e) Work performed by employees of a manufacturer or vendor on the manufacturer’s or vendor’s equipment, if required by the warranty agreement in order to maintain the warranty or guarantee, and provided that the warranty agreement is the manufacturer’s or vendor’s usual and customary warranty agreement for such equipment and is consistent with industry practice; and

(f) Specialized or technical work requiring specialized training, unique skills, or a level of specific technical experience which employees represented by the Union do not possess. At least ten (10) working days notice shall be given to the Council before any work is performed pursuant to this exemption.; and

(g) Laboratory work for testing; and

(h) Non-construction support services contracted by the City, Project Labor Coordinator, or Contractor in connection with this Project.

Section 3.3 Awarding of Contracts.

(a) The City has the absolute right to bid or award Covered Contracts regardless of delivery method to any Contractor notwithstanding the existence or non-existence of any agreements between such Contractor and any Union Parties,

provided only that such Contractor is willing, ready, and able to execute and comply with this PLA should such Contractor be awarded work covered by this PLA.

(b) It is agreed that all Contractors who have been awarded a contract for Project Work shall be required to accept and be bound by the terms and conditions of this PLA. Contractors shall evidence their acceptance of this Agreement by executing a Letter of Assent as set forth in Attachment A hereto. The Prime Contractor must sign and submit the Letter of Assent as a condition of award prior to the execution of a Covered Contract. No Contractor shall commence Project Work without first providing a copy of the signed Letter of Assent to the Project Labor Coordinator.

(c) The City and Prime Contractors agree that to the extent permitted by law and consistent with the economy and efficiency of construction and operation, it will use its best efforts to purchase materials, equipment, and supplies that will not create labor strife. Under all circumstances, however, the City and Prime Contractors shall retain the absolute right to select the lowest responsive and responsible bidder for the award of contracts on all Covered Projects.

Section 3.4 Coverage Exception. The Parties agree and understand that this PLA shall not apply to any work that would otherwise be covered Project Work if a governmental agency or granting authority partially or fully funding such work determines that it will not fund the Project Work if it is covered by this PLA. The City agrees that it will make every effort to establish the inclusion of this PLA with any governmental agency or granting authority funding a Covered Project.

Section 3.5 Schedule A's.

(a) The provisions of this PLA, including the Schedule A's (which are the local Master Labor Agreements of the signatory Unions having jurisdiction over the work on the Project, as such may be changed from time to time consistent with Section 21.3, and which are incorporated herein by reference), shall apply to the work covered by this PLA, notwithstanding the provisions of any other local, area and/or national agreement that may conflict with or differ from the terms of this PLA. Where a subject covered by the provisions of this PLA is also covered by a Schedule A, the provisions of this PLA shall prevail. Where a subject is covered by a provision of a Schedule A and not covered by this PLA, the provisions of the Schedule A shall prevail. Any dispute as to the applicable source between this PLA and any Schedule A shall be resolved under the procedures established in Article 10.

(b) It is understood that this PLA, together with the referenced Schedule A's, constitutes a self-contained, stand-alone agreement and, by virtue of having become bound to this PLA, the Contractor will not be obligated to sign any other local, area, or national collective bargaining agreement as a condition of performing work within the scope of this PLA (provided, however, that the Contractor may be required to sign a uniformly applied non-discriminatory Participation or Subscription Agreement at the request of the trustees or administrator of a trust fund established pursuant to Section 302 of the Labor Management Relations Act, and to which such Contractor may be bound to make contributions under this PLA, provided that such Participation or Subscription Agreement does not purport to bind the Contractor beyond the terms and conditions of this PLA and/or expand its obligation to make contributions pursuant thereto). It shall be the responsibility of the Prime Contractor to have each of its Contractors of any tier sign the documents with the appropriate Union prior to the Contractor beginning Project Work.

Section 3.6 The Parties agree that this PLA will be made available to, and will fully apply to, any successful bidder for Project Work, without regard to whether that successful bidder performs work at other sites on either a Union or non-Union basis. This PLA shall not apply to any work of any Contractor other than that on Project Work specifically covered by this PLA.

Section 3.7 Binding Signatories Only. This PLA and Letter of Assent shall only be binding on the signatory Parties hereto, and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such Party.

Section 3.8 Other City Work. Nothing contained herein shall be interpreted to prohibit, restrict, or interfere with the performance of any other operation, work, or function not covered by this PLA, which may be performed by City employees or contracted for by the City for its own account, on its property, or in and around a project site.

Section 3.9 Separate Liability. It is understood that the liability of the Contractor(s) and the liability of the separate Unions under this PLA shall be several and not joint. The Unions agree that this PLA does not have the effect of creating any joint employment status between or among the City or Project Labor Coordinator and/or any Contractor.

Section 3.10 Completed Project Work. As areas of Project Work are accepted by the City, this PLA shall have no further force or effect on such items or areas except where the Contractor is directed by the City or its representatives to engage in repairs, modification and/or check-out functions required by its contract(s) with the City.

Section 3.11 Except for all work performed under the NTL Articles of Agreement, the National Stack/Chimney Agreement, and the National Cooling Tower Agreement, all instrument calibrations work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article 7 (Work Stoppages and Lockouts), Article 8 (Work Assignments and Jurisdictional Disputes) and Article 10 (Settlement of Grievances and Disputes) of this PLA, which shall apply to such work.

ARTICLE 4

UNION RECOGNITION AND EMPLOYMENT

Section 4.1 **Recognition.** The Contractor recognizes the Unions as the exclusive bargaining representative for the employees engaged in Project Work. Such recognition does not extend beyond the period when the employee is engaged in Project Work.

Section 4.2 **Contractor Selection of Employees.** The Contractor shall have the right to determine the competency of all employees, the number of employees required, the duties of such employees within their craft jurisdiction, and shall have the sole responsibility for selecting employees to be laid off, consistent with this Article. The Contractor shall also have the right to reject any applicant referred by a Union for any reason, subject to any reporting time requirements of the applicable Schedule A; provided, however, that such right is exercised in good faith and not for the purpose of avoiding the Contractor's commitment to employ qualified workers through the procedures endorsed in this PLA.

Section 4.3 **Referral Procedures.**

(a) For signatory Unions to this Agreement having a job referral system contained in a Schedule A, the Contractor agrees to comply with such system and it shall be used exclusively by such Contractor, except as modified by this PLA. Such job referral system will be operated in a nondiscriminatory manner and in full compliance with federal, state, and local laws and regulations that require equal employment opportunities and non-discrimination. All of the foregoing hiring procedures, including related practices affecting apprenticeship, shall be operated so as to consider the goals of the City to encourage employment of City Residents, Targeted Workers, and utilization of Disadvantaged Business Enterprises on the Project Work, and to facilitate the ability of all Contractors to meet their employment needs.

(b) The local Unions will exert their best efforts to recruit and refer sufficient numbers of skilled craft workers to fulfill the labor requirements of the Contractor, including specific employment obligations to which the Contractor may be legally and/or contractually obligated; and to refer Apprentices as requested to develop a larger, skilled workforce. The Unions will work with the Project Labor Coordinator and others designated by the City, to identify and refer competent craft persons as needed for Project Work, and to identify individuals, particularly City Residents and Targeted Workers, for entrance into Apprenticeship Programs, or participation in other identified programs and procedures to assist individuals in qualifying and becoming eligible for such Apprenticeship Programs, all maintained to increase the available supply of skilled craft personnel for Project Work and future construction work to be undertaken by the City.

(c) The Union shall not knowingly refer an employee currently employed by a Contractor on Project Work to any other Contractor.

Section 4.4 Non-Discrimination in Referral, Employment, and Contracting. The Unions and Contractors agree that they will not discriminate against any employee or applicant for employment on the basis of race, color, religion, gender, national origin, age, Union status, sex, sexual orientation, marital status, political affiliation, or disability. Further, it is recognized that the City has certain policies, programs, and goals for the utilization of Disadvantaged Business Enterprises. The Parties shall jointly endeavor to assure that these commitments are fully met, and that any provisions of this PLA that may appear to interfere with Disadvantaged Business Enterprises successfully bidding for work on Covered Projects shall be carefully reviewed, and adjustments made as may be appropriate and agreed upon among the Parties, to ensure full compliance with the spirit and letter of the City's policies and commitment to its goals for the significant utilization of Disadvantaged Business Enterprises as Contractors, vendors or suppliers on Project Work.

Section 4.5 Employment of City Residents and Targeted Workers.

(a) In recognition of the City's mission to serve the City and its residents, the Unions and Contractors agree that, to the extent allowed by law, and as long as they possess the requisite skills and qualifications, residents of the City of San Diego, hereafter "City Residents", shall be first referred for Project Work. A "City Resident" is defined as a City of San Diego permanent resident at the time of initial employment on a Covered Project or a Veteran residing anywhere. The

list of qualifying zip codes for City Residents is included within Attachment B-1, Workforce Dispatch Request Form.

(b) The Contractors and Unions agree to work together to achieve a goal of at least thirty-five (35) percent of the total construction craft hours worked on each Covered Project be performed by City Residents.

(c) The Contractors and Unions agree to work together to achieve a goal of at least ten (10) percent of the total construction craft hours worked on each Covered Project be performed by Targeted Workers. Hours worked by Targeted Workers who are also City Residents may be applied to the City Resident participation goal.

(d) Professional services agreements entered into by the City for covered surveying or inspection services, which are separate and apart from the Construction Contract for a Covered Project, are exempt from the foregoing City Resident and Targeted Worker hiring goals.

(e) To facilitate the dispatch of City Residents, as well as all Contractor requests for referral and dispatch of workers from the applicable Union referral system, all Contractors are required to utilize the Workforce Dispatch Request Form for Covered Projects, a sample of which is attached as Attachment B-1.

(f) The Project Labor Coordinator shall work with the Unions and Contractors in the administration, monitoring, and the reporting of the foregoing City Resident and Targeted Worker hiring goals.

(g) The Parties recognize that the Pure Water Program Phase I Projects have multiple funding sources. If a particular funding source applied by the City to a Covered Project does not allow geographic preference for hiring local craft workers, the foregoing City Resident participation requirement will not be applicable to that Covered Project. The City reserves the right to apply Pure Water Program Phase I funding as it chooses and will make every effort to fund the Covered Projects to encourage inclusivity of City Residents.

Section 4.6 Core Employees. This Section only applies to Contractors who are not directly signatory to an applicable Schedule A.

(a) Disadvantaged Business Enterprise. The Parties recognize the City's interest in promoting competition and inclusion of Disadvantaged Business Enterprises, which may not be signatory to a current Schedule A. In order to promote participation and attract Disadvantaged Business Enterprises to work

under this Agreement, and subject to the limitations set forth below, each Contractor that is a Disadvantaged Business Enterprise may first employ three (3) of its core employees per craft on each Covered Project prior to employing an employee through the appropriate Union hiring hall. The next (fourth) employee shall be hired from the appropriate Union hiring hall and thereafter, such Contractor may employ, as needed, two (2) additional Core Employees in an alternating manner with Union referrals, up to a total of five (5) Core Employees. Thereafter, all additional employees in the affected trade or craft shall be requested and referred from the appropriate Union hiring hall.

The foregoing Core Employee hiring procedure for Disadvantaged Business Enterprises is subject to the following limitations:

(1) Disadvantaged Business Enterprises with an individual subcontract value of \$500,000 or less and;

(2) Disadvantaged Business Enterprises are limited to utilizing the foregoing Core Employee hiring procedure to one (1) subcontract per Covered Project and;

(3) The total value of all subcontracts utilizing the foregoing Core Employee hiring procedure shall not exceed ten (10) percent of the total value of each Covered Project; and

(4) In order to assist the Project Labor Coordinator monitor compliance with this Section, each Prime Contractor will be responsible for tracking, reporting and providing notice to the Project Labor Coordinator describing each Disadvantaged Business Enterprise subcontract that qualifies for the foregoing hiring procedure prior to work commencing.

(b) Employers who do not qualify for the hiring procedure set forth in Section 4.6(a), and who are not otherwise signatory to a current Schedule A, may employ, as needed, first, a Core Employee, then an employee through a referral from the appropriate Union hiring hall, then a second Core Employee, then a second employee through the referral system, and so on until a maximum of three (3) Core Employees are employed per craft on each Covered Project. Thereafter, all additional employees in the affected trade or craft shall be requested and referred from the appropriate Union hiring hall in accordance with this Article. Contractors employing more than fifty (50) craft workers at the same time in a specific trade on a Covered Project may hire an additional two (2) Core Employees.

(c) Section 4.6 only applies to Contractors who are not directly signatory to a current Schedule A for the craft worker in its employ and is not intended to limit the transfer provisions of the Schedule A of any trade. As part of this process, and in order to facilitate the contract administration procedures, as well as appropriate fringe benefit fund coverage, all Contractors shall require their Core Employees and any other persons employed other than through the referral process, to register with the appropriate Union hiring hall, if any, prior to their first day of employment working under the Construction Contract at the project site.

(d) Prior to each Contractor performing any work on a Covered Project, each Contractor shall provide a list of Core Employees to the Project Labor Coordinator and the Council. After submitting the Core Employee list prior to commencing work, Contractors shall not make any changes or substitutions to the Core Employee list for the duration of the Covered Project. Failure to submit the Core Employee list prior to work commencing will prohibit the Contractor from using any Core Employees for 30 calendar days after the list is provided to the Project Labor Coordinator and Council.

(e) Upon request by any Party to this Agreement, the Contractor hiring any Core Employee shall provide satisfactory proof (i.e., payroll records, quarterly tax records, and such other documentation) evidencing the Core Employee's qualification as a Core Employee to the Project Labor Coordinator and the Council.

(f) Core Employees must meet the following eligibility requirements to qualify for employment on Covered Projects:

(1) A Core Employee must be either a journeyperson or Apprentice and appear on the Contractor's active payroll for at least ninety (90) of the last one-hundred-eighty (180) working days prior to being designated as a Core Employee. The date a Core Employee is designated is the date the Core Employee list is submitted to the Project Labor Coordinator and Council prior to the Contractor commencing work; and

(2) A Core Employee must possess any license required by state or federal law for the Project Work to be performed; and

(3) A Core Employee must have the ability to safely perform the basic functions of the applicable trade.

(g) In addition to the core employee provisions set forth herein, all Contractors may avail themselves of any opportunity provided for in the applicable Schedule A's to call for specific employees by name.

(h) During any layoffs or reductions in workforce, Contractors shall layoff employees in an order and manner consistent with the Core Employee hiring procedures and maintain the required Core Employee-to-Union referral ratios required by this Section for the duration of each Covered Project.

Section 4.7 Time for Referral. If any Union's registration and referral system does not fulfill the requirements for specific classifications of covered employees (including City Residents) requested by any Contractor within forty-eight (48) hours (excluding Saturdays, Sundays, and holidays), that Contractor may employ Core Employees without reference to the ratio requirements in Section 4.6 or use employment sources other than the Union registration and referral services, and may employ applicants from any other available source. The Contractor should promptly inform the Union of any applicants hired from other sources, and such applicants shall register with the appropriate hiring hall, if any.

Section 4.8 Lack of Referral Procedure. If a signatory local Union does not have a job referral system as set forth in Section 4.3 above, the Contractors shall give the Union equal opportunity to refer applicants. The Contractors shall notify the Union of employees so hired, as set forth in Section 4.7.

Section 4.9 Union Membership. Employees are not required to become or remain union members as a condition of performing Covered Work under this Agreement. Employers shall make and transmit all deductions for union dues, fees, and assessments that have been authorized by employees in writing in accordance with the applicable Schedule A. Nothing in this Section 4.9 is intended to supersede the requirements of the applicable Schedule A's as to those Employers otherwise signatory to such Schedule A and as to the employees of those Employers who are performing Covered Work.

Section 4.10 Foremen. The selection and number of craft foremen and/or general foremen shall be the responsibility of the Contractor, consistent with the Schedule A's. All foremen shall take orders exclusively from the designated Contractor representatives. Craft foremen shall be designated as working foreman at the request of the Contractors.

Section 4.11 Skilled and Trained Workforce. All Contractors performing Project Work are required to provide the City with an enforceable commitment that a skilled and

trained workforce will be used to complete the construction contract or project, in accordance with City Council Resolution Number R-312062.

ARTICLE 5

UNION ACCESS AND STEWARDS

Section 5.1 Access to Project Sites. Authorized representatives of the Union shall have access to Project Work, provided that they do not interfere with the work of employees and further provided that such representatives fully comply with posted visitor, security, and safety rules.

Section 5.2 Stewards.

(a) Each signatory local Union shall have the right to dispatch a working journeyman as a steward for each shift, and shall notify the Contractor in writing of the identity of the designated steward or stewards prior to the assumption of such person's duties as steward. Such designated steward or stewards shall not exercise any supervisory functions. There will be no non-working stewards. Stewards will receive the regular rate of pay for their respective crafts.

(b) In addition to his/her work as an employee, the steward should have the right to receive, but not to solicit, complaints or grievances and to discuss and assist in the adjustment of the same with the employee's appropriate supervisor. Each steward should be concerned only with the employees of the steward's Contractor and not with the employees of any other Contractor. The Contractor will not discriminate against the steward in the proper performance of his/her Union duties.

(c) When a Contractor has multiple, non-contiguous work locations at one site, the Contractor may request and the Union shall appoint such additional working stewards as the Contractor requests to provide independent coverage of one or more such locations. In such cases, a steward may not service more than one work location without the approval of the Contractor.

(d) The stewards shall not have the right to determine when overtime shall be worked or who shall work overtime.

Section 5.3 Steward Layoff/Discharge. The Contractor agrees to notify the appropriate Union twenty-four (24) hours before the layoff of a steward, except in the case of

disciplinary discharge for just cause. If the steward is protected against such layoff by the provisions of the applicable Schedule A, such provisions shall be recognized when the steward possesses the necessary qualifications to perform the remaining work. In any case in which the steward is discharged or disciplined for just cause, the appropriate Union will be notified immediately by the Contractor, and such discharge or discipline shall not become final (subject to any later filed grievance) until twenty-four (24) hours after such notice has been given.

Section 5.4 Employees on Non-Project Work. On work where the personnel of the City may be working in close proximity to the construction activities covered by this PLA, the Union agrees that the Union representatives, stewards, and individual workers will not interfere with the City personnel, or with personnel employed by any other employer not a Party to this PLA.

ARTICLE 6

WAGES AND BENEFITS

Section 6.1 Wages. At a minimum, all employees covered by this PLA shall be classified in accordance with work performed and paid the hourly wage rates for those classifications in compliance with the Applicable Prevailing Wage Determination established pursuant to the California Labor Code by the California Department of Industrial Relations.

Section 6.2 Benefits.

(a) Subject to the exception set forth below for Disadvantaged Business Enterprises, otherwise, for all employees performing Project Work, Contractors shall pay all fringe benefits and other required employer contributions to the established Union employee benefit funds in the amounts required by the applicable Schedule A. In addition, the Contractors and Unions agree that only such bona fide employee benefits that accrue to the direct benefit of the employees (such as pension and annuity, health and welfare, vacation, apprenticeship, and training funds) shall be included in this requirement and required to be paid by the Contractor on Covered Projects. These Contractor contributions shall not exceed the contribution amounts set forth in the Applicable Prevailing Wage Determination.

Union Benefit Fund Contributions for Disadvantaged Business Enterprises. Disadvantaged Business Enterprises are exempt from paying fringe benefits and

other required employer contributions on behalf of their Core Employees to the Union employee benefit funds, subject to the following exemption limitations:

(1) The exemption is only applicable to Disadvantaged Business Enterprises with an individual subcontract value of \$500,000 or less and;

(2) Disadvantaged Business Enterprises are limited to utilizing this exemption for one subcontract per Covered Project and;

(3) The total value of all subcontracts utilizing this exemption shall not exceed ten (10) percent of the total value of each Covered Project; and

(4) Disadvantaged Business Enterprises utilizing this exemption are still required to pay all fringe benefits and other required employer contributions to the established Union employee benefit funds for all employees other than their Core Employees, and must comply with the applicable prevailing wage requirements, including the payment of fringe benefits, for all employees performing Project Work; and

(5) In order to assist the Project Labor Coordinator monitor utilization of this exemption, each Prime Contractor will be responsible for tracking, reporting and providing notice to the Project Labor Coordinator about each Disadvantaged Business Enterprise subcontract that qualifies and intends to utilize this exemption prior to work commencing.

(b) Where applicable, the Contractor adopts and agrees to be bound by the written terms of the applicable, legally established, Union trust agreement(s) specifying the detailed basis how payments will be made into, and benefits paid out of, such trust funds for its employees. The Contractor authorizes the Parties to such trust funds to appoint trustees and successors' trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor. The Contractor obligations to the applicable Union benefit fund(s) and trust agreement(s) are limited to work performed on a Covered Project. The applicable Union benefit funds and trust agreement(s) to each Contractor are determined by the pre-job conference and Union work assignment process described in Articles 8 and 16.

(c) Each Contractor is required to certify to the Project Labor Coordinator that it has paid all benefit contributions due and owing to the appropriate Union trust(s) and benefit funds prior to the receipt of its final payment and/or retention. Further, upon timely notification by a Union to the Project Labor Coordinator, the Project Labor Coordinator shall work with any Contractor who is delinquent in

payments to assure that proper benefit contributions are made, to the extent of requesting the City or the prime Contractor to withhold payments otherwise due such Contractor, until such contributions have been made or otherwise guaranteed.

(d) Notwithstanding any other provisions, this Agreement is an agreement under Section 8(f) of the National Labor Relations Act (NLRA), which covers work performed in the building and construction industry. In addition, the work performed under this Agreement qualifies for the Construction Industry Exemption under the Employee Retirement and Income Security Act of 1974 (“ERISA”), as amended as well. If any Union Pension Trust Fund (“Fund”) covered by the terms and conditions of this Agreement does not qualify for the Construction Industry Exemption authorized by Section 4203 (B)(1)(i), of the Employee Retirement Income Security Act of 1974 (“ERISA”) as amended, 29 U.S.C. 1383(b)(1)(i), or has not taken the necessary steps to amend the Fund documents to qualify for the Construction Industry Exemption as authorized by Section 4203(B)(1)(ii) of ERISA, as amended, 29 U.S.C. 1383(b)(1)(B)(ii); and to recognize the work performed under this Agreement to qualify for the Construction Industry Exemption, the Contractors signatory to this Agreement will not be obligated to make pension fund contributions to that Fund. In such an event, the Contractor shall pay all required amounts otherwise allocated for payment toward the non-exempt Fund to the employees’ wages or other bona fide retirement plan program pursuant to applicable prevailing wage requirements.

Section 6.3 Wage Premiums. Wage premiums, including, but not limited to, pay based on height of work, shift premiums, hazard pay, scaffold pay, and special skills shall not be applicable to work under this PLA, except to the extent provided for in any applicable prevailing wage determination.

Section 6.4 Compliance with Prevailing Wage Laws. All complaints regarding possible prevailing wage violations may be referred to the Project Labor Coordinator or Labor Compliance Program, if any, for processing, investigation and resolution, and if not resolved within thirty (30) calendar days, may be referred by any Party to the State Labor Commissioner. To facilitate compliance with applicable prevailing wage laws, the City and each Contractor agree to provide copies of certified payroll reports, redacted only to the extent required by law, to the Unions (or to any Labor Management Cooperation Committee in which a Union or its affiliate participates) within ten (10) days of their request.

ARTICLE 7

WORK STOPPAGES AND LOCKOUTS

Section 7.1 No Work Stoppages or Disruptive Activity. The Council and the Unions signatory hereto agree that they, nor their respective officers, or agents or representatives, shall incite or encourage, condone or participate in any strike, walk-out, slowdown, picketing, observation of picket lines, or other activity of any nature or kind whatsoever, for any cause or dispute whatsoever with respect to or any way related to Project Work, or which interferes with or otherwise disrupts Project Work, or with respect to or related to the City or Contractors or subcontractors, including, but not limited to, economic strikes, unfair labor practice strikes, safety strikes, sympathy strikes, and jurisdictional strikes whether or not the underlying dispute is arbitrable. Any such actions by the Council, or Unions, or their members, agents, representatives, or the employees they represent shall constitute a material violation of this PLA. The Council and the Union shall take all steps necessary to obtain compliance with this Article.

Section 7.2 Employee Violations. The Contractor may discharge any employee violating Section 7.1 above, and any such employee will not be eligible for rehire under this PLA.

Section 7.3 Standing to Enforce. The City, the Project Labor Coordinator, or any Contractor affected by an alleged violation of Section 7.1 shall have standing and the right to enforce the obligations established therein.

Section 7.4 Expiration of Schedule A's. If a collective bargaining agreement between a signatory Contractor and one or more of the Union(s) expires before the Contractor completes the performance of a Covered Contract for a Covered Project, and the Union or the Contractor gives notice of demand for a new or modified collective bargaining agreement, the Unions agree that they will not strike the Contractor on any Covered Project, and the Union and the Contractor agree that the expired collective bargaining agreement will continue in full force and effect for the Project Work until a new or modified collective bargaining agreement is reached between the Union and the Contractor. If the new or modified collective bargaining agreement reached between the Union and the Contractor provides that any terms of the collective bargaining agreement shall be retroactive, the Contractor agrees to comply, consistent with the terms of this PLA and the Prevailing Wage Statute, with any retroactive terms of the new or modified collective bargaining agreement which are applicable to employees of said Contractor that are employed on a Covered Project within seven (7) days at

no cost to the City. All employees shall continue to work and to perform all their obligations with respect to Project Work despite the expiration of a Schedule A agreement. Should a Contractor engaged in Project Work enter into an interim agreement with the Unions for work being performed elsewhere after the expiration, and before the renewal of a local collective bargaining agreement forming the basis for Schedule A, such interim agreement shall be utilized by that Contractor for Project Work, subject to the provisions of Section 21.3.

Section 7.5 No Lock Outs. Contractors shall not cause, incite, encourage, condone or participate in any lock-out of employees with respect to Project Work during the term of this PLA. The term “lock-out” refers only to a Contractor's exclusion of employees in order to secure collective bargaining advantage, and does not refer to the discharge, termination, or layoff of employees by the Contractor for any reason in the exercise of rights pursuant to any provision of this PLA, or any other agreement, nor does “lock-out” include the City's decision to stop, suspend, or discontinue any Project Work or any portion thereof for any reason.

Section 7.6 Best Efforts to End Violations.

(a) If a Contractor contends that there is any violation of this Article, it shall, at least twenty-four (24) hours prior to invoking the procedures of Section 7.7, provide written notification to the Council of the involved Union(s) and to the Project Labor Coordinator, setting forth the facts which the Contractor contends violates this Article. The Council and the leadership of the involved Union(s) will immediately instruct, order, and use their best efforts to cause the cessation of any violation of the Article.

(b) If the Union contends that any Contractor has violated this Article, it will notify the Contractor and the Project Labor Coordinator, setting forth the facts which the Union contends violate this Article, at least twenty-four (24) hours prior to invoking the procedures of Section 7.7. The Project Labor Coordinator shall promptly order the involved Contractor(s) to cease any violation of the Article.

Section 7.7 Expedited Enforcement Procedure. Any Party, including the City, which is an intended beneficiary of this Article, or the Project Labor Coordinator, may institute the following procedures, in lieu of or in addition to any other action at law or equity, when a breach of this Article is alleged.

(a) The Party invoking this procedure shall notify Thomas Pagan, who has been selected by the negotiating Parties, and whom the Parties agree shall be the permanent arbitrator under this procedure, or Barry Winograd, as the alternate

arbitrator under this procedure. If the permanent arbitrator is unavailable at any time, the alternate will be contacted. If neither is available, then a selection shall be made from the list of arbitrators as set forth in Article 10. Notice to the arbitrator shall be by the most expeditious means available, with notices to the Parties alleged to be in violation, and to the Project Labor Coordinator and Council. For purposes of this Article, written notice may be given by email, facsimile, hand delivery, or overnight mail and will be deemed effective upon receipt.

(b) Upon receipt of said notice, the arbitrator named above or his/her alternate shall sit and hold a hearing within twenty-four (24) hours if it is contended that the violation still exists, but not sooner than twenty-four (24) hours after notice has been dispatched to the Council of the involved Union(s) and/or Contractor as required by Section 7.6, above.

(c) The arbitrator shall notify the Parties of the place and time chosen for this hearing. Said hearing shall be completed in one session, which, with appropriate recesses at the arbitrator's discretion, shall not exceed twenty-four (24) hours unless otherwise agreed upon by all Parties. A failure of any Party or Parties to attend said hearings shall not delay the hearing of evidence or the issuance of any award by the arbitrator.

(d) The sole issue at the hearing shall be whether or not a violation of this Article has in fact occurred. The arbitrator shall have no authority to consider any matter in justification, explanation, or mitigation of such violation or to award damages, (except for damages as set forth in Section 7.8 below) which issue is reserved for court proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing and may be issued without an opinion. If any Party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the award. The arbitrator may order cessation of the violation of the Article and other appropriate relief, and such award shall be served on all Parties by hand or registered mail upon issuance.

(e) Such award shall be final and binding on all Parties and may be enforced by any court of competent jurisdiction upon the filing of this PLA and all other relevant documents referred to herein above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other Party. In any judicial proceeding to obtain a temporary order enforcing the arbitrator's award as issued under Section 7.7(d) of this Article, all Parties waive the right to a hearing and agree that such proceedings may be ex parte. Such

agreement does not waive any Party's right to participate in a hearing for a final order of enforcement. The court's order or orders enforcing the arbitrator's award shall be served on all Parties by hand or by delivery to their address as shown on this PLA (for a Union), as shown on their business contract for work under this PLA (for a Contractor) and to the representing Union (for an employee), by certified mail by the Party or Parties first alleging the violation.

(f) Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance hereto are hereby waived by the Parties to whom they accrue.

(g) The fees and expenses of the arbitrator shall be equally divided between the Party or Parties initiating this procedure and the respondent Party or Parties.

Section 7.8 Liquidated Damages.

(a) If the arbitrator determines in accordance with Section 7.7 above that a work stoppage has occurred, the respondent Union(s) shall, within eight (8) hours of receipt of the Award, direct all the employees they represent on the project to immediately return to work. If the craft(s) involved do not return to work by the beginning of the next regularly scheduled shift following such eight (8) hour period after receipt of the arbitrator's Award, and the respondent Union(s) have not complied with their obligations to immediately instruct, order, and use their best efforts to cause a cessation of the violation and return the employees they represent to work, then the non-complying Union(s) shall each pay a sum as liquidated damages to the City, and each will pay an additional sum per shift, as set forth in (c), below, for each shift thereafter on which the craft(s) has not returned to work.

(b) If the arbitrator determines in accordance with Section 7.7 above that a lock out has occurred, the respondent Contractor(s) shall, within eight (8) hours after receipt of the award, return all the affected employees to work on the Project, or otherwise correct the violations found by the arbitrator. If the respondent Contractor(s) do not take such action by the beginning of the next regular scheduled shift following the eight (8) hour period, each non-complying respondent Contractor shall pay or give as liquidated damages, to the affected Union(s) (to be apportioned among the affected employees and the benefit funds to which contributions are made on their behalf, as designated by the arbitrator) and each shall pay an additional sum per shift, as set forth in (c), below, for each shift thereafter in which compliance by the respondent Contractor(s) has not been completed.

(c) The Parties agree that project delays caused by violations of this Article will cause the City to sustain damages. They agree that it would be impractical or extremely difficult to fix the amount of such damages. Therefore, the Parties agree that, in the event of a breach of either of these provisions, the Party in breach shall pay to the City the sum of not less than \$10,000.00 and no more than \$20,000.00 per shift from the time the arbitrator determines that a delay has occurred until the arbitrator determines that the project is again on construction schedule. The payment, when made, shall constitute a damages remedy of the City for the delay specified, but shall not prevent the City from seeking an injunctive or other monetary relief, including termination of this PLA. Payment of these sums as liquidated damages is not intended as a forfeiture or penalty within the meaning of California Civil Code sections 3275 or 3369, but instead, is intended to constitute liquidated damages to the City pursuant to section 1671 of the California Civil Code.

ARTICLE 8

WORK ASSIGNMENTS AND JURISDICTIONAL DISPUTES

Section 8.1 No Jobsite Disruption. There will be no strikes, work stoppages, picketing, sympathy strikes, slowdowns, or other interferences with the work because of jurisdictional disputes between Unions. The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for Settlement of Jurisdictional Disputes in the Construction Industry (the “Plan”) or any successor Plan.

Section 8.2 All jurisdictional disputes on this project shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be adopted by the Building and Construction Trades Department. Decisions rendered shall be final and binding and conclusive on the Contractors and Unions parties to this PLA.

All jurisdictional disputes shall be resolved without the occurrence of any of the activities prohibited in Article 7 (Work Stoppages and Lockouts), and the Contractor’s assignment shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

Section 8.2.1 If a dispute arising under this Article involves the Southwest Regional Council of Carpenters or any of its subordinate bodies, an arbitrator shall be chosen by the procedures specified in Article V, Section 5, of the Plan from a list composed of Thomas Pagan, Thomas Angelo, Robert Hirsch, and John Kagel, and the

arbitrator's hearing on the dispute shall be held at the offices of the Council within fourteen (14) days of the selection of the arbitrator. All other procedures shall be as specified in the Plan.

Section 8.3 Failure to Comply. If any Union or Contractor fails to immediately and fully comply with the final decision rendered by the Plan, affected Union(s) or Contractor(s) may seek legal redress for such conduct, including, but not limited to, injunctive relief and/or damages.

Section 8.4 Pre-job Conference. It is required that a pre-job conference be held not later than fourteen (14) calendar days prior to the start of work by each Contractor for the Covered Project in accordance with the procedure described in Article 16.

ARTICLE 9

MANAGEMENT RIGHTS

Section 9.1 Contractor and City Rights. The Contractors and the City have the sole and exclusive right and authority to oversee and manage construction operations on Project Work without any limitations unless expressly limited by a specific provision of this PLA. In addition to the following and other rights of the Contractors enumerated in this PLA, the Contractors expressly reserve their management rights and all the rights conferred upon them by law. The Contractor's rights include, but are not limited to, the right to:

- (a) Plan, direct, and control operations of all work; and
- (b) Hire, promote, transfer, and layoff their own employees, respectively, as deemed appropriate to satisfy work and/or skill requirements; and
- (c) Promulgate and require all employees to observe reasonable job rules and security and safety regulations; and
- (d) Discharge, suspend, or discipline their own employees for just cause; and
- (e) Utilize, in accordance with City approval, any work methods, procedures, or techniques, and select, use, and install any types or kinds of materials, apparatus, or equipment, regardless of source of manufacture or construction; and
- (f) Assign and schedule work at their discretion; and

(g) Assign overtime, determine when it will be worked and the number and identity of employees engaged in such work, subject to such provisions in the applicable Schedule A(s) requiring such assignments be equalized or otherwise made in a nondiscriminatory manner.

Section 9.2 Specific City Rights. In addition to the following and other rights of the City enumerated in this PLA, the City expressly reserves its management rights and all the rights conferred on it by law and contract. The City's rights (and those of the Project Labor Coordinator on its behalf) include, but are not limited to the right to:

(a) Inspect any construction site or facility to ensure that the Contractor follows the applicable safety and other work requirements; and

(b) At its sole option, terminate, delay, and/or suspend any and all portions of the Project Work at any time; prohibit some or all work on certain days or during certain hours of the day to accommodate the ongoing operations of the City and/or to mitigate the effect of ongoing Project Work on businesses and residents in the neighborhood of the Project sites; and/or require any other operational or schedule changes it deems necessary, in its sole judgment, to meet Project deadlines and remain a good neighbor to those in the area of the Covered Projects. (In order to permit the Contractors and Unions to make appropriate scheduling plans, the City will provide the Project Labor Coordinator, and the affected Contractor[s] and Union[s] with reasonable notice of any changes it requires pursuant to this section); and

(c) Approve any work methods, procedures, and techniques used by Contractors whether or not these methods, procedures, or techniques are part of industry practices or customs; and

(d) Investigate and process complaints or disagreements, through its Project Labor Coordinator.

Section 9.3 Use of Materials. There should be no limitations or restrictions by the Union upon a Contractor's choice of materials or design, nor, regardless of source or location, upon the full use and utilization of equipment, machinery, packaging, precast, prefabricated, prefinished, or preassembled materials, tools, or other labor-saving devices, subject to the application of the California Public Contract and Labor Codes. Generally, the onsite installation or application of such items shall be performed by the craft having jurisdiction over such work.

Section 9.4 Special Equipment, Warranties, and Guaranties.

(a) It is recognized that certain equipment of a highly technical and specialized nature may be installed at Covered Project sites. The nature of the equipment, together with the requirements for manufacturer's warranties, may dictate that it be prefabricated, pre-piped, and/or pre-wired and that it be installed under the supervision and direction of the City's and/or manufacturer's personnel. The Unions agree that such equipment is to be installed without incident.

(b) The Parties recognize that the Contractor will initiate from time to time the use of new technology, equipment, machinery, tools, and other labor-savings devices and methods of performing Project Work. The Unions agree that they will not restrict the implementation of such devices or work methods. The Unions will accept and will not refuse to handle, install, or work with any standardized and/or catalogue parts, assemblies, accessories, prefabricated items, preassembled items, partially assembled items, or materials whatever their source of manufacture or construction.

(c) If any disagreement between the Contractor and the Unions concerning the methods of implementation or installation of any equipment, device, or item, or method of work arises, or whether a particular part or pre-assembled item is a standardized or catalog part or item, the work will proceed as directed by the Contractor, and the Parties shall immediately consult over the matter. If the disagreement is not resolved, the affected Union(s) shall have the right to proceed through the procedures set forth in Article 10.

ARTICLE 10

SETTLEMENT OF GRIEVANCES AND DISPUTES

Section 10.1 Cooperation and Harmony on Site.

(a) This PLA is intended to establish and foster continued close cooperation between management and labor. The Council shall assign a representative to this Project for the purpose of assisting the local Unions, and working with the Project Labor Coordinator, together with the Contractors, to complete construction of the Project Work economically, efficiently, continuously, and without any interruption, delays, or work stoppages.

(b) The Project Labor Coordinator, the Contractors, Unions, and employees collectively and individually, realize the importance to all Parties of maintaining continuous and uninterrupted performance of Project Work, and agree to resolve

disputes in accordance with the grievance provisions set forth in this Article or, as appropriate, those of Article 7 or 8.

(c) The Project Labor Coordinator shall observe the processing of grievances under this Article and Articles 7 and 8, including the scheduling and arrangements of facilities for meetings, selection of the arbitrator from the agreed-upon panel to hear the case, and any other administrative matters necessary to facilitate the timely resolution of any dispute; provided, however, it is the responsibility of the principal Parties to any pending grievance to ensure the time limits and deadlines are met.

Section 10.2 Processing Grievances. Any questions arising out of and during the term of this PLA involving its interpretation and application, which includes applicable provisions of the Schedule A's, but not alleged violations of Articles 7 or 8, shall be considered a grievance and subject to resolution under the following procedures.

Step 1. (a) Employee Grievances. When any employee subject to the provisions of this PLA feels aggrieved by an alleged violation of this PLA, the employee shall, through his local Union business representative or job steward, within ten (10) working days after the occurrence of the violation, give notice to the work site representative of the involved Contractor stating the provision(s) alleged to have been violated, the details of the alleged violation and the remedy sought to resolve the matter. A grievance shall be considered null and void if notice of the grievance is not given within the ten (10) day period. A business representative of the local Union or the job steward and the work site representative of the involved Contractor shall meet and endeavor to adjust the matter within ten (10) working days after timely notice has been given. If they fail to resolve the matter within the prescribed period, the grieving Party may, within ten (10) working days thereafter, pursue Step 2 of this grievance procedure provided the grievance is reduced to writing, setting forth the relevant information, including a short description thereof, the date on which the alleged violation occurred, and the provision(s) of the applicable agreement alleged to have been violated. Grievances and disputes settled at Step 1 shall be non-precedential except as to the Parties directly involved.

(b) Union or Contractor Grievances. Should the Union(s) or any Contractor have a dispute with the other Party(ies) and, if after conferring within ten (10) working days after the disputing Party knew or should have known of the facts or occurrence giving rise to the dispute, a settlement is not reached within five (5) working days, the dispute shall be reduced to writing and processed to Step 2 in

the same manner as outlined in Step 1(a) above for the adjustment of an employee complaint.

Step 2. The business manager of the involved local Union or his designee, together with the site representative of the involved Contractor, and the labor relations representative of the Project Labor Coordinator shall meet within seven (7) working days of the referral of the dispute to this second step to arrive at a satisfactory settlement thereof. If the Parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days after the initial meeting at Step 2.

Step 3. (a) If the grievance shall have been submitted but not resolved under Step 2, either the Union or Contractor Party may request in writing to the Project Labor Coordinator (with copy[ies] to the other Party[ies]) within seven (7) calendar days after the initial Step 2 meeting, that the grievance be submitted to an arbitrator selected from the agreed-upon list below, on a rotational basis in the order listed. Those arbitrators are: (1) Thomas Pagan; (2) David Hart; (3) Edna Francis; (4) Mike Rappaport; (5) Michael Prihar; (6) Fred Horowitz; and (7) Sara Adler. The decision of the arbitrator shall be final and binding on all Parties, and the fee and expenses of such arbitrations shall be borne equally by the involved Contractor(s) and the involved Union(s).

(b) Failure of the grieving Party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the Parties involved at the particular step where the extension is agreed upon. The arbitrator shall have the authority to make decisions only on issues presented and shall not have the authority to change, amend, add to, or detract from any of the provisions of this PLA.

Section 10.3 Limit on Use of Procedures. Procedures contained in this Article shall not be applicable to any alleged violation of Article 7 or 8, with a single exception that any employee discharged for violation of Section 7.2 may resort to the procedures of this Article to determine only if he/she was, in fact, engaged in that violation.

Section 10.4 Notice. The Project Labor Coordinator (and the City, in the case of any grievance regarding the Scope of this PLA), shall be notified by the involved Contractor of all actions at Steps 2 and 3, and further, the Project Labor Coordinator shall, upon its own request, be permitted to participate fully in all proceedings at such steps.

ARTICLE 11

COMPLIANCE

Section 11.1 Compliance with All Laws. The Council and all Unions, Contractors, and their employees shall comply with all applicable federal and state laws, ordinances, and regulations including, but not limited to, those relating to safety and health, employment, and applications for employment. All employees shall comply with the safety regulations established by the City, the Project Labor Coordinator, and the Contractor. Employees must promptly report any injuries or accidents to a supervisor.

Section 11.2 Monitoring Compliance. The Parties agree that the City shall require, and that the Project Labor Coordinator and Council shall monitor, compliance by all Contractors with all federal and state laws and regulations that, from time to time may apply to Project Work. It shall be the responsibility of both the Council and the Project Labor Coordinator (on behalf of the City) to investigate or monitor compliance with these various laws and regulations. The Council may recommend to the Project Labor Coordinator and/or the City procedures to encourage compliance with these laws and regulations.

Section 11.3 Prevailing Wage Compliance. The Council or Union may refer all complaints regarding any potential prevailing wage violation to the Project Labor Coordinator, who may process, investigate, and resolve such complaints. The Council or Union, as appropriate, shall be advised in a timely manner with regard to the facts and resolution, if any, of any complaint. It is understood that this Section does not restrict any individual rights as established under the State Labor Code, including the rights of an individual to file a complaint with the State Labor Commissioner.

Section 11.4 Violations of Law. Based upon a finding of violation by the City of a federal and state law, and upon notice to the Contractor that it is in such violation, the City, in the absence of the Contractor remedying such violation, shall take such action as it is permitted by law or contract to encourage the Contractor to come into compliance, including, but not limited to, assessing fines and penalties and/or removing the offending Contractor from Project Work.

ARTICLE 12

SAFETY AND PROTECTION OF PERSON AND PROPERTY

Section 12.1 Safety.

(a) It shall be the responsibility of each Contractor to ensure safe working conditions and employee compliance with all applicable safety laws and regulations and any safety rules contained herein or established by the City, the Project Labor Coordinator, or the Contractor. It is understood that employees have an individual obligation to use diligent care to perform their work in a safe manner and to protect themselves and the property of the Contractor and the City.

(b) All Parties and Contractor employees shall be bound by the safety, security, and visitor rules established by the Contractor, the Project Labor Coordinator, and the City. These rules will be published and posted. An employee's failure to satisfy his/her obligations under this Section will subject him/her to discipline, up to and including discharge.

Section 12.2 Drug and Alcohol Testing Policy. The Parties agree to adopt the Drug and Alcohol Testing Policy attached hereto as Attachment C, which is the exclusive Drug and Alcohol Testing Policy for Covered Projects.

Section 12.3 Inspection. The inspection of shipments of equipment, machinery, and construction materials of every kind shall be performed at the discretion of the Contractor by individuals of its choice.

ARTICLE 13

TRAVEL AND SUBSISTENCE

Section 13.1 Travel expenses, travel time, subsistence allowances and/or zone rates, and parking reimbursements shall not be applicable to work under this PLA, except to the extent provided for in any applicable prevailing wage determination. Parking for employees covered by this PLA shall be provided by the Contractor(s) according to the provision of the Schedule A(s) existing on the Effective Date of this PLA and upon presentation of proof of any expense incurred.

ARTICLE 14

APPRENTICES

Section 14.1 Importance of Training. The Parties recognize the need to maintain continuing support of the programs designed to develop adequate numbers of competent workers in the construction industry, the obligation to capitalize on the availability of the local work force in the area served by the City, and the opportunities to provide continuing work on Covered Projects for City Residents and Targeted Workers. To these ends, and consistent with any laws or regulations, the Parties will facilitate, encourage, and assist City Residents and Targeted Workers commence and progress in Apprenticeship Programs and/or apprenticeship readiness programs in the construction industry leading to participation in such Apprenticeship Programs. The City, the Project Labor Coordinator, other City consultants, the Contractors, and the Council and Unions, will work cooperatively to identify, or establish and maintain, effective programs and procedures for persons interested in entering the construction industry and which will help prepare them for the entry into Apprenticeship Programs. Apprentices, if utilized, must be enrolled in a California Apprenticeship Council-approved Apprenticeship Program.

Section 14.2 Use of Apprentices.

(a) The Unions and Contractors agree to cooperate in referring and employing Apprentices up to the maximum percentage allowed by the State Labor Code and the standards of each State-Approved Apprenticeship Program. The minimum ratios for Apprentice to journey person hours worked shall be in compliance, at a minimum, with the applicable provisions of the State Labor Code relating to utilization of Apprentices. The City, unless otherwise required by law, shall encourage such utilization, and, both as to Apprentices and the overall supply of experienced workers, the Project Labor Coordinator will work with the Council, Apprenticeship Programs, and Contractors to assure appropriate and maximum utilization of Apprentices and the continuing availability of both Apprentices and journey persons.

(b) The Parties agree that all Contractors will comply with all applicable laws and regulations in the request for dispatch and employment of Apprentices.

(c) The Parties agree that Apprentices will not be dispatched to Contractors working under this PLA unless there is a journeyman or other Contractor employee working on the Project where the Apprentice is to be employed who is

qualified to assist and oversee the Apprentice's progress through the program in which he/she is participating.

ARTICLE 15

LEGAL ACTION

Section 15.1 Legal Action. The City, Council and Unions recognize the substantial legal costs (including all attorney's fees and associated disbursements) that might accrue with regard to any legal challenge over the adoption by the City of this PLA, and related to claims directly challenging the legality of this PLA, or a particular section or language that has been adopted herein. In the event of a legal challenge, the Council, on behalf of itself and affiliated Unions, agrees to seek to intervene in the legal action and actively participate in the litigation or other action to defend the legality of this PLA, or a particular section or language herein. The failure of the Council to seek to intervene in the legal action and actively participate to defend the legality of this PLA will constitute a material breach of this PLA. In the event the Council is denied leave to intervene in the legal action, the Council shall have its counsel coordinate with the City's counsel, at the Council's own expense, regarding how the Council can best support the City's legal position.

ARTICLE 16

PRE-JOB CONFERENCE

Section 16.1 Each Contractor is required to conduct a pre-job conference with the Unions not later than fourteen (14) calendar days prior to commencing work. The purpose of the conference will be to, among other things, convey craft manpower needs, the schedule of work for the Covered Project, project work rules, and propose preliminary Union work assignments. The Project Labor Coordinator may work with the Prime Contractor and Council to facilitate the scheduling of all pre-job conferences, but ensuring each Contractor conducts a pre-job conference in accordance with this Agreement is the responsibility of the Prime Contractor. All preliminary Union work assignments shall be disclosed by each Contractor at a pre-job conference. Should there be work within the scope of a Construction Contract for a Covered Project that was not previously assigned at a pre-job conference, or additional work be added to the scope of the Covered Project, the Contractor(s) performing such work will conduct a separate pre-job conference.

Any Union in disagreement with a proposed assignment shall notify the affected Contractor of its position in writing, with a copy sent to the Project Labor Coordinator, within seven (7) calendar days after the pre-job conference occurred. Within seven (7) calendar days after the period allowed for Union notices of disagreement with the Employer's proposed assignments, but prior to the commencement of any work, the Employer shall make final assignments in writing with copies sent to the Project Labor Coordinator and Council.

ARTICLE 17

LABOR/MANAGEMENT AND COOPERATION

Section 17.1 Joint Committee. The Parties to this PLA will form a joint committee consisting of three (3) representatives selected by the Council and three (3) representatives selected by the Project Labor Coordinator, to be chaired jointly by a representative of the Project Labor Coordinator and the Council. The purpose of the Committee shall be to promote harmonious and stable labor management relations on this Project, to ensure effective and constructive communication between labor and management Parties, to advance the proficiency of work in the industry, and to evaluate and ensure an adequate supply of skilled labor for all Project Work. Representatives of the City may participate upon its request, and all Parties will be invited to attend.

Section 17.2 Functions of Joint Committee. The Committee shall meet on a schedule to be determined by the Committee or at the call of the joint chairs, to discuss the administration of the PLA, the progress of the project, general labor management problems that may arise, and any other matters consistent with this PLA. Substantive grievances or disputes arising under Articles 7, 8, or 10 shall not be reviewed or discussed by this Committee, but shall be processed pursuant to the provisions of the appropriate Article.

The Project Labor Coordinator shall be responsible for scheduling of the meetings and the preparation of the agenda topics for the meetings, with input from the Unions, the Contractors, and the City. Notice of the date, time and place of meetings, shall be given to the Committee members at least three (3) days prior to the meeting. The City shall be notified of the meetings and invited to send a representative(s) to participate.

The Project Labor Coordinator shall prepare quarterly reports on Apprentice utilization and the training and employment of City Residents, and a schedule of Project work and estimated number of craft workers needed. The Committee, or

an appropriate subcommittee, may review such reports and make any recommendations for improvement, if necessary, including increasing the availability of skilled trades, and the employment of local residents or other individuals who should be assisted with appropriate training to qualify for Apprenticeship Programs.

Section 17.3 Subcommittees. The Committee may form subcommittees to consider and advise the full Committee with regard to safety and health issues affecting the Project and other similar issues affecting the overall Project, including any workers' compensation program initiated under this PLA.

ARTICLE 18

SAVINGS AND SEPARABILITY

Section 18.1 Savings Clause. It is not the intention of the City, the Project Labor Coordinator, Contractor, or the Union Parties to violate any laws governing the subject matter of this PLA. The Parties hereto agree that in the event any provision of this PLA is finally held or determined to be illegal or void as being in contravention of any applicable law or regulation, the remainder of the PLA shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this PLA. Further, the Parties agree that if and when any provision(s) of this PLA is finally held or determined to be illegal or void by a court of competent jurisdiction, the Parties will promptly enter into negotiations concerning the substantive effect of such decision for the purposes of achieving conformity with the requirements of any applicable laws and the intent of the Parties hereto. If the legality of this PLA is challenged and any form of injunctive relief is granted by any court, suspending temporarily or permanently the implementation of this PLA, then the Parties agree that all Project Work that would otherwise be covered by this PLA should be continued to be bid and constructed without application of this PLA so that there is no delay or interference with the ongoing planning, bidding, and construction of any Project Work.

Section 18.2 Effect of Injunctions or Other Court Orders. The Parties recognize the right of the City to withdraw, at its absolute discretion, the utilization of the PLA as part of any bid specification should a court of competent jurisdiction issue any order, or any applicable statute that could result, temporarily or permanently, in delay of the bidding, awarding, and/or construction on the Project.

ARTICLE 19

WAIVER

Section 19.1 Waiver. A waiver of or a failure to assert any provisions of this PLA by any or all of the Parties hereto shall not constitute a waiver of such provision for the future. Any such waiver shall not constitute a modification of the PLA or change in the terms and conditions of the PLA and shall not relieve, excuse or release any of the Parties from any of their rights, duties, or obligations hereunder.

ARTICLE 20

AMENDMENTS

Section 20.1 Amendments. The provisions of this PLA can be renegotiated, supplemented, rescinded, or otherwise altered only by mutual agreement in writing, hereafter signed by the Parties.

ARTICLE 21

DURATION OF THE PLA

Section 21.1 Duration. This Agreement shall be effective on June 16, 2020, provided that the Council has signed the Agreement. The Agreement shall continue in full force and effect until all of the work within the scope of a Covered Contract is completed and accepted by the City.

Section 21.2 Turnover and Final Acceptance of Completed Work.

(a) Construction of any phase, portion, section, or segment of Project Work shall be deemed complete when such phase, portion, section or segment has been turned over to the City by the Contractor and the City has accepted such phase, portion, section, or segment. As areas and systems of the Project are inspected and construction-tested and/or approved and accepted by the City or third parties with approval of the City, the PLA shall have no further force or effect on such items or areas, except when the Contractor is directed by the City to engage in repairs or modifications required by its Contract(s) with the City.

(b) Notice of each final acceptance received by the Contractor will be provided to the Council with the description of what portion, segment, etc. has

been accepted. Final acceptance may be subject to a “punch” list, and in such case, the PLA will continue to apply to each such item on the list until it is completed to the satisfaction of the City and Notice of Acceptance is given by the City or its representative to the Contractor.

Section 21.3 Continuation of Schedule A’s. Schedule A's incorporated as part of this PLA shall continue in full force and effect, as previously stated, until the Contractor and Union Parties to the collective bargaining agreement(s), which are the basis for such Schedule A's, notify the Project Labor Coordinator of the mutually agreed upon changes in such agreements and their effective date(s).

The Parties agree to recognize and implement all applicable changes on their effective dates, except as otherwise provided by this PLA; provided, however, that any such provisions negotiated in said collective bargaining agreements will not apply to work covered by this PLA if such provisions are less favorable to the Contractor under the PLA than those uniformly required of Contractors for construction work normally covered by those agreements; nor shall any provision be recognized or applied if it may be construed to apply exclusively or predominantly to work covered by this PLA. Any disagreement between the Parties over the incorporation into a Schedule A of any such provision agreed upon in a negotiation of the local collective bargaining agreement that is the basis for a Schedule A shall be resolved under the procedures established in Article 10.

Section 21.4 Final Termination. Final termination of all obligations, rights, and liabilities, and disagreements shall occur upon receipt by the Council of a Notice from the City saying that no work remains within the scope of the PLA.

Section 21.5 Pure Water Program Phase II Projects. The City and the Unions intend to have this Agreement or a succeeding Agreement include all construction projects in Pure Water Program Phase II. The Pure Water Program Phase II Projects are in the early development stage and cannot be specifically identified at this time to be included in the scope of this Agreement. Therefore, to reopen negotiations to include Pure Water Program Phase II Projects into this Agreement, the Council shall send written notice to the City’s Project Labor Coordinator after the City has approved Pure Water Program Phase II Projects' Environmental Impact Report and no later than ninety (90) days after the City’s final approval of the Environmental Impact Report.

ARTICLE 22

WORK AND ECONOMIC OPPORTUNITY

Section 22.1 The magnitude, duration, and complexity of the Pure Water Program Phase I Projects will require large numbers of skilled craft personnel and create significant economic opportunities for City Residents, Targeted Workers, Disadvantaged Business Enterprises and other businesses. It is therefore the understanding and intention of the Parties to use the opportunities provided by the extensive amount of work to collaborate and implement programs and procedures, which may include, for example, North America's Building Trades Unions Multi-Craft Core Curriculum (MC3) apprenticeship readiness programs, to prepare persons, especially City Residents and Targeted Workers, for entrance into Apprenticeship Programs to begin or continue their construction careers on Covered Projects. Further, the Parties agree to maximize the inclusion of Disadvantage Business Enterprises through outreach, training, and subcontracting for Covered Projects. With assistance from the Project Labor Coordinator, the City, the Contractors, the Unions and their affiliated regional and national organizations will work jointly to promptly develop and implement procedures for the identification of craft needs, the scheduling of work to facilitate the utilization of available craft workers, and the securing of services of craft workers in sufficient numbers to meet the high demands of the Project Work to be undertaken.

Section 22.2 The City, together with the Parties, supports the development of increased numbers of skilled construction workers who are City Residents and Targeted Workers to meet the labor needs of Covered Projects. Towards that end, the Parties, together with the City and its Project Labor Coordinator, agree to develop and implement a work opportunities program for City Residents and Targeted Workers to maximize construction career opportunities and create a construction career pipeline to becoming employed on Covered Projects. Further, the City together with the Parties, will create opportunities for Disadvantaged Business Enterprises consistent with the City's goals and inclusion programs for such businesses. In furtherance of the foregoing, the Council and Unions specifically agree to work with the City and the Project Labor Coordinator to:

- (a) Collaborate with existing or newly created MC3 apprenticeship readiness programs in San Diego to offer opportunities for City Residents and Targeted Workers, including students, to enroll in free short-term construction apprenticeship readiness training to prepare them to enter into Apprenticeship Programs and become employed by a Contractor on a Covered Project. The

Project Labor Coordinator, with the assistance of the Parties, will assist with the recruitment, career placement, and tracking of such City Residents and Targeted Workers who graduate from these apprenticeship readiness programs; and

(b) The Parties will cooperate and collaborate with the City and Project Labor Coordinator to conduct outreach to and include City Residents and Targeted Workers from traditionally underrepresented segments of the City's population in the construction craft workforce for each Covered Project; and

(c) The Council will provide accurate data on a quarterly basis to the City and Project Labor Coordinator pertaining to their level of economic support provided to meet these objectives. Further, the Project Labor Coordinator shall produce detailed quarterly reports for the City and Council to measure and report the outcomes of the policies, requirements, and programs established in this Agreement; and

(d) The Unions will partner with the City and Project Labor Coordinator to conduct outreach and recruitment activities by establishing or continuing to maintain existing centers, programs, and events to facilitate the entry of City Residents and Targeted Workers into the building and construction trades. These programs shall serve as a resource for preliminary orientation, assessment of construction aptitude, referral to MC3 apprenticeship readiness programs or Apprenticeship Programs, referral to hiring halls, and provide tailored orientation and mentoring for women and Targeted Workers; and

(e) The Unions shall assist City Residents and Targeted Workers with contacting the Apprenticeship Programs for the crafts and trades they are interested in. The Unions shall assist City Residents and Targeted Workers who are seeking employment on Covered Projects and provide opportunities for Union membership by assessing their work experience and giving them credit for provable past experience in their relevant craft or trade, including experience gained working for non-Union Contractors. The Unions shall put on their rolls qualified bona fide City Residents and Targeted Workers for employment on Covered Projects.

Section 22.3 Joint Subcommittee on Work and Economic Opportunity. To carry out the intent and purpose of this Article, a subcommittee of the Labor Management Committee established pursuant to Article 17 shall be established, jointly chaired by a designee of the City and a designee of the Council, to oversee the effective development and implementation of the programs and policies described herein, and to work with representatives of each apprenticeship committee and representatives of the MC3 apprenticeship readiness programs to maximize

employment opportunities for City Residents and Targeted workers who reflect the diversity of the communities surrounding each Covered Project and who may not be previously qualified for the construction career opportunities created by the Covered Projects. The subcommittee will meet as necessary at the call of the joint chairs to promptly facilitate its purposes in an expeditious manner as soon as this PLA becomes effective. In addition to the joint chairs, the membership of the committee will consist of at least three (3) representatives of the signatory local Unions and three (3) representatives of Contractors (or organization to which the Contractors belong) signatory to this PLA and experienced in overseeing and participating in Apprenticeship Programs.

ARTICLE 23

HELMETS TO HARDHATS


Section 23.1 Veterans Entry into Building and Construction Trades. The Parties recognize a desire to facilitate the entry into the building and construction trades of Veterans who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter “Center”) and the Center’s “Helmets to Hardhats” program to serve as a resource for preliminary orientation, assessment, and construction aptitude, referral to Apprenticeship Programs or hiring halls, counseling and mentoring, support network, employment opportunities, and other needs as identified by the Parties.

Section 23.2 Integrated Database. The Unions and Contractors agree to coordinate with the Center to create and maintain an integrated database of Veterans interested in working on this Covered Project and of apprenticeship and employment opportunities for this Covered Project.

In witness whereof, the Parties have caused this Project Labor Agreement for City of San Diego Pure Water Program Phase I Projects to be executed as of the date and year above stated.

Dated: July 9, 2020

SAN DIEGO BUILDING AND CONSTRUCTION
TRADES COUNCIL

DocuSigned by:

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By: _____
Tom Lemmon, Business Manager

SIGNATORY UNIONS AND
(See Attached)

SIGNATORY UNIONS

DocuSigned by:
Michael Patterson
38B4C81867E341A...
By: Allied Workers Local 5

By: Chad Boggio Chad Boggio
Bricklayer & Allied Crafts Local 4

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By: Electrical Workers Local 569

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3380E1140A31459...
By: Glaziers, Floor Coverings & Painters Local 1399

DocuSigned by:
Valentine R. Macedo
AC5993278764412...
By: Laborers Local 89

DocuSigned by:
James Preciado
D99A99A99A99A...
By: Plasterer Tenders Local 1414

By: [Signature]
Operating Engineers Local 12

DocuSigned by:
Mike Hartley
363A084B720A48F...
By: Plumbers & Pipefitters Local 230

DocuSigned by:
Paul Colmenero
97581004B0E0439...
By: Roofers & Waterproofers Local 45

DocuSigned by:
[Signature]
B589A3D2C62940C...
By: Laborers Local 1184

DocuSigned by:
Ed Iann
AEBFEA548C4F413...
By: Laborers Local 345

DocuSigned by:
Ricardo Perez
8C144FFD6F5F464...
By: UA Local 345

DocuSigned by:
Stephen Aravaia
B66C6F62284F439...
By: Southwest Regional Council of Carpenters

DocuSigned by:
Luis Miramontes
997D1F49D5364AD...
By: Boilermakers Local 92

DocuSigned by:
Jack Alvarado
5C681A00E44B47F...
By: Cement Masons Local 500 / Area 744

By: Frank Belio, Jr. For BM Gazzaniga
Elevator Constructors Local 18

DocuSigned by:
David Osborne
0679DF11AEC94C3...
By: Iron Workers Local 229

DocuSigned by:
Tom Castleman
D99E7C175E1E4A7...
By: Plasterers Local 200

By: Ronald A. [Signature]
Operating Engineers Local 12

By: [Signature]
Operating Engineers Local 12

DocuSigned by:
Todd Barry
B9584FD2117949F...
By: Road Sprinkler Fitters Local 669

DocuSigned by:
Dave Gauthier
D3C0E4114ADC482...
By: Sheet Metal Workers Local 206

DocuSigned by:
Douglas R Tracy
E80F5779F50C47E...
By: Sheet Metal Workers Local 206

DocuSigned by:
Jose Estrada
530AF0ECACB1492...
By: Teamsters Local 166

DocuSigned by:
[Signature]
3380E1140A31459...
By: Tradeshow & Sign Craft Local 831

DocuSigned by:
[Signature]
B66C6F62284F439...
By: Laborers Local 300

ATTACHMENT A – LETTER OF ASSENT

To be signed by all Contractors awarded work covered by the Project Labor Agreement prior to commencing work.

[CONTRACTOR’S LETTERHEAD]

DATE

Project Labor Coordinator

Address

Address

Address

Attention: _____

**Re: City of San Diego Project Labor Agreement for
Pure Water Program Phase I Project**

Dear Sir:

This is to confirm [Name of Company] agrees to be party to and bound by the City of San Diego Project Labor Agreement for Construction of Pure Water Program Phase I Projects, effective May 1, 2020, as such Agreement may from time to time be amended by the negotiating Parties or interpreted pursuant to its terms. Such obligation to be a Party and bound by this Agreement shall extend to all work covered by the Agreement undertaken by this Company on the Project pursuant to [City Contract No. _____ and Name of Covered Project], and this Company shall require all of its subcontractors of whatever tier to be similarly bound for all work within the scope of the Agreement by signing and furnishing to you an identical Letter of Assent prior to their commencement of work.

Sincerely,

[Name of Construction Company]

By:

[Name and Title of Authorized Executive]

[Copies of this Letter must be submitted to the Project Labor Coordinator and to the Council consistent with Article 3, Section 3.3(b)]

ATTACHMENT B-1 – WORKFORCE DISPATCH REQUEST FORM

The City of San Diego’s Project Labor Agreement for Pure Water Program Phase I Projects establishes a goal of at least thirty-five percent (35%) of the total craft hours on each Covered Project be performed by City Residents. The Unions and Contractors agree that, to the extent allowed by law, and as long as they possess the requisite skills and qualifications, City Residents shall be first referred for Project Work. A “City Resident” is defined as a City of San Diego permanent resident at the time of initial employment on a Covered Project or a Veteran residing anywhere.

*The list of qualifying zip codes for City Residents includes: 92014, 92037, 92038, 92067, 92093, 92101, 92102, 92103, 92104, 92105, 92106, 92107, 92108, 92109, 92110, 92111, 92113, 92114, 92115, 92116, 92117, 92119, 92120, 92121, 92122, 92123, 92124, 92126, 92127, 92128, 92129, 92130, 92131, 92132, 92134, 92137, 92138, 92139, 92145, 92154, 92166, 92167, 92169, 92171, 92173, 92177.

C O N T R A C T O R U S E O N L Y

Please complete and fax or email this form to the applicable union to request craft workers that fulfill the hiring requirements for this project. After faxing your request, please call the Local to verify receipt and substantiate their capacity to furnish workers as specified below. Please print your Fax or Email Transmission Verification Reports and keep copies for your records.

TO:	Local Union and #	
	Email	
	Fax	

CC:	City of San Diego Project Labor Coordinator	
	Email	
	Fax	

FROM:	Contractor	
	Issued by	
	Email	
	Phone	
	Fax	

UNION CRAFT WORKER REQUEST:

Craft Classification	Journeyperson or Apprentice	City Resident and/or Veteran	# of Workers
	<input type="checkbox"/> JM <input type="checkbox"/> APP	YES*	
	<input type="checkbox"/> JM <input type="checkbox"/> APP	YES*	
	<input type="checkbox"/> JM <input type="checkbox"/> APP	YES*	
	<input type="checkbox"/> JM <input type="checkbox"/> APP	YES*	

WORKER REPORTING INSTRUCTIONS:

Reporting Date:	
Reporting Time:	
Project Name:	
Project Location:	
Reporting To:	
On Site Phone:	
Special Instructions:	

U N I O N U S E O N L Y

Please complete the “Union Use Only” section and fax or email both pages to the requesting Contractor and Project Labor Coordinator.

Date Dispatch Received:	
Dispatch Received by:	

Date Worker(s) Dispatched:			
Name	Veteran (Y/N)	Zip Code	JM or App
			<input checked="" type="checkbox"/> JM <input type="checkbox"/> APP
			<input type="checkbox"/> JM <input type="checkbox"/> APP
			<input type="checkbox"/> JM <input checked="" type="checkbox"/> APP
			<input type="checkbox"/> JM <input type="checkbox"/> APP

ATTACHMENT B-2 – CONTRACTOR CORE WORKFORCE FORM

C O N T R A C T O R I N F O R M A T I O N			
Project Name:			
Contractor/Firm Name:			
Prime Tier:			
Submitted by:			
Email:		Phone:	

In accordance with the Project Labor Agreement, Article 4, Section 4.6 (f), a Core Employee must be either a journeyman or Apprentice and appear on the Contractor’s active payroll for at least ninety (90) of the last one-hundred-eighty (180) working days prior to being designated as a Core Employee; and must possess any license required by state or federal law for the Project Work to be performed; and must have the ability to safely perform the basic functions of the applicable.

Prior to each Contractor performing any work on a Covered Project, each Contractor shall provide a list of Core Employees to the Project Labor Coordinator and the Council. After submitting the Core Employee list prior to commencing work, Contractors shall not make any changes or substitutions to the Core Employee list for the duration of the Covered Project. Failure to submit the Core Employee list prior to work commencing will prohibit the Contractor from using any Core Employees for 30 calendar days after the list is provided to the Project Labor Coordinator and Council.

Please check all that apply:

Our firm will not be self-performing any work on this project.
We will be subcontracting our work to: _____

PLA Section 4.6 regarding Core Employees is not applicable to Contractors that are signatory to one or more Schedule As, which are the Master Labor Agreements of the Unions. If your company is signatory, please list the union and local number below. For crafts that you are not signatory, please complete the core employee list below.

Indicate Signatory Union Trade: _____ Local # _____
 Indicate Signatory Union Trade: _____ Local # _____
 Indicate Signatory Union Trade: _____ Local # _____

We are not a union signatory contractor and will be using core employees on this project as indicated below:

Craft/Trade	Employee Name	MC3 Apprentice Y/N?	Last 4 SSN	Hire Date	Date Last Employed

ATTACHMENT C – DRUG AND ALCOHOL TESTING POLICY

The Parties recognize the problems that drug and alcohol abuse have created in the construction industry and the need to develop drug and alcohol abuse prevention programs. Accordingly, the Parties agree that in order to enhance the safety of the workplace and to maintain a drug and alcohol-free work environment, individual Contractors shall require applicants or employees to undergo drug and alcohol testing in accordance with this PLA and this policy, Attachment C – Drug and Alcohol Testing Policy, hereafter “Policy.”

1. It is understood that the use, possession, transfer, or sale of illegal drugs, narcotics, or other unlawful substances, as well as being under the influence of alcohol and the possession of or consuming alcohol is absolutely prohibited while employees are on the Contractor’s job premises or while working on any jobsite in connection with work performed under the PLA.
2. No Contractor may implement a drug and alcohol testing program that does not conform in all respects to the provisions of this Policy.
3. No Contractor may implement drug and alcohol testing at any jobsite unless written notice is given to the Union setting forth the location of the jobsite, a description of the project under construction, and the name and telephone number of the Prime Contractor's project manager. Said notice shall be provided at the pre-job conferences for each Covered Project. Failure to give such notice shall make any drug and alcohol testing engaged in by the Contractor a violation of the Agreement and subject to the Article 10 grievance procedure.
4. A Contractor who elects to implement drug and alcohol testing pursuant to this Policy shall require all craft employees on the Covered Project to be tested. With respect to individuals who become employed on the Covered Project subsequent to the proper implementation of a valid drug and alcohol testing program, such test shall be administered upon the commencement of employment on the project, whether by referral from a Union Dispatch Office, transfer from another project, or another method. Individuals who were employed on the project prior to proper implementation of a valid drug and alcohol testing program may only be subjected to testing for the reasons set forth in paragraphs 5(g)(1) through 5(g)(3) and paragraphs 6(a) through 6(e) of this Policy. Refusal to undergo such testing shall be considered sufficient grounds to deny employment on the project.
5. The following procedure shall apply to all drug and alcohol testing:
 - a. The Contractor may request urine samples only. The applicant or employee shall not be observed when the urine specimen is given. An applicant or employee, at his or her sole option, shall, upon request, receive a blood test in lieu of a urine test. No employee of the Contractor shall draw blood from a bargaining unit employee, touch

- or handle urine specimens, or in any way become involved in the chain of custody of urine or blood specimens. A Union Business Representative, subject to the approval of the individual applicant or employee, shall be permitted to accompany the applicant or employee to the collection facility to observe the collection, bottling, and sealing of the specimen.
- b. A Contractor may request an applicant or employee promptly, within four (4) hours of the Contractor's request, perform an alcohol breathalyzer test at a certified laboratory only, and cutoff levels shall be those mandated by applicable state or federal law.
 - c. The testing shall be done by a laboratory approved by the Substance Abuse & Mental Health Services Administration (SAMHSA), which is chosen by the Contractor and the Union.
 - d. An initial test shall be performed using the Enzyme Multiplied Immunoassay Technique (EMIT). In the event a question or positive result arises from the initial test, a confirmation test must be utilized before action can be taken against the applicant or employee. The confirmation test will be by Gas Chromatography/Mass Spectrometry (GC/MS). Cutoff levels for both the initial test and confirmation test will be those established by SAMHSA and this Policy. Should these SAMHSA levels be changed during the course of the PLA or new testing procedures are approved, then these new regulations will be deemed as part of this existing PLA. Confirmed positive samples will be retained by the testing laboratory in secured long-term frozen storage for a minimum of one (1) year. Handling and transportation of each sample must be documented through strict chain-of-custody procedures.
 - e. In the event of a confirmed positive test result, the applicant or employee may request, within forty-eight (48) hours, a sample of his/her specimen from the testing laboratory for purposes of a second test to be performed at a second laboratory, designated by the Union and approved by SAMHSA. The retest must be performed within ten (10) days of the request. Chain of custody for this sample shall be maintained by the Contractor between the original testing laboratory and the Union's designated laboratory. Retesting shall be performed at the applicant's or employee's expense. In the event of conflicting test results, the Contractor may require a third test, at the Contractor's expense.
 - f. If, as a result of the above testing procedure, it is determined that an applicant or employee has tested positive, this shall be considered sufficient grounds to deny the applicant or employee his/her employment on the project.
 - g. No individual who tests negative for drugs and alcohol pursuant to the above procedure and becomes employed on the project shall again be subjected to drug and alcohol testing with the following exceptions:
 - 1) Employees who are involved in industrial accidents resulting in damage to plant, property, or equipment or injury to him/her or others may be tested for drugs or alcohol pursuant to the procedures stated hereinabove.

- 2) The Contractor may test employees following thirty (30) days' advance written notice to the employee(s) to be tested and to the applicable Union. Notice to the applicable Union shall be sent by certified mail to the affected Union with a copy to the Project Labor Coordinator. Such testing shall be pursuant to the procedures stated hereinabove.
 - 3) The Contractor may test an employee where the Contractor has reasonable cause to believe that the employee is impaired from performing his/her job. Reasonable cause shall be defined as being aberrant or unusual behavior, the type of which is a recognized and accepted symptom of impairment (e.g., slurred speech, unusual lack of muscular coordination). Such behavior must be actually observed by at least two (2) persons, one (1) of whom shall be a supervisor who has been trained to recognize the symptoms of drug and alcohol abuse or impairment and the other of whom shall be the Job Steward. If the Job Steward is unavailable or there is no Job Steward on the Covered Project, the other person shall be a member of the applicable Union's bargaining unit. Testing shall be pursuant to the procedures stated hereinabove. Employees who are tested pursuant to the exceptions set forth in this paragraph and who test positive will be removed from the Contractor's payroll.
 - h. Applicants or employees who do not test positive shall be paid for all time lost while undergoing drug and alcohol testing. Payment shall be at the applicable wage and benefit rates set forth in the applicable Union's Master Labor Agreement. Applicants who have been dispatched from the Union and who are not put to work pending the results of a test will be paid waiting time until such time as they are put to work. It is understood that an applicant must pass the test as a condition of employment. Applicants who are put to work pending the results of a test will be considered probationary employees.
6. The Contractors will be allowed to conduct periodic jobsite drug and alcohol testing on the Project under the following conditions:
- a. The entire jobsite must be tested, including any employee or subcontractor's employee who worked on that project three (3) working days before or after the date of the test;
 - b. Jobsite testing cannot commence sooner than fifteen (15) days after start of the work on the project;
 - c. Prior to start of periodic testing, a Business Representative will be allowed to conduct an educational period on company time to explain periodic jobsite testing program to affected employees;
 - d. Testing shall be conducted by an SAMHSA-certified laboratory, pursuant to the provisions set forth in paragraph 5 hereinabove.
 - e. Only two (2) periodic tests may be performed in a twelve (12)-month period.

7. It is understood that the unsafe use of prescribed medication, or where the use of prescribed medication impairs the employee's ability to perform work, is a basis for the Contractor to remove the employee from the jobsite.
8. Any grievance or dispute that may arise out of the application of this Policy shall be subject to the grievance and arbitration procedures set forth in the PLA.
9. The establishment or operation of this Policy shall not curtail any right of any employee found in any law, rule, or regulation. Should any part of this Policy be found unlawful by a court of competent jurisdiction or a public agency having jurisdiction over the Parties, the remaining portions of the Agreement shall be unaffected, and the Parties shall enter negotiations to replace the affected provision.
10. Present employees, if tested positive, shall have the prerogative for rehabilitation program at the employee's expense. When such program has been successfully completed, the Contractor shall not discriminate in any way against the employee. If work for which the employee is qualified exists, he/she may be reinstated.
11. The Contractor agrees that results of urine and blood tests performed hereunder will be considered medical records held confidential to the extent permitted or required by law. Such records shall not be released to any persons or entities other than designated Contractor representatives and the applicable Union. Such release to the applicable Union shall only be allowed upon the signing of a written release by the employee, and the information contained therein shall not be used to discourage the employment of the individual applicant or employee on any subsequent occasion.
12. Employees who seek voluntary assistance for substance abuse may not be disciplined for seeking such assistance. Requests from employees for such assistance shall remain confidential and shall not be revealed to other employees or management personnel without the employee's consent. Employees enrolled in substance abuse programs will be subject to all Contractor rules, regulations, and job performance standards with the understanding that an employee enrolled in such a program is receiving treatment for an illness.
13. The Contractor shall indemnify and hold the Union harmless against any and all claims, demands, suits, or liabilities that may arise out of the application of this Policy.
14. This Policy shall constitute the only Policy in effect between the Parties concerning drug and alcohol abuse, prevention, and testing. Any modifications thereto must be accomplished pursuant to collective bargaining negotiations between the Parties.

SPECIMEN REPORTING CRITERIA

Initial Test Analyte	Initial Test Cutoff ¹	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Marijuana metabolites (THCA) ²	50 ng/ml ³	THCA	15 ng/ml
Cocaine metabolite (Benzoylecgonine)	150 ng/ml ³	Benzoylecgonine	100 ng/ml
Codeine/ Morphine	2000 ng/ml	Codeine Morphine	2000 ng/ml 2000 ng/ml
Hydrocodone/ Hydromorphone	300 ng/ml	Hydrocodone Hydromorphone	100 ng/ml 100 ng/ml
Alcohol	0.02%	Ethanol	0.02%
Oxycodone/ Oxymorphone	100 ng/ml	Oxycodone Oxymorphone	100 ng/ml 100 ng/ml
6-Acetylmorphine	10 ng/ml	6-Acetylmorphine	10 ng/ml
Phencyclidine	25 ng/ml	Phencyclidine	25 ng/ml
Amphetamine/ Methamphetamine	500 ng/ml	Amphetamine Methamphetamine	250 ng/ml 250 ng/ml
MDMA ⁴ /MDA ⁵	500 ng/ml	MDMA MDA	250 ng/ml 250 ng/ml
Initial Test Analyte	Initial Test Cutoff	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Barbiturates	300 ng/ml	Barbiturates	200 ng/ml
Benzodiazepines	300 ng/ml	Benzodiazepines	300 ng/ml
Methadone ⁶	300 ng/ml	Methadone	100 ng/ml
Methaqualone	300 ng/ml	Methaqualone	300 ng/ml
Propoxyphene	300 ng/ml	Propoxyphene	100 ng/ml

¹ For grouped analytes (i.e., two or more analytes that are in the same drug class and have the same initial test cutoff):

Immunoassay: The test must be calibrated with one analyte from the group identified as the target analyte. The cross-reactivity of the immunoassay to the other analyte(s) within the group must be 80 percent or greater; if not, separate immunoassays must be used for the analytes within the group.

Alternate technology: Either one analyte or all analytes from the group must be used for calibration, depending on the technology. At least one analyte within the group must have a concentration equal to or greater than the initial test cutoff or, alternatively, the sum of the analytes present (i.e., equal to or greater than the laboratory's validated limit of quantification) must be equal to or greater than the initial test cutoff.

² An immunoassay must be calibrated with the target analyte, 9-tetrahydrocannabinol-9- carboxylic acid (THCA).

³ **Alternate technology (THCA and benzoylecgonine):** The confirmatory test cutoff must be used for an alternate technology initial test that is specific for the target analyte (i.e., 15 ng/ml for THCA, 100 ng/ml for benzoylecgonine).

⁴ Methylenedioxymethamphetamine (MDMA)

⁵ Methylenedioxyamphetamine (MDA)

⁶ Employees with a prescription for methadone who are using the medication as prescribed, and are not impaired and can safely perform their work, will not be considered to have violated this Policy.

**MEMORANDUM OF UNDERSTANDING REGARDING
“QUICK” DRUG SCREENING TESTS PURSUANT TO
ATTACHMENT C – DRUG AND ALCOHOL TESTING POLICY**

It is hereby agreed between the Parties hereto that a Contractor who has otherwise properly implemented drug and alcohol testing, as set forth in the Policy, shall have the right to offer an applicant or employee a "quick" drug screening test. This “quick” screen test shall consist either of the “ICUP” urine screen or similar test or an oral screen test. The applicant or employee shall have the absolute right to select either of the two “quick” screen tests, or to reject both and request a full drug test.

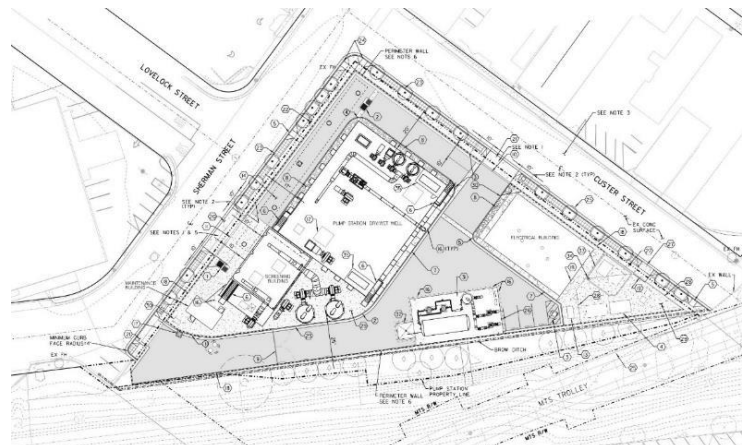
An applicant or employee who selects one of the "quick" screen tests, and who passes the test, shall be put to work immediately. An applicant or employee who fails the "quick" screen test, or who rejects the "quick" screen tests, shall be tested pursuant to the procedures set forth in the Policy. The sample used for the "quick" screen test shall be discarded immediately upon conclusion of the test. An applicant or employee shall not be deprived of any rights granted to them by the Policy as a result of any occurrence related to the “quick” screen test.

APPENDIX A – SAN DIEGO PURE WATER PROGRAM PHASE I COVERED PROJECTS

1. Morena PS/PL Construction Package 1: Morena Pump Station

- **Associated Pure Water Project:** Morena PS/PL Project
- **Summary:** The package is the construction of a new pump station that will transport approximately 32 mgd of wastewater to the NCWRP, where it will be treated before being sent to the NCPWF for further purification. Construction of the pump station will be on Sherman Street.
- **Summary of Major Construction Package Components**
 - 4+1 Dual Stage Sewer Pump Station
 - Screening Facility
 - High Purity Oxygen System
 - 48-inch to 60-inch diameter influent diversion sewers in Friars Road
 - 66-inch Overflow Sewer
 - Electrical and Instrumentation

Morena Pump Station Rendering and Site Plan



2. Morena PS/PL Construction Package 2: Morena Northern Alignment and Tunnels

- **Associated Pure Water Project:** Morena PS/PL Project
- **Summary:** Two pipelines that will start at approximately Genesee Avenue/Highway 52, and will continue through University City to the NCWRP. Three short length tunnels are included in this section, each approximately 1000 feet; one at Highway 52, one at Rose Creek in University City and one at Interstate 805. One pipeline will transport wastewater to the NCWRP, while the other will transport salt and contaminants removed from the water at the NCPWF to the Point Loma Wastewater Treatment Plant.
- **Summary of Major Construction Package Components**
 - 4 miles of 48-inch force main
 - 4 miles of 36-inch brine/centrate pipeline
 - Tunnel crossing of I-805
 - Tunnel crossing of MTS/NCTD railroad at Rose Creek Canyon
 - Tunnel crossing at San Clemente Creek

Morena Conveyance Northern, Middle and Southern Segments Site Plan



3. Morena PS/PL Construction Package 3: Morena Middle Alignment

- **Associated Pure Water Project:** Morena PS/PL Project
- **Summary:** Two pipelines will start at Iroquois Avenue and will terminate at Genesee Avenue/Highway 52. One pipeline will transport wastewater to the NCWRP, while the other will transport salt and contaminants removed from the water at the NCPWF to the Point Loma Wastewater Treatment Plant.
- **Summary of Major Construction Package Components**
 - 3.6 miles of 48-inch welded steel force main
 - 3.6 miles of 36-inch brine/centrate high density polyethylene pipeline

4. Morena PS/PL Construction Package 4: Morena Southern Alignment

- **Associated Pure Water Project:** Morena PS/PL Project
- **Summary:** Two pipelines will start at Sherman Street, follow West Morena Boulevard and terminate at Iroquois Avenue. One pipeline will transport wastewater to the NCWRP, while the other will transport salt and contaminants removed from the water at the NCPWF to the Point Loma Wastewater Treatment Plant. A 36-inch diameter welded steel water transmission main will be constructed and a 16 inch steel water distribution main will be replaced by 16 inch PVC in this package.
- **Summary of Major Construction Package Components**
 - 3.2 miles of 48-inch force main
 - 3.2 miles of 30-inch brine/centrate pipeline
 - Brine/centrate pressure reducing station
 - 3.2 Miles of existing 16-inch steel water distribution main replacement with PVC
 - 3.3 miles of new 36-inch water transmission main

5. NCWRP Expansion Construction Package 1: NCWRP Flow Equalization Basin

- **Associated Pure Water Project:** NCWRP Expansion
- **Summary:** This package includes the construction of one concrete equalization tank that will balance high/low wastewater flows from primary effluent and will provide for consistent flow to the biological treatment basins.
- **Summary of Major Construction Package Components**
 - 2.35-million-gallon flow equalization basin
 - Grading, yard piping and stormwater basin
 - Electrical and instrumentation

NCWRP Equalization Basin Package 1 Rendering



6. NCWRP Construction Packages 2 and 3: NCWRP Expansion and NCPWF Influent Conveyance

- **Associated Pure Water Project:** NCWRP Expansion
- **Summary:** This package will increase the amount of recycled water that the plant produces to meet the needs of both the non-potable reuse recycled water system and the new NCPWF. Plant expansion includes the construction of a 42.5 mgd pump station that will convey water to the NCPWF across Eastgate Mall Road.
- **Summary of Major Construction Package Components**
 - Plant expansion from 30 mgd to 52 mgd
 - 42-mgd Influent Pump Station and pipeline to the NCPWF
 - New primary clarifiers, new bioreactor basins and retrofit of existing basins, secondary clarifiers, new tertiary filter, chemical facilities, and yard piping
 - Equipment and electrical substation replacements
 - Electrical and instrumentation

NCWRP Expansion Rendering



7. NCPWF Construction Package 1: NCPWF and NCPW Pump Station

- **Associated Pure Water Project:** NCWPF
- **Summary:** A new Pure Water Facility will be built on Eastgate Mall across the street from the existing NCWRP to clean the recycled water further and produce 30 mgd of a safe, high-quality drinking water source. A new pump station will be constructed adjacent to the NCPWF on Eastgate Mall Road to pump an annual average of 30 mgd to Miramar Reservoir. The package includes widening a portion of Eastgate Mall Road.
- **Summary of Major Construction Package Components**
 - New 34-mgd Pure Water Facility, including:
 - Ozone Generation and Contactor
 - Biologically Active Carbon (BAC) Filters
 - Membrane Filtration (MF) System
 - Reverse Osmosis (RO)
 - Ultraviolet Disinfection and Advanced Oxidation (UV/AOP)
 - Chemical Feed Systems
 - Operations Building
 - 30-mgd Pump Station (3 + 1 vertical turbine pumps)
 - Electrical and instrumentation

NCPWF and NCPW Pump Station Rendering



8. NCPW PS/PL Construction Package 1: NCPW Pipeline and Dechlorination Facility

- **Associated Pure Water Project:** NCPW PS/PL
- **Summary:** This package includes infrastructure to convey 30 mgd of purified water produced by the NCPWF to Miramar Reservoir. The pipeline will start on Eastgate Mall, follow Miramar Road, continue through Scripps Ranch and end at Miramar Reservoir. The package includes the replacement of 6.4 miles of asbestos cement watermains with PVC.
- **Summary of Major Construction Package Components**
 - 8 Miles of 48-inch welded steel pipe transmission main (purified water pipeline)
 - Dechlorination Facility
 - Standpipe
 - 6.4 miles of watermain replacement of 6, 12 and 16-inch asbestos cement (AC) pipe with 16-inch polyvinylchloride (PVC) pipe.

Pure Water Pipeline Alignment



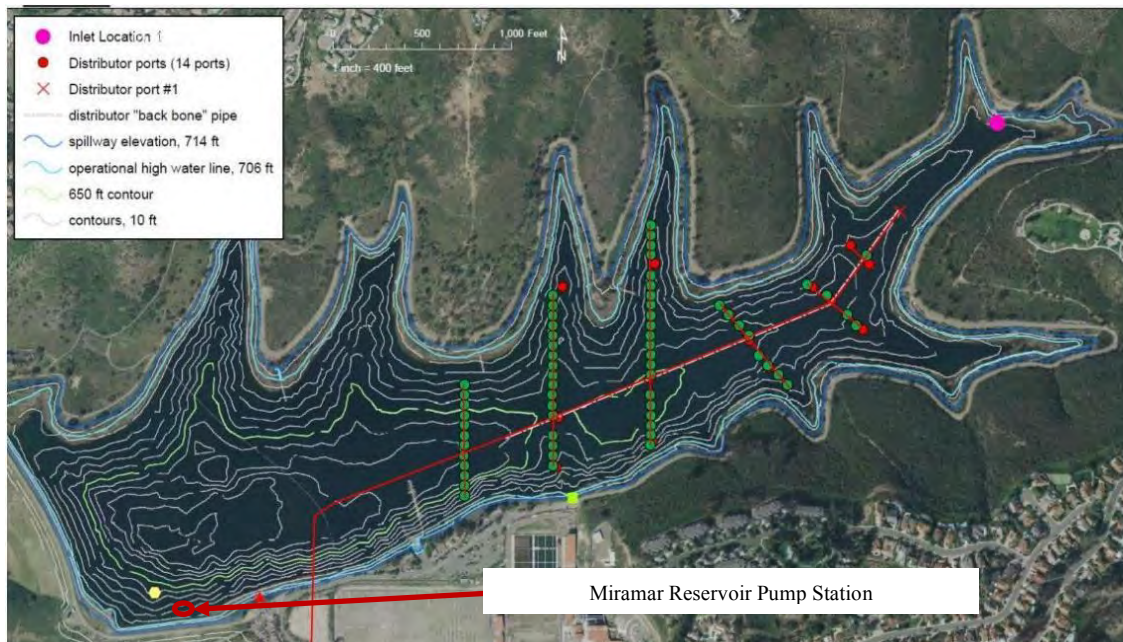
Dechlorination Facility Rendering



9. NCPW PS/PL Construction Package 2: Subaqueous Pipeline and Miramar Reservoir Pump Station Improvements

- **Associated Pure Water Project:** NCPW PS/PL
- **Summary:** This package includes 0.9 miles of pipeline with duckbill outlets placed at the bottom of Miramar Reservoir together with the rehabilitation of a 100 mgd pump station that delivers raw water from Miramar Reservoir to the Miramar Water Treatment Plant.
- **Summary of Major Construction Package Components**
 - 54-inch to 8-inch Subaqueous pipe
 - 94 Dual duckbill valve outlet ports
 - Miramar Reservoir Pump Station Improvements
 - Electrical and instrumentation

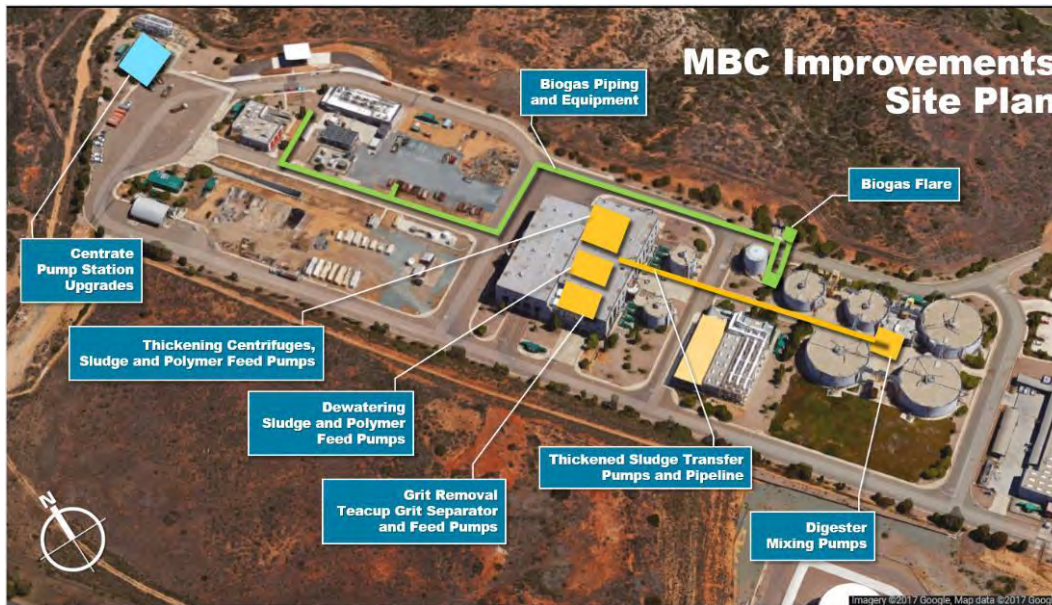
Subaqueous Pipeline Site Plan



10. MBC Construction Package 1: Metropolitan Biosolids Center Improvements

- **Associated Pure Water Project:** MBC Improvements
- **Summary:** This package will consist of improvements to the existing City biosolids center.
- **Summary of Major Construction Package Components**
 - Thickening centrifuges, sludge feed and polymer pumps, transfer pumps and supply pipeline
 - Digester mixing pump replacements, nozzles, overflow lines, biogas compressors, flare and biogas pipeline
 - Dewatering sludge feed pumps and polymer pumps
 - Centrate Pump Station pump and VFD replacements
 - Electrical and instrumentation

Metropolitan Biosolids Center Improvements Site Plan



APPENDIX B

MEMORANDUM OF UNDERSTANDING #1

PROJECT LABOR AGREEMENT SECTION 3.1

The City and the Parties agree that Project Work includes all onsite physical craft work that is part of startup and commissioning, including, but not limited to, system flushes and testing, loop checks, rework and modifications, and functional and operational testing up to and including the final running test. It is understood that the City's personnel and/or its representatives, together with the manufacturer's and/or vendor's representatives, and/or plant operating personnel may supervise and direct the startup, commissioning, rework, and modification activity, and that the onsite physical craft work is typically performed as part of a joint effort with these representatives and personnel. A manufacturer or its representatives may perform industry standard startup and commissioning work to satisfy its guarantee or warranty on a piece of equipment, and such work will be exempt from the Project Labor Agreement to the extent the work is excluded by Section 3.2(e) and/or Section 3.2(f).

MEMORANDUM OF UNDERSTANDING #2

NO DISCRIMINATION AND HARASSMENT

The City hereby provides notice that the City and its Contractors must not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, sexual orientation, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, denial of family care leave, or genetic information, gender, gender identity, gender expression, or military and veteran status. The City and Contractors will ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. The City and Contractors must comply with the provisions of the Fair Employment and Housing Act and the applicable regulations promulgated thereunder. (Govt. Code §12990, subs. (a)-(f) et seq.; Cal. Code Regs., tit. 2 §7285, et seq.) These terms will be incorporated into every contract and subcontract for the Covered Project.

Dated: 9-18-20

SAN DIEGO BUILDING AND CONSTRUCTION
TRADES COUNCIL



By: _____
Tom Lemmon, Business Manager

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, "California Building Code, California Code of Regulations Title 24 and 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 and Pledge of Compliance"), 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.

CONTRACTOR CERTIFICATION

PRODUCT ENDORSEMENT

I declare under penalty of perjury that I acknowledge and agree to comply with the provisions of City of San Diego Administrative Regulation 95.65, concerning product endorsement. Any advertisement identifying or referring to the City as the user of a product or service requires the prior written approval of the City.

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:

Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)

(Project Title)

as particularly described in said contract and identified as Bid No. **K-22-1797-DBB-3-A**; SAP No. (WBS) **B-15141, S-16027, 21004804**; 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 ^①	WHERE CERTIFIED ^②
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.

City of San Diego Pure Water Project OCIP Notice of Subcontract Award

Today's Date _____

To:	From:
Email:	Email:
Phone #:	Phone #:
Fax #:	Fax #:

The subcontractor named below will be issued a contract to perform work on the following:

Project: _____

Contract Number: _____ Contract Value: \$ _____

- Check here if the subcontractor is to be enrolled in the OCIP
- Check here if the subcontractor is to be excluded from the OCIP
- Check here if the subcontractor will be an excluded prime tier fabricator with eligible (enrolled) sub-tier erector/installer

1. Name of subcontractor:	
2. Prime sub or GC name:	
3. Subcontractor FEIN:	
4. Subcontractor contact person:	
5. Subcontractor phone number:	
6. Subcontractor address:	
7. Subcontractor email address:	
8. General description of work:	
9. Date of award:	
10. Anticipated on-site start date:	
11. Anticipated completion date:	



INSURANCE COST WORKSHEET
(Fixed Price Type Contracts)
 Numbers reference attached instructions

City of San Diego Pure Water OCIP

A. Contractor Information: Federal ID # or Soc. Sec. # **1**

Business Information (headquarters) **Contact Information** (address questions to)

Company Name & dba: **2** **3**

Contact Name & Title: _____

Address: _____

City, State, Zip Code: _____

Telephone: _____

E-mail Address: _____

B. Bid Information: Bid Package No.: **1**

Description of Work: **2**

Proposed Contract Price \$: **3** Are you submitting a bid to The City of San Diego? **5** Yes No

Amount of Self Performed Work \$: **4** If No, identify to whom: **6**

C. Workers Compensation Insurance Information for Work Described Above: ^(a) (attach a separate sheet, if necessary)

a State	b Class Code	c Description	d Rate (per \$100 payroll)	e Work Hours	f Payroll	g WC Premium (Payroll*Rate/100)
1						
			Totals	2	3	4

Identify the Amount of Your Claim Retention **5** Your Company's Workers Compensation Experience Modifier: **6**

Modified Premium (line **C4** x **C6**): **7**

Employers Liability Rate: **8** Employers Liability Premium: **9**

10 Modification & Discount Premium Factors		11 Rate	12 Amount
Mod 1:	+ or =		
Mod 2:	+ or =		
Mod 3:	+ or =		
Mod 4:	+ or =		
Mod 5:	+ or =		
Total Modification Amount (Total of all amounts entered in column C12 :			13
Total Workers Compensation Premium (line C7 + C9 + C13):			14

D. General Liability: ^(a) Rate: **1** **2** Based On: **3** Rate factor: **4** Identify the Amount of Your Claim Retention: _____

Total Payroll (**C3**) Per 100

Contract Price (**B3**) Per 1,000

Other: _____ GL Premium (**D2** x **D1** ÷ **D3**): **5**

Excess/Umb. Liab.: ^(a) Rate: **6** **7** Based On: **8** Rate factor: _____

Total Payroll (**C3**) Per 100

Contract Price (**B3**) Per 1,000

Other: _____ Excess/Umbrella Premium (**D7** x **D6** ÷ **D8**): **9**

E. Builder's Risk/ Installation Floater: ^(a) Rate: **1** **2** Rate Factor Per 100 Per 1,000

Builder's Risk/Installation Floater Premium (**B3** x **E1** ÷ **E2**): **3**

F. Other Insurance Premiums: ^(a) (Enter total premium costs identified on page 2) **1**

G. Totals Total of all Insurance Premiums (Total of lines **C14**+**D5**+**D9**+**E3**+**F1**): **1**

Overhead & Profit on Insurance Premium %: **2** **15%** O/H & Profit Amount (**G1** x **G2**): **3**

Total Initial Insurance Cost (Total of lines **G1** + **G3**): **4**

Contractor's Initial Insurance Cost Rate (Line **G4** divided by total payroll in line **C3** x **100**): **5**

H. Signature Block: I verify the information presented above and attachments are correct:

Name: _____ Date: _____

Title: _____ (please print) Signature: _____

Completion of this form is a required part of your bid and must accompany your bid documents. Complete a separate form for each contractor, known subcontractor(s) and trades not currently awarded to a subcontractor. Duplicate this form as needed.

(a) Please provide copies of the following documents to support your insurance cost calculations:



**INSURANCE COST WORKSHEET
(Fixed Price Type Contracts)**
Numbers reference attached instructions

City of San Diego Pure Water OCIP

Complete a separate form for each contractor, known subcontractor and trade not currently awarded to a subcontractor. Duplicate this form as needed. Completion of this form is a required part of your bid and must accompany your bid documents.

A. Contractor Information

1. Enter your company's Federal ID number. This number can be found on filings made to the federal government such as your tax return.
2. Enter your company's name, mailing address and phone/fax number for your company's main office location in the space provided below.
3. Enter the name of the person AON should contact if questions arise. Include the mailing address, phone/fax and e-mail address if different than A-2.

B. Bid Information

1. Enter the Bid Package Number, Contract Number or Purchase Order Number that was included in The City of San Diego originating documentation.
2. Provide a brief description of the work you will be performing at the project site.
3. Identify the total amount of your bid. Include both labor and material.
4. Identify the amount of work that you anticipate will be self-performed. Include both labor and material.
5. Check the appropriate box that identifies if you contract directly with The City of San Diego or are a subcontractor.
6. If you are a subcontractor identify the entity with whom you are under contract.

C. Workers Compensation Insurance Information

- 1
 - a. Enter the two letter abbreviation for the state in which the work will be performed.
 - b. Enter each Workers Compensation class code that applies to your work identified in B2. (Most states use a 4 digit Number).
 - c. Enter the Workers Compensation class code description that applies to each class code identified in C1b.
 - d. Enter the Workers Compensation rate that applies to the specified class code.
 - e. Enter the estimated Work Hours required to complete the described work for each Workers Compensation class code.
 - f. Enter the estimated Payroll required to complete your work. Use only unburdened payroll and exclude the premium portion of any overtime pay.
 - g. Calculate the WC Premium by multiplying the Payroll (C1f) by the Rate (C1d) and dividing the result by 100. Repeat this calculation for each WC class code.
2. Total the estimated Work Hours for each class code. Be sure to include information from additional pages if used.
3. Total the estimated Payroll for each class code. Be sure to include information from additional pages if used.
4. Total the Workers Compensation Premium for each class code. Be sure to include information from additional pages if used.
5. Enter the amount of the Claim Retention/ Deductible your company has on their existing Worker's Compensation.
6. Enter you WC experience Modifier. This information can be located on your Workers Compensation policy or on your NCCI Bureau Rating Sheet.
7. Calculate the Modified Premium by multiplying the WC Premium (C4) by the Experience Modifier (C6).
8. Enter your Employer's Liability Insurance Rate. This information can be found in your Workers Compensation Policy.
9. Calculate your Employer's Liability Premium by multiplying the Modified Premium (C7) by the Employer's Liab. Rate (C8).
10. Identify the Modifiers that apply to your Workers Compensation Premium. This information can be located on your Workers Compensation Policy.
11. Enter the rate for each identified Modifier. The information can be located on your Workers Compensation Policy.
12. Calculate the Modified Premium Factor Amount by multiplying the Modified Premium (C7) by the Modified Premium Rate (C11) and dividing by 100. Be sure to identify if the Modification factor is an addition or reduction to your premium.
13. Total the Modified Premium Amounts by adding the numbers in column C12.
14. Calculate the Total Workers Compensation Premium by adding the Modified Premium (C7) to the Employer's Liab Premium (C9) and adding the Premium Modifications (C12).

D. General Liability & Umbrella/Excess Liability Insurance

1. Enter the general liability Rate. This number can be found on your General Liability Policy.
2. Identify the base the General Liability Rate applies to. If the base is other than Payroll or Revenue, enter the amount and the description in the space provided.
3. Identify the General Liability Rate factor by marking the box.
4. Identify the amount of your Claim Retention.
5. Calculate the General Liability Premium by multiplying the Bases (D2) by the Rate and dividing by the factor (D3).
6. Enter the Excess/Umbr Liability Rate. This number can be found on your Excess/Umbr Liability Policy.
7. Identify the base the Excess/Umbr Liab. Rate applies to. If the base is other than Payroll or Revenue, enter the amount and description in the space provided.
8. Identify the Excess/Umbr Liability Rate factor by marking the box.
9. Calculate the Excess/Umbr Liability Premium by multiplying the Bases (D7) by the Rate (D6) and dividing by the factor (100 or 1,000).

E. Builder's Risk / Installation Floater

1. Enter the Builder's Risk / Installation Floater Rate. Locate this information on your Property Policy or Builder's Risk Policy.
2. Identify the base factor that it applies to (100 or 1,000).
3. Calculate the Premium by multiplying the Proposed Contract Price (B3) by the Rate (E1) and dividing it by the Factor (E2).

F. Other Insurance Premiums

1. For each of the Insurance Lines of Coverage identified below, identify the Rate, Base and Factor. Calculate the Premium by multiplying the Base x Rate ÷ Factor. Total the Other Insurance Premiums in the space provided and carry that amount to the front page.

Line of Coverage	Rate	Base	Factor	Premium	Total Premium
------------------	------	------	--------	---------	---------------

G. Totals

1. Calculate the Total of all Insurance Premium by adding Workers Compensation (C14), General Liability (D5), Excess/Umbr Liability (D9), Builder's Risk/Installation Floater (E3), and Other Insurance Premiums (F1).
2. Identify the Overhead & Profit Percentage that was applied to this project during the tabulation of the Proposed Contract Price.
3. Calculate the Overhead & Profit Amount by Multiplying the Total of all Insurance Costs (G1) by your Overhead & Profit Percentage (G2).
4. Calculate the Total Initial Insurance Cost by adding the Overhead & Profit Amount (G3) with the Total of all Insurance Premium (G1).
5. Calculate your rate by Dividing the Total Initial Insurance Cost (G4) by the Estimated Payroll (C3) and multiplying by 100.

H. Signature Block

Note: Please provide copies of the following documents as part of your submittal:

- | | |
|--|---|
| <input type="checkbox"/> Rate Pages | <input type="checkbox"/> General Liability declaration and rate pages |
| <input type="checkbox"/> Workers Compensation declaration and rate pages | <input type="checkbox"/> Umbrella / Excess Liability declaration and rate pages |
| | <input type="checkbox"/> 5 years actual loss experience for each line of coverage in which Contractor retains more than \$5,000 |

This form is to be used by a Prime Contractor to summarize subcontract activity. This form may also be used by Subcontracts that must summarize subcontract activity of any tier. Submit this form with your Bid Documents.

A. Contractor Information	Federal ID # or Soc. Sec. #	1
	2 Business Information (headquarters)	3 Contract Information (address questions to...)
Company Name & dba: Contract Name & Title:		
Address:		
City, State, Zip Code:		
Telephone:		
Fax:		
Email Address:		
Indicate your Organization's Structure: 4		
<input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> S-Corporation <input type="checkbox"/> Joint Venture <input type="checkbox"/> Sole Proprietor <input type="checkbox"/> Other		

B. Contract Information:	Contract No.:	1
Date Contract Awarded:	2	
Description of Work:	3	
Proposed Contract Price:	4	Are you Submitting a bid to The City of San Diego? 6
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		If No, identify to whom: 7
Amount of Self Performed Work \$:	5	<input type="checkbox"/> Actual <input type="checkbox"/> Actual
8		<input type="checkbox"/> Estimated <input type="checkbox"/> Estimated
Start Date:		Completion Date:

C. Contacts: (Complete if Applicable)				
Position	1 Name & Title	2 Phone	3 Fax	4 Email Address
Project Manager:				
Resident Engineer:				
Insurance:				
Contract Administrator:				
Payroll:				
Claims:				
Safety Representative:				
Provide Location of payroll records if different than Corporate address: 5		Phone:		
City, State, Zip Code:		Fax:		

D. Workers Compensation Insurance Information for Work Described Above: (attach a separate sheet, if necessary)				
a State	b Class Code	c Description	d Work Hours	e Payroll
1				
Totals:			2	3

E. Provide your current Off-Site Workers Compensation Information: (for each state you will perform work in)			
Applicable State	Risk ID Number	Rating Bureau	Anniversary Rating Date
1	2	3	4

Your WC Insurance Carrier	5
Policy #	6
Effective Date	7
Expiration Date	8

1 Subcontractor	2 Subcontract \$	3 Contact Person	4 Address	5 Phone & Fax No.	6 Estimated Start Date

F. Signature Block: This form must be signed by a representative of your company knowledgeable of its accuracy.	
Name: _____	Date: _____
(please print)	
Title: _____	Signature: _____

This form must be completed and submitted by each successful Contractor and Subcontractor of any tier prior to Site mobilization for each contract awarded. The Contractor and Subcontractor will submit the completed form to Aon Risk Services. Upon receipt of this form, Aon will issue to the Contractor or Subcontractor a Certificate of Insurance evidencing coverage in the Controlled Insurance Program. The completed Certificate of Insurance and Workers Compensation insurance policy will be mailed to the Enrolled party.

A. Contractor Information

- 1 Enter your company's Federal ID number. This number can be found on filings made to the federal government such as your tax return.
- 2 Enter your company's name, mailing address and phone/fax number for your company's primary office location.
- 3 Enter the name of the person Aon should contact if questions arise. Include mailing address, phone/fax and email address, if different than A2.
- 4 Identify your company's legal structure by checking the box that applies. If the correct legal structure is not specifically listed, please check the "Other" box and specify in the space provided.

B. Contract Information

- 1 Enter the Contract Number or Purchase Order Number that was included in The City of San Diego's originating documentation.
- 2 Supply the Date this Contract was awarded to your organization.
- 3 Provide a brief description of the work you will be performing at the project site.
- 4 Identify the total amount of your contract. Include both labor and material.
- 5 Identify the amount of work that you anticipate will be self-performed. Include both labor and material.
- 6 Check the appropriate box that identifies if you contract directly with The City of San Diego or are a Subcontractor.
- 7 If you are a Subcontractor, identify the entity with whom you are under contract.
- 8 Enter the Date you anticipate starting work and then mark whether the date provided is actual or estimated.
- 9 Enter the Date you anticipate completing the described work and then mark whether the date provided is actual or estimated.

C. Contacts *(Requested Contact information is for specific functions. It is possible to have a single person fulfill multiple responsibilities.)*

- 1 Identify the name of the person and their title for each function. These individuals should be located, if at all possible, on-site.
- 2 Provide the phone number for each person identified above.
- 3 Provide the fax number for each person identified above.
- 4 Provide the email address for each person identified above, if applicable.
- 5 Identify the physical location where your payroll records are retained. Provide the Address, City, State, Zip Code, Telephone, Fax Number and Email Address of the person responsible for maintaining the payroll information.

D. Workers Compensation Information (Duplicate or attach additional sheets if necessary. You may create an electronic version of this document if all requested information is included.):

- 1
 - a Enter the two letter abbreviation for the state in which the work will be performed.
 - b Enter each Workers Compensation class code that applies to the work identified in B2. (Most states use a 4 digit Number)
 - c Enter the Workers Compensation class code description that applies to the work identified in D1b.
 - d Enter the estimated Work Hours required to complete the described work by Workers Compensation class code.
 - e Enter the estimated Payroll required to complete the described work for each Workers Compensation class code. Use only unburdened payroll and exclude the premium portions of any overtime pay.
- 2 Total all estimated Work Hours for each class code. Be sure to include information from additional pages if used.
- 3 Total all estimated Payroll for each class code. Be sure to include information from additional pages if used.

E. Current Off-Site Workers Compensation Information (Information relates to your corporation's existing coverage; identify each modification factor that applies.)

- 1 Enter the State that the Modification Information applies to.
- 2 Enter your Bureau File Number also referred to as your Risk Identification Number. This number can also be found on your Modification worksheets.
- 3 Enter the Bureau Rating Agency. In most states this is NCCI.
- 4 Provide your Company's Anniversary Rating Date. Information can be located on your bureau's WC Experience Modification worksheets.
- 5 Identify your insurance carrier for Workers Compensation Coverage.
- 6 Provide your Workers Compensation Policy Number.
- 7 Provide the effective date of your Workers Compensation policy.
- 8 Provide the expiration date of your Workers Compensation policy.

F. Subcontractor Information (Provide the following information for each Subcontractor that will be performing work at the project site. Use additional sheets, if necessary.)

- 1 Identify the name of the Subcontracting firm.
- 2 Provide the estimated value of the subcontracted activity.
- 3 Provide a contact name, preferably the project manager, for the Subcontractor.
- 4 Provide the mailing address for the Subcontractor.
- 5 Provide the phone number for the Subcontractor.
- 6 Provide the date the Subcontractor is scheduled to begin work.

G. Enrollment Questions

- 1 Determine if you will have any locations, off-site, that will be 100% dedicated to this project. Include material/supply storage as a possible location. Mark the appropriate box (yes/no). If you answer yes – provide the address of each location you identified as 100% dedicated.
- 2 Mark the box or boxes that apply. Contemplate only work performed under this contract.
- 3 Mark the box or boxes that apply. Employee Leasing Firm are those firms that supply the labor force for your company (You direct the activities of the Leasing Company's employees). Temporary Labor Firms supplement your labor force.

H. Warranty Statements:

- 1-6 Read each Warranty statement thoroughly. If you have questions regarding any of these statements, contact the Aon administrator identified on page 2.

I. Signature Block: This form must be signed by a representative of your company knowledgeable of its accuracy.

Forward the completed Enrollment Application to the Aon administrator identified at the bottom of page 2 of this form. The administrator prior to the start of your work on-site must receive this form.

Skilled and Trained Workforce Certification Form

Month: _____ Year: _____

In accordance with Public Utilities Code section 132354.7 and Public Contract Code sections 2600-2602, _____ (the "Prime Contractor") certifies that all the workers performing work in an apprenticeable occupation utilized on the project known as _____ (the "Project") during the monthly reporting period are either skilled journeypersons or apprentices in an apprenticeship program approved by the Chief of the Division of Apprenticeship Standards of the California Department of Industrial Relations (the "Chief").

"Skilled Journeyperson" means a worker who either:

- (1) Graduated from an apprenticeship program for the applicable occupation that was approved by the Chief or apprenticeship program located outside California and approved for federal purposes, pursuant to the apprenticeship regulations adopted by the Federal Secretary of Labor.
- (2) Has at least as many hours of on-the-job experience in the applicable occupation as would be required to graduate from an apprenticeship program that is approved by the Chief.

In addition, the Prime Contractor certifies that it has met the requirements of Public Contract Code 2601(d), subject to certain exceptions set forth therein, that the required percentage of the skilled journeypersons or skilled journeyperson hours employed to perform work on the Project by the Prime Contractor and all subcontractors are graduates of an apprenticeship program for the applicable apprenticeable occupation.

A graduate of an apprenticeship program means either of the following:

- (1) An individual that has been issued a certificate of completion under the authority of the California Apprenticeship Council for completing an apprenticeship program approved by the Chief pursuant to Section 3075 of the Labor Code, or
- (2) An individual that has completed an apprenticeship program located outside California and approved for federal purposes pursuant to the apprenticeship regulations adopted by the federal Secretary of Labor.

I declare, under penalty of perjury under the laws of the State of California, that the foregoing is true and correct. I certify that the attached Skilled and Trained Workforce Monthly Compliance Reports are complete and accurate.

Full Name: _____

Title: _____

Signature: _____

Date Signed: _____

Please upload the completed form to LCPTTracker monthly.

Skilled and Trained Workforce Monthly Compliance Report

DIRECTIONS: This form is required to be submitted by the Prime for all contractors regardless of tier by the 10th of the following month for work performed corresponding to this reporting period. Items with a red asterisk (*) indicate a required field.

*Project Title:	
*Project Number:	
*Prime Contractor:	
*Subcontractor:	
*Contact Name:	
*Contact Number:	
	Month
	Year
*Work Month & Year:	

*Exemptions:	The contractor or subcontractor need not meet the apprenticeship graduation requirements if either (1) is true, or (2)(A) and (2)(B) are both true:	*Please select (True/False)	Exempt or non-exempt?
	(1) The contractor or subcontractor employed skilled journeypersons to perform fewer than 10 hours of work on the project during the reporting period?		Exempt if (1) is "True"
	(2)(A) The subcontractor was not a listed subcontractor under Section 4104 or a substitute for a listed contractor.		Exempt if both (2)(A) and (2)(B) are "True"
	(2)(B) The subcontractor does not exceed one-half of 1 percent of the price of the prime contract.		

***Report:** Please fill out the following report for all apprenticeable occupations utilized in this reporting period.

SKILLED JOURNEYPEPERSON (SJ) REPORT							
*Apprenticeable Occupation	*Required minimum SJ: Apprentice Graduate % (see 2 nd page attachment)	Number of Skilled Journeypersons (SJ) employed by the contractor to perform work on the project		SJ ratio between the number of SJ: Apprentice Graduates to SJ: On-The-Job Experience Workers	Number of hours worked by SJ employed by the contractor to perform work on the project		SJ ratio of hours worked by SJ: Apprentice Graduates compared with SJ: On-The-Job Experience Workers
		*SJ: Apprentice Graduate	*SJ: On-The-Job Experience		*SJ: Apprentice Graduate	*SJ: On-The-Job Experience	
EXAMPLE Laborer	40%	7	3	70%	30	70	30%

Terms	Definitions
Apprentice	Defined in Labor Code 3077
Skilled Journeyperson: Apprentice Graduate	Defined in Public Contracts Code 2601 (e) (1)
Skilled Journeyperson: On-The-Job-Experience	Defined in Public Contracts Code 2601 (e) (2)

Apprenticeable Occupations (San Diego County)	Annual Apprenticeship Graduation Rate Minimum Requirements for Employed Skilled Journeypersons (%)		
	January 1, 2018	January 1, 2019	January 1, 2020
Asbestos Worker, Heat & Frost Insulator	40%	50%	60%
Boilermaker – Blacksmith	40%	50%	60%
Bricklayer	30%	30%	30%
Bricktender	40%	50%	60%
Bridge Carpenter	30%	30%	30%
Building Construction Inspector & Field Soils & Material Tester	30%	30%	30%
Carpenter	30%	30%	30%
Carpet, Linoleum & Resilient Floor Layer	40%	50%	60%
Cement Mason	30%	30%	30%
Drywall Finisher	40%	50%	60%
Drywall Installer/Lather (Carpenter)	30%	30%	30%
Electrician: Inside Wireman	40%	50%	60%
Electrician: Sound & Signal Technician	40%	50%	60%
Electrical Utility Lineman	40%	50%	60%
Elevator Constructor	40%	50%	60%
Field Surveyor: Chainman/Rodman	30%	30%	30%
Field Surveyor: Chief of Party	30%	30%	30%
Glazier	40%	50%	60%
Horizontal Directional Drilling (Laborer)	40%	50%	60%
Ironworker	40%	50%	60%
Laborer	40%	50%	60%
Landscape/Irrigation Fitter	40%	50%	60%
Landscape/Irrigation Laborer	40%	50%	60%
Marble Finisher	30%	30%	30%
Metal Roofing Systems Installer	40%	50%	60%
Millwright	40%	50%	60%
Modular Furniture Installer (Carpenter)	30%	30%	30%
Operating Engineer	30%	30%	30%
Operating Engineer: Dredger	30%	30%	30%
Operating Engineer: Landscape Construction	30%	30%	30%
Painter	40%	50%	60%
Painter: Industrial Painter	40%	50%	60%
Parking & Highway Improvement (Striper-Laborer)	40%	50%	60%
Pile Driver (Carpenter)	30%	30%	30%
Plasterer	30%	30%	30%
Plaster Tender	40%	50%	60%
Plumber, Pipefitter, Steamfitter	40%	50%	60%
Roofer	30%	30%	30%
Sheet Metal Worker	40%	50%	60%
Sprinkler Fitter (Fire Protection/Fire Control Systems)	40%	50%	60%
Stator Rewinder	40%	50%	60%
Terrazzo Finisher (Carpenter)	30%	30%	30%
Terrazzo Installer (Carpenter)	30%	30%	30%
Terrazzo Finisher	30%	30%	30%
Terrazzo Worker	30%	30%	30%
Tile Finisher	30%	30%	30%
Tile Layer	30%	30%	30%

Please visit the California Legislative Information website for further information on Public Contracts Code (PCC) 2600-2602 <https://leginfo.legislature.ca.gov/>

ELECTRONICALLY SUBMITTED FORMS

FAILURE TO FULLY COMPLETE AND SUBMIT ANY OF THE FOLLOWING FORMS WILL DEEM YOUR BID NON-RESPONSIVE.

PLANETBIDS WILL NOT ALLOW FOR BID SUBMISSIONS WITHOUT THE ATTACHMENT OF THESE FORMS

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 FOR ALTERNATE ITEMS**
- E. DEBARMENT AND SUSPENSION CERTIFICATION (PRIME CONTRACTOR)**
- F. DEBARMENT AND SUSPENSION CERTIFICATION (SUBCONTRACTORS/SUPPLIERS/MANUFACTURERS)**
- G. DISCLOSURE OF LOBBYING ACTIVITIES**
- H. FORM 4500-3: DBE SUBCONTRACTOR PERFORMANCE FORM**
- I. FORM 4500-4: DBE SUBCONTRACTOR UTILIZATION FORM**
- J. COMMITMENT TO COMPLY WITH SKILLED AND TRAINED WORKFORCE REQUIREMENTS**

BID BOND

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

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Principal, and _____ 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

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 _____ day of _____, 20____

(Principal) (SEAL)

(Surety) (SEAL)

By: _____
(Signature)

By: _____
(Signature)

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

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: _____

Certified By _____ Title _____
Name

_____ Date _____
Signature

USE ADDITIONAL FORMS AS NECESSARY

Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Legal Name		DBA	
Street Address	City	State	Zip
Contact Person, Title		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	Title/Position
City and State of Residence	Employer (if different than Bidder/Proposer)
Interest in the transaction	

Name	Title/Position
City and State of Residence	Employer (if different than Bidder/Proposer)
Interest in the transaction	

* 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.

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.

SUBCONTRACTORS ADDITIVE/DEDUCTIVE ALTERNATE
***** FOR USE WHEN LISTING SUBCONTRACTORS ON ALTERNATES *****
(Use Additional Sheets As Needed)

ADDITIVE/DEDUCTIVE ALTERNATE	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 ^①	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
	Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____								
	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.

DEBARMENT AND SUSPENSION CERTIFICATION
PRIME CONTRACTOR
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

EFFECT OF DEBARMENT OR SUSPENSION
To promote integrity in the City's contracting processes and to protect the public interest, the City shall only enter into contracts with responsible- bidders and contractors. In accordance with San Diego Municipal Code §22.0814 (a): <i>Bidders</i> and <i>contractors</i> who have been <i>debarred</i> or <i>suspended</i> are excluded from submitting bids, submitting responses to requests for proposal or qualifications, receiving <i>contract</i> awards, executing <i>contracts</i> , participating as a <i>subcontractor</i> , employee, agent or representative of another <i>person</i> contracting with the City.

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 Names of the Principal Individual owner(s).

The names of all persons interested in the foregoing proposal as Principals are as follows:

NAME	TITLE

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Bidder or other interested person is an individual, state first and last names in full.

The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State or local agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State or local agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Contractor Name: _____

Certified By _____ Title _____

Name

Date _____

Signature

NOTE: Providing false information may result in criminal prosecution or administrative sanctions.

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor, supplier, and/or manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE

Contractor Name: _____

Certified By _____ Title _____

Name

Date _____

Signature

USE ADDITIONAL FORMS AS NECESSARY*

LOBBY PROHIBITION, CERTIFICATION AND DISCLOSURE

In acknowledgment that funds received under this agreement have been provided pursuant to a Federal grant, recipient hereby recognizes the prohibitions against lobbying the Federal government with any of these funds. Recipient agrees that it shall comply with the laws set forth at 31 U.S.C. § 1352 (1989) and 24 C.F.R. part 87, to wit:

A. Conditions on use of funds

Recipient shall not expend any funds received pursuant to this agreement to pay any person to influence an officer or employee of Federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with any of the following Covered Federal actions:

- (1) The awarding of any federal contract
- (2) The making of any Federal grant
- (3) The making of any Federal Loan
- (4) The entering into of any cooperative agreement
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

For purposes of defining the terms of this part of the agreement, the definitions set forth in 24 C.F.R. § 87.105 are hereby adopted and incorporated herein by reference.

B. Certification and Disclosure

Each recipient at every tier under this agreement shall file a certification regarding lobbying, and a Disclosure Form-LLL, where required by 24 C.F.R. § 87.110. The certification form and Disclosure Form-LLL are attached to this agreement.

C. Certifications must be filed:

- (1) By any person upon each submission that initiates agency consideration for an award of a Federal contract, grant, or cooperative agreement exceeding \$100,000, or a Federal loan or loan guarantee exceeding \$150,000.
- (2) Upon receipt by any person of a Federal contract, grant, or cooperative agreement exceeding \$100,000, or upon receipt of a Federal loan or loan guarantee exceeding \$150,000.
- (3) By any person who requests or receives from a person referred to in subsections 1 and 2 of this paragraph:
 - a. A subcontract exceeding \$100,000 at any tier under a Federal contract;
 - b. A subgrant, contract or subcontract exceeding \$100,000 at any tier under a Federal grant;
 - c. A contract or subcontract exceeding \$100,000 at any tier under a Federal loan exceeding \$150,000;
 - d. A contract or subcontract exceeding \$100,000 at any tier under a Federal cooperative agreement.

D. Disclosure Forms-LLL must be filed in every instance when a person applies for, requests, or receives Federal appropriations exceeding \$100,000 pursuant to a contract, subcontract, grant, subgrant, loan, or cooperative agreement when such person has paid or expects to pay any sum, in cash or in kind, to influence or attempt to influence any officer or employee of an agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress. Further, Disclosure Form-LLL must be filed by recipients at any tier at the end of each calendar quarter in which there occurs any event that requires disclosure or materially affects information submitted in prior disclosures. Such events include:

- (1) 1. An increase of \$25,000 in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action;
- (2) 2. A change in the person(s) influencing or attempting to influence a covered action;
- (3) 3. A change in the officer(s), employee(s), or member(s) contacted to influence a covered action.

All disclosure Forms-LLL, but not certifications, shall be forwarded from tier to tier until received by the principal recipient, which in turn will file them with the appropriate Federal agency.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLLA Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing there port in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item4) to the lobbying entity (item10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLLA Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing datasources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

DISCLOSURE OF LOBBYING ACTIVITIES Approved by OMB
 Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
 (See reverse for public burden disclosure)

0348-0046

1. Type of Federal Action: <input type="checkbox"/> a. Contract a. Grant b. Cooperative agreement c. Loan d. Loan guarantee e. Loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application b. initial award c. post-award	3. Report Type: <input type="checkbox"/> a. initial finding b. material change For Material Change Only year ____ quarter ____ date of last report ____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known: Congressional District, if known:	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known:	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$	
10. a. Name and Address of Lobbying Entity (if individual, last name, first name, M) (attach Continuation Sheet(s) SF-LLL4, if necessary)	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): (attach Continuation Sheet(s) SF-LLL4, if necessary)	
11. Amount of Payment (check all that apply) \$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned	13. Type of Payment (check all that apply) <input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferral <input type="checkbox"/> f. other: specify: _____	
12. Form of Payment (check all that apply) <input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind: specify: nature _____ Value _____	14. Brief Description of Services Performed or to be Performed and Date(s) of Service, Including officer(s), employee(s), or Member(s), contacted, for Payment indicated in item 11: (attach Continuation Sheet(s) SF-LLLA, if necessary)	
15. Continuation Sheet(s) SF-LLLA attached: <input type="checkbox"/> Yes <input type="checkbox"/> No		
16. Information requested through this for misauthorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 7-07)

DISCLOSURE OF LOBBYING ACTIVITIES Approved by
CONTINUATION SHEET

OMB0348-0046

Reporting Entity: _____ Page ____ of ____

Empty reporting area for disclosure details.

Empty box for additional information or signature.

Authorized for Local Reproduction
Standard Form - LLL-A



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name		Project Name	
Bid / Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity	

Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____		Meets/exceeds EPA certification standards? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.
² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractor's² and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid / Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity			

I have identified potential DBE certified subcontractors. ___ YES ___ NO If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address / Phone / Email	Estimated Dollar Amount	Currently DBE Certified?

--Continue on back if needed--

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-4 (DBE Subcontractor Utilization Form)

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency’s need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-4 (DBE Subcontractor Utilization Form)

COMMITMENT TO COMPLY WITH SKILLED AND TRAINED WORKFORCE REQUIREMENTS

Bidder, on behalf of itself and its subcontractor(s) at every tier, hereby commits that a skilled and trained workforce will be used to perform all work on the Project that falls within an apprenticeship occupation in the building or construction trades in accordance with Chapter 2.9 (commencing with Section 2600) of Part 1 of Division 2 of the Public Contract Code. Pursuant to Public Contract Code section 2601, as of January 1, 2018:

“Skilled and trained workforce” means a workforce that meets all of the following conditions: All the workers performing work in an apprenticeable occupation in the building and construction trades are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the chief.

For work performed on or after January 1, 2018, at least 40 percent of the skilled journeypersons employed to perform work on the contract or project by every contractor and each of its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation. This requirement shall not apply to work performed in the following occupations: acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, teamster, terrazzo worker or finisher, and tile layer, setter, or finisher.

For work performed on or after January 1, 2019, at least 50 percent of the skilled journeypersons employed to perform work on the contract or project by every contractor and each of its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation. This requirement shall not apply to work performed in the following occupations: acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, teamster, terrazzo worker or finisher, and tile layer, setter, or finisher.

For work performed on or after January 1, 2020, at least 60 percent of the skilled journeypersons employed to perform work on the contract or project by every contractor and each of its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation. This requirement shall not apply to work performed in the following occupations: acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, teamster, terrazzo worker or finisher, and tile layer, setter, or finisher.

NOTE: The above commitment is required by California Public Utilities Code section 132354.7 and must be submitted by Bidder in order for the Bid to be responsive to the IFB.

Name of Bidder: _____

Name and Title of Bidder's Authorized Representative: _____

Signature of Bidder's Representative: _____ Date: _____

(SIGN HERE)

City of San Diego

CITY CONTACT: Stephen Samara, Principal Contract Specialist, Email: SSamara@sandiego.gov
Phone No. (619) 533-3619

ADDENDUM A



FOR

PURE WATER PROGRAM (PWP) MORENA CONVEYANCE SOUTH & MIDDLE AND MORENA CONVEYANCE BIKE LANES (BL)

BID NO.: K-22-1797-DBB-3-A
SAP NO. (WBS/IO/CC): B-15141
CLIENT DEPARTMENT: 2000
COUNCIL DISTRICT: 2, 6, 7,
PROJECT TYPE: JA, KA

BID DUE DATE:
2:00 PM
FEBRUARY 23, 2022

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:

<u>Shapiro, Alan</u>	<small>Digitally signed by Shapiro, Alan DN: cn=Shapiro, Alan, o=USSD01, email=Alan.Shapiro@uscom.com Reason: I have reviewed this document Date: 2022.01.27 15:00:21 -0800</small>	<u>1/27/2022</u>	Seal:	
1) Registered Engineer		Date		
<u>Raymond Martin</u>		<u>1/27/2022</u>	Seal:	
2) For City Engineer		Date		
<u>Brian Genovese</u>	<small>Digitally signed by Brian Genovese Date: 2022.01.28 12:46:10 -08'00'</small>	<u>1/28/2022</u>	Seal:	
3) For City Engineer		Date		

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.

B. BIDDER'S QUESTIONS

Q1. The PlanetBids site has made the specifications ONLY for download. Where can we find the pipeline drawings??

A1. A link is provided to the PDF of the plan sets for Morena Conveyance Middle, Morena Conveyance South and Morena Bike Lanes in Attachment A, Scope of Work on page 27 of the original solicitation document. Further clarification to refer to the link will be added to Item 1.1. via this Addendum.

Q2. Specification Section 601-7 indicates a quantity of 420 PCMS (12 PCMS x 35 months). The bid quantity for Bid Item 25- Portable Changeable Message Signs is 70 months. Please clarify whether the bid quantity is correct and if so, how the bid quantity of 70 months is derived from the 12 required PCMS.

A2. Adjusted quantity in bid list to 35 months in this addendum. 12 PCMS for 35 Months.

Q3. For the Morena Conveyance Middle (Plan Set B2), it appears that the City has provided approved traffic control plans for construction. The approved plans do not incorporate all of the work areas and only portions of other work areas depicted on the traffic control phasing/staging plans. Please confirm that the City will be providing complete traffic control plans for construction of the Morena Conveyance Middle (Plan Set B2) or clarify whether the contractor will be responsible for developing plans for the work areas not included.

For the Morena Conveyance South (Plan Set B1), the City has provided red lined traffic plans "for reference only". Please confirm whether the City intends to provide engineered traffic plans for this project. If not, please confirm whether the City will provide the design files for the incomplete traffic plans for the contractor to use in development of traffic control plans for the project.

Many work areas depict k-rail with crash cushions. Is it the intent to leave traffic control in place during non-working hours? Will k-rail

and/or crash cushions be required where traffic control must be removed during non-working hours?

- A3. 1. The Contractor is responsible to provide Traffic Control Plans for all areas not shown on the accompanying Traffic Control Plans.
2. Electronic files may be provided for areas with red-lined "for reference only" plans.
3. K-rails should remain in place during non-working hours.
- Q4. Package B2 Drawings, Street Resurfacing Drawings are unclear as to the City's intent. On the resurfacing drawings C-209 through C-217 the legend repeatedly refers to a one-inch AC overlay using conflicting cross hatching and in apparent contradiction to the paving schedule which contains no reference to a 1-inch overlay. Please confirm if and where a one-inch overlay is required, it's limits, and under what pay item it will be paid.
- A4. The legend items with zigzag patterns should read "Approximate Location of Slurry Seal (Type II/III)". See revised Sheets C-211 thru C-217 in this Addendum for clarification.
- Q5. Once again there is no specification listed for bid item #110 – Traffic Signal Light System Restoration – Quantity of 10 ea.
- Please provide a DETAILED written specification of what items of work is to be included in the Bid Item #110 – Traffic Signal Light System Restoration – Qty of 10 ea.
- A5. Work for "Traffic Signal Light System Restoration" is considered replace in place as necessary as stated in Greenbook Section 400-1, Protection and Restoration. The unit quantity of Each is revised to a Lump Sum quantity in this addendum. A separate, detailed specification for this work will not be provided but generally includes restoration of existing traffic loops, conduits, handholes, reconnections for traffic signal systems, and other appurtenances disturbed by pipeline construction. Traffic Signal As-builts record drawings are provided in the link below for informational purposes.
- https://drive.google.com/drive/folders/1l9CTCq_o1Bbt0Z9Q4Q2t5qWdm1au8C7Q?usp=sharing
- Q6. Plan Sheet C-198 depicts a 2-inch highline that is to be installed along the norths side of Sherman St. in support of the 12" PVC waterline relocation.

- Please confirm that none of the existing hydrants within the limits of the waterline to be removed from service will need to be highlined or kept in service during construction.
 - Please confirm whether the services for the properties on Custer St., Banks St. or Grant St. need be highlined to maintain service during construction.
- A6. 1. No structure shall be more than 1000 feet from a “live” fire hydrant at any time during construction, per note 4 on C-198. This includes affected areas on Banks St., Custer St., Grant St., and Lovelock St.
2. High-lining alignments are provided for Banks St., Custer St., Grant St., and Lovelock St, per C-198.
- Q7. Question 2: In Plan set B1 12.15.21 page E-01 Notes 1, 2, and 3 delineate the duties of the contractor from Package A and Package B. From what I can gather Package A stubs the conduit out past the curb and the successful bidder will pick it up and install it into the PRV vaults. Note 2 and 3 state that contractor for package B will supply the wire. Note 4 States that contractor for Package B will supply temporary wire and temporary power to initially test the controls and instrumentation, and the contractor for package A will permanently install the wiring and retest. These notes seem to be in conflict with each other and no distance is given for the length of the wire from the PRV vaults to the control panel. Can you please provide clarification?
- A7. 2. Package A can be assumed to be complete with portions of work to allow for the Package B construction, the following keynotes on Dwg E-01 are amended as follows.
- Keynote 1- “Conduit provided by Package A, wire provided by Pkg A”
- Keynote 4- “Package B shall provide wire within vaults and test instruments and valves utilizing power and controls from Pkg A equipment.”
- Wire from PRV to Panel to be provided as part of Pkg A.
- Q8. Reference the "Electronically Submitted Forms" section of the solicitation, Item D - Subcontractor Listing for Alternate Items. The top of the form states "for use when listing subcontractors on alternates". This project does not appear to have any alternates. Should this form

be used if there are no alternates? If not, will an updated sub listing form be issued?

A8. No, the form should not be used if there are no alternates. Subcontractors are to be entered electronically on the "Subcontractors" tab within PlanetBids. The Subcontractor Listing for Alternate Items form will be deleted via this Addendum.

Q9. What is the anticipated NTP date?

A9. NTP date is to be determined upon the completion of bid/award process. It is anticipated for May-June 2022; however, it depends on the actual duration of advertisement, bid evaluations, and award process and could be extended.

Q10. Spec Page 131 notes sweeping will be required weekly every Friday as well as before rain events. There is often times an item for "Street Sweeping". Can an item be created for this or which item should this cost be bid through?

A10. This item is included in the "SWPPP Implementation" item, per Whitebook 1001-3.7.

Q11. Spec Page 149 notes OCIP requirements but then also alludes to Contractor needing to provide some insurance – ie Pollution Liability. The chart on Spec page 155 appears to note though that the contractor/subcontractors only need to provide General Liability, Auto Liability, and Worker's Comp. Please clarify what the OCIP will cover and what insurance the Prime and its' Subs should be including.

A11. OCIP provided insurance is detailed out in sections 5-4.5 through 5-4.9 Contactor/Subcontractor insurance requirements outside the OCIP are detailed in sections 5-4.17.

OCIP table at the end of the OCIP specifications provides a summary OCIP contractor/subcontractor.

Q12. Spec Page 276 states the project is to be built in seven phases. However, the Plan Sheets T1 through T151 for Traffic Control appear to "Work Area Phase" #s and miscellaneous traffic control closures for various areas of work. Please clarify how the seven phases of work and the Traffic Control plan sheets relate to each other.

- A12. 306-1.1 refers to highlining for the phasing shown on Dwg C-198 (Sht 207). The seven phases referred to in section 306 1-1 should be disregarded, only one phase is shown on Sht 207. The "Work Area Phase" in the Traffic Control plans is not related to the water highline phasing.
- Q13. Spec Page 276 notes the removal of PCC is incidental to the Ramps. Is the AC Slot Paving also Incidental? Are any adjustments at each ramp that are needed, etc also incidental? Please clarify as there are no demo/removal bid items noted other than Items #8, #9, & the cold mill items #72 and #107.
- A13. AC slot paving and other itemized requirements for demolition and building curb ramps is covered by the cost associated with each curb ramp type. Adjustments to design required by ADA requirements are covered by "Modified Curb Ramps per new ADA Requirements".
- Q14. Spec Page 288 defines the PCMS Quantity as "12 PCMS multiplied by 35 months... [equaling] 420 PCMS." Bid Item #25 is for 70 months though. Is this item supposed to be bid as 12 PCMS x 70 months or is it supposed to be 1 PCMS x 70 months..? Please clarify.
- A14. Bid item adjusted to 35 months. 12 PCMS for 35 Months.
- Q15. Spec Page 306 calls for a full time senior level scheduler to be employed throughout the project. Which bid item will pay for this? Please clarify.
- A15. Payment for a full-time senior level scheduler shall be included in the contract price.
- Q16. Plan Sheets C-164, C-165, etc vaguely note for "Begin Removal & Replacement" & "End Removal & Replacement". It is not clear what is being removed and replaced. Please clarify the scope and which bid items would pay for the corresponding work.
- A16. Work on C-164, C-165, etc. is covered by "Median Curb and Gutter (Type B2)" and "Colored Stamped Concrete Raised Median"
- Q17. Bid item 35 would appear to specifically include the fiber pull boxes based on its description of "Fiber Optic Cable, Conduit, Appurtenances, innerduct, and fiber Pull Boxes and Patch Panels." After checking the plans, there appear to be 40 EA Fiber pullboxes which matches Bid Item 28. This may be a double-up. Under which Bid item will the Fiber Optic

pull boxes be paid under? If it is bid item 35, are there other possibly other pullboxes not shown on the plans that are not fiber optic?

A17. Bid Item 28, "Pull Box" will be deleted in this addendum There is no change to Bid item 35 "Fiber Optic Cable, Conduit, Appurtenances, innerduct, and fiber Pull Boxes and Patch Panels."

Q18. With regard to Bid Items 113/114 for Traffic Signal Loop and Appurtenances: Please confirm the bid quantities for Bid Items 113 and 114. A take-off of the Morena Conveyance Bilke Lanes, Electrical Plan reveals a quantity of 26 EA Type Q and 321 EA Type E loop detectors; therefore it appears the bid quantity may be incorrect.

What bid item includes payment for traffic signal loop detector replacement between Custer St. and Clairemont Drive which is not part of the Bike Lane's project?

- A18. 1. The quantities for Type E loops and Type loops are adjusted in this addendum.
2. It is assumed the question refers to traffic signal restoration along the pipeline alignment. Work for "Traffic Signal Light System Restoration" is considered replace in place as necessary as stated in Greenbook Section 400-1, Protection and Restoration. The unit quantity of Each is revised to a Lump Sum quantity in this addendum. The work generally includes restoration of existing traffic loops, conduits, handholes, reconnections for traffic signal systems, and other appurtenances disturbed by pipeline construction. Traffic Signal As-builts record drawings are provided in the link below for informational purposes.

https://drive.google.com/drive/folders/1l9CTCq_o1Bbt0Z9Q4Q2t5qWdm1au8C7Q?usp=sharing

Q19. Please confirm the City will perform any required biological monitoring for the project.

A19. Yes, the City (via the CM contract with Helix Environmental) will provide biological monitoring.

Q20. Reference plan sheet C-29 in the Middle section. The plan view appears to indicate that there are sewer and water laterals extending from the properties on the west side of Clairemont Dr. that will require

temporary support during the new pipeline construction. The profile view on this same plan sheet does not depict these laterals. Please confirm whether these laterals do exist and will need to be addressed by the contractor. This same issue occurs throughout the plans.

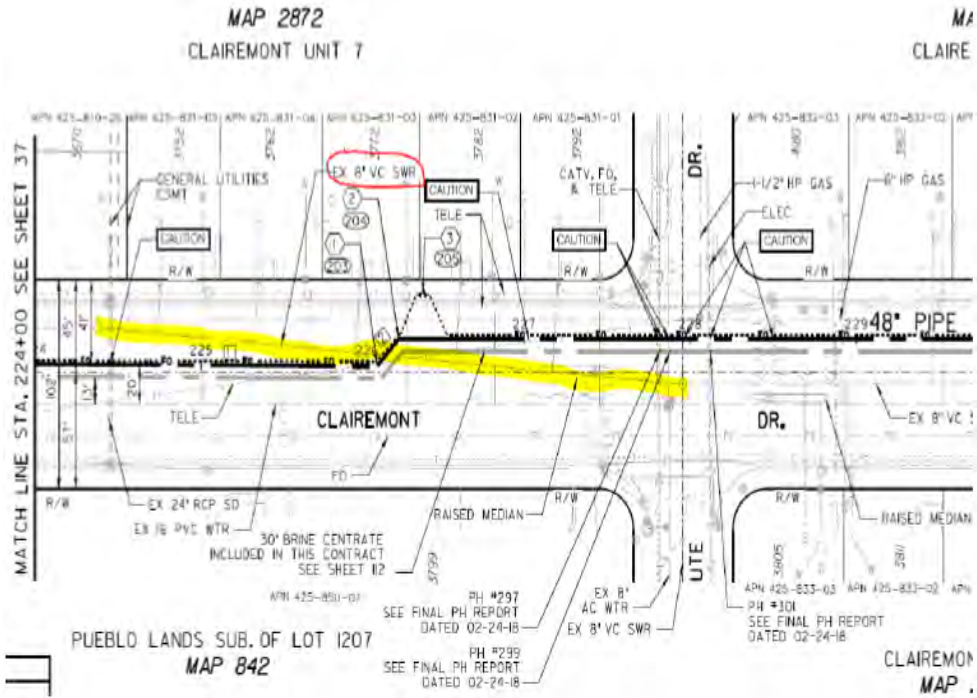
A20. Confirmed.

Q21. Reference plan sheet C-29 in the Middle section. The plan view indicates that there are 1.5" and 6" existing High Pressure (HP) gas lines in the street. Please confirm that these are indeed High-Pressure gas lines as there are much stricter requirements when excavating around High-Pressure lines. This same issue occurs throughout the plans.

A21. Confirmed.

Q22. Please indicate which paralleling sewer mains are required to be pre and post videoed.

A22. 8-inch sewer main (352 feet VC pipe) from manhole 242 to 238 (E13S) is required to be pre and post videoed. See below for location on plans.



C. NOTICE INVITING BIDS

1. To Item 3, Estimated Construction Cost, page 7, **DELETE** in its entirety and **SUBSTITUTE** with the following:
 3. **Estimated Construction Cost.** The City's estimated construction cost for this project is **\$116,125,000.**

D. ATTACHMENTS

1. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Sub-item 1.1.1, page 27, **DELETE** Drawing numbers **40067-1-D, 40067-5-D, and 40067-207-D** in their entirety and **REPLACE** with Drawing numbers **40067-1-D, 40067-5-D, and 40067-207-D**, pages 43 through 45 of this Addendum.
2. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Sub-item 1.1.1., page 27, **ADD** Drawings numbered **40067-327-D** through **40067-332-D**, pages 46 through 51 of this Addendum.
3. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Sub-item 1.1.2., page 27, **DELETE** Drawing numbers **40067-1-D, 40067-5-D** and **40067-254-D** through **40067-260-D** in their entirety and **REPLACE** with Drawing numbers **40067-1-D, 40067-5-D** and **40067-254-D** through **40067-260-D**, pages 52 through 60 of this Addendum.
4. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Sub-item 1.1.2., page 27, **ADD** Drawing numbers **40067-333-D through 40067-339-D**, pages 61 through 67 of this Addendum.
5. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Sub-items 1.1.3. and 1.1.4., page 27, **DELETE** in their entirety and **SUBSTITUTE** with the following:
 - 1.1.3. Plans numbered 42335-45-D through 42335-88-D, inclusive (Morena Conveyance Bike Lanes (BL)).
 - 1.1.4. PDF of Plan sets for Morena Conveyance South, Morena Conveyance Middle and Morena Conveyance Bike Lanes (BL) can be found in the link below.

https://drive.google.com/drive/folders/1Te03G8_LKqPIWR4x4VryiCzKh6ERkn6H?usp=sharing
 - 1.1.5. General Requirements as detailed in DIV 01 of CSI shall support equivalent sections as defined in the Whitebook.

6. To Attachment A, Scope of Work, Section 3, Contract Time, **DELETE** in its entirety and **SUBSTITUTE** with the following:
 3. **CONTRACT TIME:** The Contract Time for completion of the Work, including overall Pure Water Phase 1 commissioning shall be **740 Working Days**.
7. To Attachment A, Scope of work, Section 4, **DELETE** in its entirety and **SUBSTITUTE** with the following:
 4. **The project has specific milestones, constraints, testing periods, and completion requirements, which include the following:**

Activity	Working days from Start of Contract
Notice to Proceed	0 Days
Intermediate Substantial Completion (Morena Conveyance Southern and Middle)	560 Days
Substantial Completion	700 Days
Final Completion	740 Days

8. To Attachment D, Funding Agency Provisions, Item 10, Davis-Bacon Wage Rates and Provisions, Sub-Item 10.1., Wage Rates, pages 58 through 87, **DELETE** in their entirety and **SUBSTITUTE** with pages 13 through 41 of this Addendum.

E. CERTIFICATIONS AND FORMS3

1. ADD Covid-19 Vaccination Ordinance – Certification of Compliance on page 42 of this Addendum.
2. To Electronically Submitted Forms, page 657, **DELETE** Item D. Subcontractor Listing for Alternate Items in its entirety.
3. To Electronically Submitted Forms, page 661, **DELETE** Subcontractors Additive/Deductive Alternate in its entirety .

F. ADDITIONAL CHANGES

1. The following are additional changes to the Line Items in the PlanetBids Tab:
For clarity where applicable, **ADDITIONS**, if any, have been **Underlined** and **DELETIONS**, if any, have been **~~Stricken out.~~**

Section	Item Code	Description	UoM	Quantity	Payment Reference
Main Bid (MORENA CONVEYANCE SOUTH AND MIDDLE)	238910	Portable Changeable Message Signs (EOC Type I)	Months	70 35	601-7
Main Bid (MORENA CONVEYANCE SOUTH AND MIDDLE)	237310	Pull Box	EA	40	701-2
Main Bid (MORENA CONVEYANCE SOUTH)	238210	Traffic Signal Light System Restoration	EA LS	1	701-2
Main Bid (MORENA CONVEYANCE MIDDLE)	238210	Traffic Signal Light System Restoration	EA LS	1	701-2
Main Bid (MORENA CONVEYANCE MIDDLE)	238210	Traffic Signal Loop and Appurtenance (Type Q)	EA	28 26	404-12
Main Bid (MORENA CONVEYANCE MIDDLE)	238210	Traffic Signal Loop and Appurtenance (Type E)	EA	118 325	404-12

Rania Amen
Engineering & Capital Projects Department

Dated: *January 31, 2022*
San Diego, California

RA/AJ/mlw

10. DAVIS-BACON WAGE RATES AND PROVISIONS:

10.1. WAGE RATES This contract shall be subject to the following Davis-Bacon Wage Decisions:

"General Decision Number: CA20220001 01/21/2022

Superseded General Decision Number: CA20210001

State: California

Construction Types: Building, Heavy (Heavy and Dredging),
Highway and Residential

County: San Diego County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022
1	01/14/2022
2	01/21/2022

ASBE0005-002 09/01/2021

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 47.25	24.45
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 32.09	19.66

ASBE0005-004 07/05/2021

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	\$ 22.40	13.07

BOIL0092-003 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 46.03	38.81

BRCA0004-008 05/01/2021

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 40.94	18.71

BRCA0018-004 06/01/2021

	Rates	Fringes
MARBLE FINISHER.....	\$ 35.90	14.11
TILE FINISHER.....	\$ 30.47	12.52
TILE LAYER.....	\$ 43.09	18.31

BRCA0018-010 09/01/2020

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 33.66	14.20
TERRAZZO WORKER/SETTER.....	\$ 41.60	14.73

CARP0213-003 07/01/2021

	Rates	Fringes
Drywall		
(1) Work on wood framed construction of single family residences, apartments or condominiums under four stories		
Drywall Installer/Lather...\$	32.14	16.28
Drywall Stocker/Scrapper...\$	22.16	8.62

CARP0619-002 07/01/2021

	Rates	Fringes
Drywall		
(2) All other work		
Drywall Installer/Lather...\$	42.80	16.28
Drywall Stocker/Scrapper...\$	23.07	8.62

CARP0619-003 07/01/2021

	Rates	Fringes
CARPENTER		
(1) Bridge.....\$	51.53	16.28
(2) Commercial Building....\$	46.30	16.28
(3) Heavy & Highway.....\$	51.40	16.28
(4) Residential Carpenter..\$	38.47	16.28
(5) Residential		
Insulation Installer.....\$	24.16	15.76
PILEDRIVERMAN.....\$	51.53	16.28

CARP0619-004 07/01/2021

	Rates	Fringes
Diver		
(1) Wet.....\$	831.20	16.28
(2) Standby.....\$	444.24	16.28
(3) Tender.....\$	436.24	16.28
(4) Assistant Tender.....\$	412.24	16.28

Amounts in "'Rates' column are per day

CARP0721-001 07/01/2021

	Rates	Fringes
Modular Furniture Installer.....\$	21.85	7.15

CARP1607-004 07/01/2021

	Rates	Fringes
MILLWRIGHT.....\$	51.90	16.48

ELEC0569-001 06/01/2021

	Rates	Fringes
Electricians (Tunnel Work)		
Cable Splicer.....	\$ 54.36	3%+14.88
Electrician.....	\$ 53.61	3%+14.88
Electricians: (All Other Work, Including 4 Stories Residential)		
Cable Splicer.....	\$ 48.40	3%+14.88
Electrician.....	\$ 47.65	3%+14.88

ELEC0569-004 06/01/2021

	Rates	Fringes
ELECTRICIAN (Sound & Communications Sound Technician).....	\$ 35.20	13.84
SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, freuency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.		

ELEC0569-005 06/01/2021

	Rates	Fringes
Sound & Communications Sound Technician.....	\$ 35.20	13.84
SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, freuency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music.		

All of the above shall include the installation and transmission over fiber optics.

SOUND TECHNICIAN: Terminating, operating and performing final check-out

 ELEC0569-006 02/22/2021

Work on street lighting; traffic signals; and underground systems and/or established easements outside of buildings

	Rates	Fringes
Traffic signal, street light and underground work		
Utility Technician #1.....	\$ 35.17	9.01
Utility Technician #2.....	\$ 28.60	8.80

STREET LIGHT & TRAFFIC SIGNAL WORK:

UTILITY TECHNICIAN #1: Installation of street lights and traffic signals, including electrical circuitry, programmable controller, pedestal-mounted electrical meter enclosures and laying of pre-assembled cable in ducts. The layout of electrical systems and communication installation including proper position of trench depths, and radius at duct banks, location for manholes, street lights and traffic signals.

UTILITY TECHNICIAN #2: Distribution of material at jobsite, installation of underground ducts for electrical, telephone, cable TV land communication systems. The setting, leveling, grounding and racking of precast manholes, handholes and transformer pads.

 ELEC0569-008 08/30/2021

	Rates	Fringes
ELECTRICIAN (Residential, 1-3 Stories).....	\$ 37.28	7.98

 * ELEC1245-001 01/01/2022

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 60.19	22.07
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 48.08	20.86
(3) Groundman.....	\$ 36.76	20.46
(4) Powderman.....	\$ 51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

 ELEV0018-001 01/01/2022

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 61.34	36.885+a+b

FOOTNOTE:

- a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
- b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

 ENGI0012-003 07/01/2020

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....	\$ 48.25	27.20
GROUP 2.....	\$ 49.03	27.20
GROUP 3.....	\$ 49.32	27.20
GROUP 4.....	\$ 50.81	27.20
GROUP 5.....	\$ 48.96	25.25
GROUP 6.....	\$ 51.03	27.20
GROUP 8.....	\$ 51.14	27.20
GROUP 9.....	\$ 49.29	25.25
GROUP 10.....	\$ 51.26	27.20
GROUP 11.....	\$ 49.41	25.25
GROUP 12.....	\$ 51.43	27.20
GROUP 13.....	\$ 51.53	27.20
GROUP 14.....	\$ 51.56	27.20
GROUP 15.....	\$ 51.64	27.20
GROUP 16.....	\$ 51.76	27.20
GROUP 17.....	\$ 51.93	27.20
GROUP 18.....	\$ 52.03	27.20
GROUP 19.....	\$ 52.14	27.20
GROUP 20.....	\$ 52.26	27.20
GROUP 21.....	\$ 52.43	27.20
GROUP 22.....	\$ 52.53	27.20
GROUP 23.....	\$ 52.64	27.20
GROUP 24.....	\$ 52.76	27.20
GROUP 25.....	\$ 52.93	27.20
OPERATOR: Power Equipment (Cranes, Piledriving & Hoisting)		
GROUP 1.....	\$ 49.60	27.20
GROUP 2.....	\$ 50.38	27.20
GROUP 3.....	\$ 50.67	27.20
GROUP 4.....	\$ 50.81	27.20
GROUP 5.....	\$ 51.03	27.20

	Rates	Fringes
GROUP 6.....	\$ 51.14	27.20
GROUP 7.....	\$ 51.26	27.20
GROUP 8.....	\$ 51.43	27.20
GROUP 9.....	\$ 51.60	27.20
GROUP 10.....	\$ 52.60	27.20
GROUP 11.....	\$ 53.60	27.20
GROUP 12.....	\$ 54.60	27.20
GROUP 13.....	\$ 55.60	27.20
OPERATOR: Power Equipment (Tunnel Work)		
GROUP 1.....	\$ 50.10	27.20
GROUP 2.....	\$ 50.88	27.20
GROUP 3.....	\$ 51.17	27.20
GROUP 4.....	\$ 51.31	27.20
GROUP 5.....	\$ 51.53	27.20
GROUP 6.....	\$ 51.64	27.20
GROUP 7.....	\$ 51.76	27.20

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (guniting work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor;

Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less than 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote-control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any

and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator;
Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western
or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist
operator (Chicago boom and similar type); Lift mobile
operator; Lift slab machine operator (Vagtborg and similar
types); Material hoist and/or manlift operator; Polar
gantry crane operator; Self Climbing scaffold (or similar
type); Shovel, backhoe, dragline, clamshell operator (over
3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline,
clamshell operator (over 5 cu. yds. mrc); Tower crane
repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton
capacity); Crawler transporter operator; Derrick barge
operator (up to and including 25 ton capacity); Hoist
operator, stiff legs, Guy derrick or similar type (up to
and including 25 ton capacity); Shovel, backhoe, dragline,
clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including
50 tons mrc); Derrick barge operator (over 25 tons up to
and including 50 tons mrc); Highline cableway operator;
Hoist operator, stiff legs, Guy derrick or similar type
(over 25 tons up to and including 50 tons mrc); K-crane
operator; Polar crane operator; Self erecting tower crane
operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and
including 100 tons mrc); Derrick barge operator (over 50
tons up to and including 100 tons mrc); Hoist operator,
stiff legs, Guy derrick or similar type (over 50 tons up to
and including 100 tons mrc), Mobile tower crane operator
(over 50 tons, up to and including 100 tons M.R.C.); Tower
crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and
including 200 tons mrc); Derrick barge operator (over 100
tons up to and including 200 tons mrc); Hoist operator,
stiff legs, Guy derrick or similar type (over 100 tons up
to and including 200 tons mrc); Mobile tower crane operator
(over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including
300 tons mrc); Derrick barge operator (over 200 tons up to
and including 300 tons mrc); Hoist operator, stiff legs,
Guy derrick or similar type (over 200 tons, up to and
including 300 tons mrc); Mobile tower crane operator (over
200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N,m R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32,

T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1S, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34. T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis

Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

 ENGI0012-004 08/01/2020

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 56.40	30.00
(2) Dredge dozer.....	\$ 50.43	30.00
(3) Deckmate.....	\$ 50.32	30.00
(4) Winch operator (stern winch on dredge).....	\$ 49.77	30.00
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 49.23	30.00
(6) Barge Mate.....	\$ 49.84	30.00

 IRON0229-001 07/01/2021

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 38.08	24.91
Ornamental, Reinforcing and Structural.....	\$ 43.00	33.55

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0089-001 07/01/2020

	Rates	Fringes
LABORER (BUILDING and all other Residential Construction)		
Group 1.....	\$ 34.18	20.48
Group 2.....	\$ 34.86	20.48
Group 3.....	\$ 35.57	20.48
Group 4.....	\$ 36.37	20.48
Group 5.....	\$ 38.30	20.48
LABORER (RESIDENTIAL CONSTRUCTION - See definition below)		
(1) Laborer.....	\$ 30.82	18.80
(2) Cleanup, Landscape, Fencing (Chain Link & Wood).	\$ 29.53	18.80

RESIDENTIAL DEFINITION: Wood or metal frame construction of single family residences, apartments and condominiums - excluding (a) projects that exceed three stories over a garage level, (b) any utility work such as telephone, gas, water, sewer and other utilities and (c) any fine grading work, utility work or paving work in the future street and public right-of-way; but including all rough grading work at the job site behind the existing right of way

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete Screeding for Rought Strike-off; Concrete, water curing; Demolition laborer; Flagman; Gas, oil and/or water pipeline laborer; General Laborer; General clean-up laborer; Landscape laborer; Jetting laborer; Temporary water and air lines laborer; Material hoseman (walls, slabs, floors

and decks); Plugging, filling of Shee-bolt holes; Dry packing of concrete; Railroad maintenance, Repair Trackman and road beds, Streetcar and railroad construction track laborers; Slip form raisers; Slurry seal crews (mixer operator, applicator operator, squeegee man, Shuttle man, top man), filling of cracks by any method on any surface; Tarman and mortar man; Tool crib or tool house laborer; Window cleaner; Wire Mesh puling-all concrete pouring operations

GROUP 2: Asphalt Shoveler; Cement Dumper (on 1 yard or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute man, pouring concrete, the handling of the concrete from ready mix trucks, such as walls, slabs, decks, floors, foundations, footings, curbs, gutters and sidewalks; Concrete curer-impervious membrane and form oiler; Cutting torch operator (demolition); Guinea chaser; Headboard man-asphalt; Laborer, packing rod steel and pans; membrane vapor barrier installer; Power broom sweepers (small); Rii-prap, stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Tank sealer and cleaner; Tree climber, faller, chain saw operator, Pittsburgh Chipper and similar type brush shredders; Underground laborers, including caisson bellower

GROUP 3: Buggymobile; Concrete cutting torch; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2 1/2 feet drill steel or longer; Dri Pak-it machine; High sealer (including drilling of same); Hydro seeder and similar type; Impact wrench, multi-plate; Kettlemen, potmen and men applying asphalt, lay-kold, creosote, line caustic and similar type materials (applying means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operators of pneumatic, gas, electric tools, vibrating machines, pavement breakers, air blasting, come-along, and similar mechanical tools not separately classified herein; Pipelayers back up man coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rotary Scarifier or multiple head concrete chipping scarifier; Steel header board man and guideline setter; Tampers, Barko, Wacker and similar type; Trenching machine, handpropelled

GROUP 4: Asphalt raker, luterman, ironer, asphalt dumpman and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), Grinder or sander; Concrete saw man; cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Laser beam in connection with laborer's work; Oversize concrete vibrator operator 70 pounds and over; Pipelayer performing all services in the laying, installation and all forms of connection of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit, and any other stationary type of

tubular device used for the conveying of any substance or element, whether water, sewage, solid, gas, air or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzleman), Porta shot-blast, water blasting

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller-all power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power.

LABO0089-002 11/01/2020

	Rates	Fringes
LABORER (MASON TENDER).....	\$ 33.00	19.23

LABO0089-004 07/01/2020

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
Laborers:		
Group 1.....	\$ 35.30	20.48
Group 2.....	\$ 35.76	20.48
Group 3.....	\$ 36.17	20.48
Group 4.....	\$ 37.01	20.48
Group 5.....	\$ 40.28	20.48

LABORER CLASSIFICATIONS

GROUP 1: Laborer: General or Construction Laborer, Landscape Laborer. Asphalt Rubber Material Loader. Boring Machine Tender (outside), Carpenter Laborer (cleaning, handling, oiling & blowing of panel forms and lumber), Concrete Laborer, Concrete Screeding for rough strike-off, Concrete water curing. Concrete Curb & Gutter laborer, Certified Confined Space Laborer, Demolition laborer & Cleaning of Brick and lumber, Expansion Joint Caulking; Environmental Remediation, Monitoring Well, Toxic waste and Geotechnical Drill tender, Fine Grader, Fire Watcher, Limbers, Brush Loader, Pilers and Debris Handlers. flagman. Gas Oil and Water Pipeline Laborer. Material Hoseman (slabs, walls, floors, decks); Plugging, filling of shee bolt holes; Dry packing of concrete and patching; Post Holer Digger (manual); Railroad maintenance, repair trackman, road beds; Rigging & signaling; Scaler, Slip-Form Raisers, Filling cracks on any surface, tool Crib or Tool House Laborer, Traffic control (signs, barriers, barricades, delineator, cones etc.), Window Cleaner

GROUP 2: Asphalt abatement; Buggymobile; Cement dumper (on 1 yd. or larger mixers and handling bulk cement); Concrete curer, impervious membrane and form oiler; Chute man, pouring concrete; Concrete cutting torch; Concrete pile cutter; driller/Jackhammer, with drill steel 2 1/2 feet or longer; Dry pak-it machine; Fence erector; Pipeline wrapper, gas, oil, water, pot tender & form man; Grout man; Installation of all asphalt overlay fabric and materials used for reinforcing asphalt; Irrigation laborer; Kettleman-Potman hot mop, includes applying asphalt, lay-klold, creosote, lime caustic and similar tyhpes of materials (dipping, brushing, handling) and waterproofing; Membrane vapor barrier installer; Pipelayer backup man (coating, grouting, making of joints, sealing caulkiing, diapering including rubber basket joints, pointing); Rotary scarifier, multiple head concrete chipper; Rock slinger; Roto scraper & tiller; Sandblaster pot tender; Septic tank digger/installer; Tamper/wacker operator; Tank scaler & cleaner; Tar man & mortar man; Tree climber/faller, chainb saw operator, Pittsburgh chipper & similar type brush shredders.

GROUP 3: Asphalt, installation of all frabrics; Buggy Mobile Man, Bushing hammer; Compactor (all types), Concrete Curer - Impervious membrane, Form Oiler, Concrete Cutting Torch, Concrete Pile Cutter, Driller/Jackhammer with drill steel 2 1/2 ft or longer, Dry Pak-it machine, Fence erector including manual post hole digging, Gas oil or water Pipeline Wrapper - 6 ft pipe and over, Guradrail erector, Hydro seeder, Impact Wrench man (multi plate), kettleman-Potman Hot Mop includes applying Asphalt, Lay-Kold, Creosote, lime caustic and similar types of materials (dipping, brushing or handling) and waterproofing. Laser Beam in connection with Laborer work. High Scaler, Operators of Pneumatic Gas or Electric Tools, Vibrating Machines, Pavement Breakers, Air Blasting, Come-Alongs and similar mechanical tools, Remote-Controlled Robotic Tools in connection with Laborers work. Pipelayer Backup Man (Coating, grouting, m makeing of joints, sealing, caulking, diapering including rubber gasket joints, pointing and other services). Power Post Hole Digger, Rotary Scarifier (multiple head concrete chipper scarifier), Rock Slinger, Shot Blast equipment (8 to 48 inches), Steel Headerboard Man and Guideline Setter, Tamper/Wacker operator and similar types, Trenching Machine hand propelled.

GROUP 4: Any worker exposed to raw sewage. Asphalt Raker, Luteman, Asphalt Dumpman, Asphalt Spreader Boxes, Concrete Core Cutter, Concrete Saw Man, Cribber, Shorer, Head Rock Slinger. Installation of subsurface instrumentation, monitoring wells or points, remediation system installer; Laborer, asphalt-rubber distributor bootman; Oversize concrete vibrator operators, 70 pounds or over. Pipelayer, Prfefabricated Manhole Installer, Sandblast Nozzleman (Water Balsting-Porta Shot Blast), Traffic Lane Closure.

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Horizontal directional driller, Boring system, Electronic tracking, Driller: all power drills excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and all other types of mechanical drills without regard to form of motive power. Environmental remediation, Monitoring well, Toxic waste and Geotechnical driller, Toxic waste removal. Welding in connection with Laborer's work.

LABO0300-005 03/01/2021

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 37.49	21.88

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO0345-001 07/01/2021

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	\$ 46.50	20.42
GROUP 2.....	\$ 45.55	20.42
GROUP 3.....	\$ 42.01	20.42

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 38.89	17.10
(2) Vehicle Operator/Hauler.	\$ 39.06	17.10
(3) Horizontal Directional Drill Operator.....	\$ 40.91	17.10
(4) Electronic Tracking Locator.....	\$ 42.91	17.10
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	\$ 40.10	20.12
GROUP 2.....	\$ 41.40	20.12
GROUP 3.....	\$ 43.41	20.12
GROUP 4.....	\$ 45.15	20.12

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

LABO1414-003 08/05/2020

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER.....	\$ 36.03	21.01
PLASTER TENDER.....	\$ 38.58	21.01

Work on a swing stage scaffold: \$1.00 per hour additional.

Work at Military Bases - \$3.00 additional per hour:

 Coronado Naval Amphibious Base, Fort Irwin, Marine Corps Air Station-29 Palms, Imperial Beach Naval Air Station, Marine Corps Logistics Supply Base, Marine Corps Pickle Meadows, Mountain Warfare Training Center, Naval Air Facility-Seeley, North Island Naval Air Station, Vandenberg AFB.

PAIN0036-001 07/01/2020

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 29.59	17.12
(2) All Other Work.....	\$ 33.12	17.24

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-010 10/01/2021

	Rates	Fringes
DRYWALL FINISHER/TAPER		
(1) Building & Heavy Construction.....	\$ 37.14	20.90
(2) Residential Construction (Wood frame apartments, single family homes and multi-duplexes up to and including four stories).....	\$ 32.27	14.70

PAIN0036-012 10/01/2020

	Rates	Fringes
GLAZIER.....	\$ 45.55	18.06

PAIN0036-019 01/01/2021

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 33.52	17.59

PLAS0200-005 08/04/2021

	Rates	Fringes
PLASTERER.....	\$ 45.77	18.39

NORTH ISLAND NAVAL AIR STATION, COLORADO NAVAL AMPHIBIOUS
BASE, IMPERIAL BEACH NAVAL AIR STATION: \$3.00 additional
per hour.

PLAS0500-001 07/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
GROUP 1.....	\$ 26.34	19.77
GROUP 2.....	\$ 27.99	19.77
GROUP 3.....	\$ 30.07	21.12

CEMENT MASONS - work inside the building line, meeting the
following criteria:

GROUP 1: Residential wood frame project of any size; work
classified as Type III, IV or Type V construction;
interior tenant improvement work regardless the size of the
project; any wood frame project of four stories or less.

GROUP 2: Work classified as type I and II construction

GROUP 3: All other work

PLUM0016-006 09/01/2021

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER		
Camp Pendleton; Vandenberg Air Force Base.....	\$ 58.33	25.36
Work ONLY on new additions and remodeling of commercial buildings, bars, restaurants, and stores not to exceed 5,000 sq. ft. of floor space.....	\$ 52.20	24.38
Work ONLY on strip malls, light commercial, tenant improvement and remodel work.....	\$ 39.91	22.71
All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel work.....	\$ 53.83	25.36

PLUM0016-011 09/01/2021

	Rates	Fringes
PLUMBER/PIPEFITTER		
Residential.....	\$ 42.74	21.28

PLUM0345-001 09/01/2021

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter..	\$ 36.85	24.75
Sewer & Storm Drain Work....	\$ 40.94	22.13

ROOF0045-001 07/01/2021

	Rates	Fringes
ROOFER.....	\$ 37.75	10.24

SFCA0669-001 04/01/2021

	Rates	Fringes
SPRINKLER FITTER.....	\$ 43.01	24.62

SHEE0206-001 07/01/2020

	Rates	Fringes
SHEET METAL WORKER		
Camp Pendleton.....	\$ 42.62	29.55
Except Camp Pendleton.....	\$ 40.62	29.55
Sheet Metal Technician.....	\$ 30.51	9.49

SHEET METAL TECHNICIAN - SCOPE:
a. Existing residential buildings, both single and multi-family, where each unit is heated and/or cooled by a separate system b. New single family residential buildings including tracts. c. New multi-family residential buildings, not exceeding five stories of living space in height, provided each unit is heated or cooled by a separate system. Hotels and motels are excluded. d. LIGHT COMMERCIAL WORK: Any sheet metal, heating and air conditioning work performed on a project where the total construction cost, excluding land, is under \$1,000,000 e. TENANT IMPROVEMENT WORK: Any work necessary to finish interior spaces to conform to the occupants of commercial buildings, after completion of the building shell

TEAM0166-001 09/01/2019

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 18.90	34.69
GROUP 2.....	\$ 26.49	34.69
GROUP 3.....	\$ 26.69	34.69

	Rates	Fringes
GROUP 4.....	\$ 26.89	34.69
GROUP 5.....	\$ 27.09	34.69
GROUP 6.....	\$ 27.59	34.69
GROUP 7.....	\$ 29.09	34.69

FOOTNOTE: HAZMAT PAY: Work on a hazmat job, where hazmat certification is required, shall be paid, in addition to the classification working in, as follows: Levels A, B and C - +\$1.00 per hour. Workers shall be paid hazmat pay in increments of four (4) and eight (8) hours.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Fuel Man, Swamper

GROUP 2: 2-axle Dump Truck, 2-axle Flat Bed, Concrete Pumping Truck, Industrial Lift Truck, Motorized Traffic Control, Pickup Truck on Jobsite

GROUP 3: 2-axle Water Truck, 3-axle Dump Truck, 3-axle Flat Bed, Erosion Control Nozzleman, Dump Crete Truck under 6.5 yd, Forklift 15,000 lbs and over, Prell Truck, Pipeline Work Truck Driver, Road Oil Spreader, Cement Distributor or Slurry Driver, Bootman, Ross Carrier

GROUP 4: Off-road Dump Truck under 35 tons 4-axles but less than 7-axles, Low-Bed Truck & Trailer, Transit Mix Trucks under 8 yd, 3-axle Water Truck, Erosion Control Driver, Grout Mixer Truck, Dump Crete 6.5yd and over, Dumpster Trucks, DW 10, DW 20 and over, Fuel Truck and Dynamite, Truck Greaser, Truck Mounted Mobile Sweeper 2-axle Winch Truck

GROUP 5: Off-road Dump Truck 35 tons and over, 7-axles or more, Transit Mix Trucks 8 yd and over, A-Frame Truck, Swedish Cranes

GROUP 6: Off-Road Special Equipment (including but not limited to Water Pull Tankers, Athey Wagons, DJB, B70 Wuclids or like Equipment)

GROUP 7: Repairman

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union, which prevailed in the survey for this classification, which in this example would be Plumbers 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all

rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Division National Office Branch of Wage Surveys. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

CONTRACTOR CERTIFICATION

COVID-19 VACCINATION ORDINANCE

CERTIFICATION OF COMPLIANCE

I hereby certify that I am familiar with the requirements of San Diego City Council Ordinance No. O-2022-53 Emergency Ordinance to Implement the City's Mandatory COVID-19 Vaccination Policy.

TERMS OF COMPLIANCE

The Mandatory COVID-19 Vaccination Policy, outlined in San Diego Ordinance O-21398 (Nov. 29, 2021), requires ALL City of San Diego (City) contractors, who interact with City employees while providing contracted services indoors in City facilities or while performing bargaining unit work while indoors, to be fully vaccinated against COVID-19, effective January 3, 2022, as a condition for provision or continued provision of contracted services.

1. "City contractor" means a person who has contracted with the City of San Diego to provide public works, goods, services, franchise, or consultant services for or on behalf of the City, and includes a subcontractor, vendor, franchisee, consultant, or any of their respective officers, directors, shareholders, partners, managers, employees, or other individuals associated with the contractor, subcontractor, consultant, or vendor. "Person" means any natural person, firm, joint venture, joint stock company, partnership, association, club, company, corporation business trust or organization.
2. "Fully vaccinated" means a person has received, at least 14 days prior, either the second dose in a two-dose COVID-19 vaccine series or a single-dose COVID-19 vaccine, or otherwise meets the criteria for full vaccination against COVID-19 as stated in applicable public health guidance, orders, or law. Acceptable COVID-19 vaccines must be approved by the U.S. Food and Drug Administration (FDA) or authorized for emergency use by the FDA or the World Health Organization.
3. Contractors must fully comply with the City's Mandatory COVID-19 Vaccination Policy, which may include a reporting program that tracks employee vaccination status.
4. Contractors must certify that members of their workforce, and subcontractors regardless of tier, who work at a City facility, are fully vaccinated and that the contractor has a program to track employee compliance.
5. Contractors that have an Occupational Safety and Health Administration compliant testing program for members of their workforce, as a reasonable accommodation, may be considered for compliance.

Non-compliance with the City's Mandatory COVID-19 Vaccination Policy may result in termination of a contract for cause, pursuant to the City's General Terms and Provisions, Reference Standards, and the San Diego Municipal Code

PWP MORENA CONVEYANCE SOUTH (40067-D)

CONTRACTOR'S RESPONSIBILITIES

- PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
- NOTIFY SDG&E AT LEAST 30 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (I.E., 69 KV & HIGHER)
- LOCATE AND RECONNECT ALL SEWER LATERALS. LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. LATERAL RECORDS ARE AVAILABLE TO THE CONTRACTOR AT THE WATER DEPARTMENT, 2797 CAMINITO CHOLLAS. LOCATE THE IMPROVEMENTS THAT WILL BE AFFECTED BY LATERAL REPLACEMENTS.
- EXCAVATE AROUND WATER METER BOX (CITY PROPERTY SIDE) TO DETERMINE IN ADVANCE, THE SIZE OF EACH SERVICE BEFORE TAPPING MAIN.
- CITY FORCES, WHEN SPECIFIED OR SHOWN ON THE PLANS, WILL MAKE PERMANENT CUTS & PLUGS AND CONNECTIONS.
- KEEP EXISTING MAINS IN SERVICE IN LIEU OF HIGH-LINING, UNLESS OTHERWISE SPECIFIED AND/OR SHOWN ON PLANS.
- THE LOCATIONS OF EXISTING BUILDINGS AS SHOWN ON THE PLAN ARE APPROXIMATE.
- STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE GREENBOOK STANDARD SPECIFICATIONS SECTION 402-UTILITIES.
- EXISTING UTILITY CROSSING AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAN VIEW.
- ALL ADVANCE METERING INFRASTRUCTURE (AMI) DEVICES ATTACHED TO THE WATER METER OR LOCATED IN OR NEAR WATER METER BOXES, COFFINS, OR VAULTS SHALL BE PROTECTED AT ALL TIMES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE COATED AND HOLIDAY FREE AS SPECIFIED IN THE WHITEBOOK. IF USING WAX TAPE, OVERLAP EXISTING METALLIC PIPING BY 12 INCHES ON EACH SIDE. IF ANY BURIED PIPE MATERIALS ARE TO BE CHANGED FROM NONMETALLIC TO METALLIC DURING THE CONSTRUCTION PHASE, THIS CHANGE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY'S CORROSION ENGINEER.
- FOR COORDINATION OF THE SHUTDOWN OF MAINS, PLEASE CONTACT THE FOLLOWING:
TRANSMISSION MAINS (16 INCHES AND LARGER) - JESUS RAMOS (619-527-7438)
DISTRIBUTION MAINS (LESS THAN 16 INCHES) - TISA AGUERO (619-527-3143)
WATER FACILITIES - TATYANA FIKHMAN (619-527-7465) AND JESUS RAMOS (619-527-7438)

CONSTRUCTION STORM WATER PROTECTION NOTES

- TOTAL SITE DISTURBANCE AREA (ACRES) 6.3 AC
HYDROLOGIC UNIT/ WATERSHED Penasquitos HU/Mission Bay Watershed
San Diego HU/ SD River Watershed
HYDROLOGIC SUBAREA NAME & NO. Miramar HSA (906.40), Tecolote HSA (906.50)
Mission San Diego HSA (907.11)
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
 SWPPP
THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT (CGP) ORDER 2009-0009-DWQ AS AMENDED BY ORDER 2010-0014-DWQ AND 2012-0006-DWQ
TRADITIONAL: RISK LEVEL 1 2 3
LUP: RISK TYPE 1 2 3
- CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW

PERMANENT STORM WATER BMP CATEGORY:

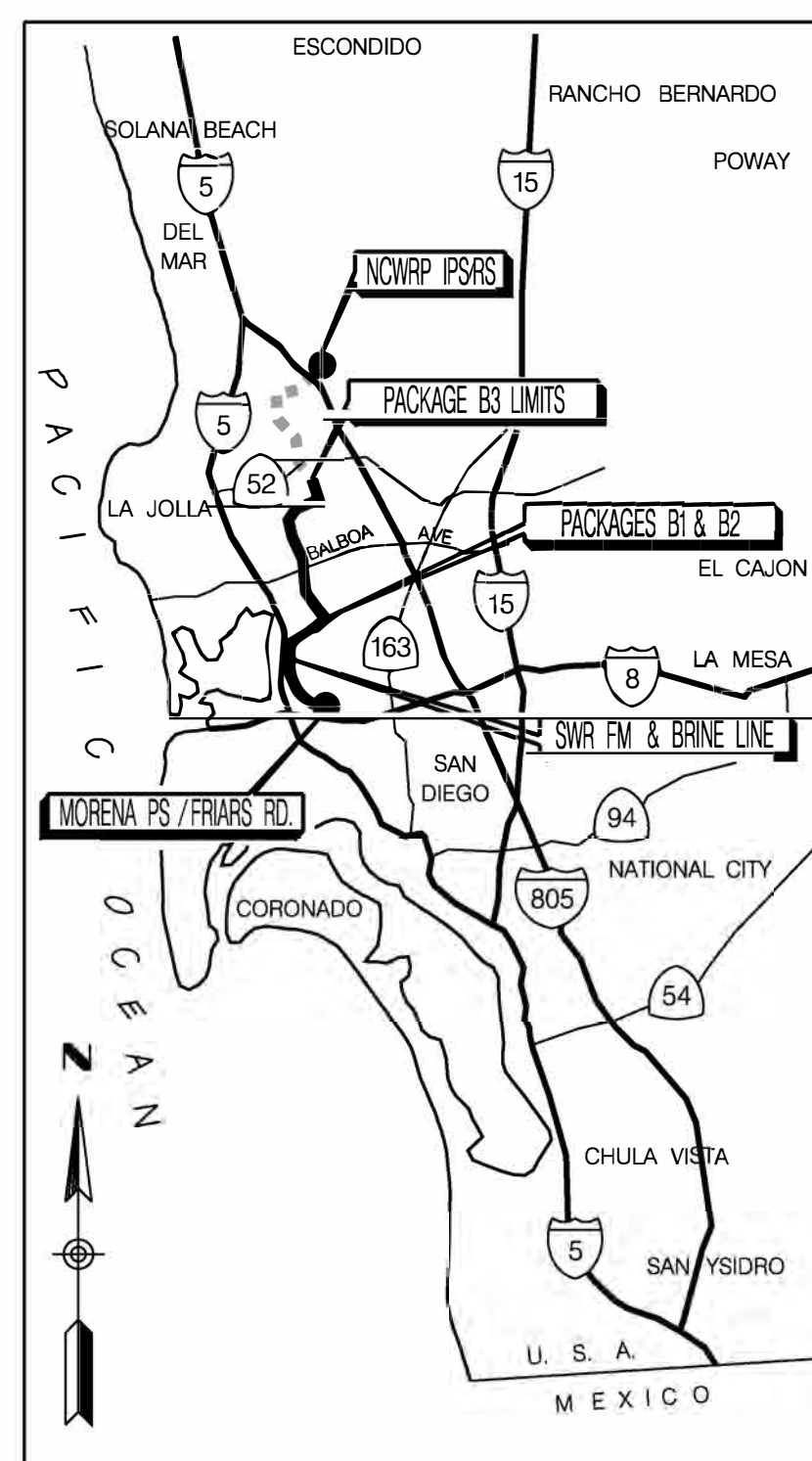
- PRIORITY DEVELOPMENT PROJECT
 STANDARD DEVELOPMENT PROJECT
 PDP EXEMPT
 NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS

EXISTING STRUCTURES

- EX WATER MAIN & VALVES
EX WATER METER
EX FIRE HYDRANT
EX SEWER MAIN & MANHOLES
EX DRAINS
EX PAVEMENT (PROFILE)
EX GROUND LINE (PROFILE)
EX TRAFFIC SIGNAL
EX STREET LIGHT
GAS MAIN
ELEC. COND., TEL. COND., CATV
RAILROAD, TROLLEY TRACKS

WORK TO BE DONE

THE PROJECT CONSISTS OF THE CONSTRUCTION FOR APPROX 17,400 LF OF NEW 48-INCH WASTEWATER FORCEMAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE, BEGINNING FROM THE MORENA PUMP STATION FACILITY TO FORCEMAIN STATION 184+00 AND BRINE CENTRATE STATION 851+00 AT CLAIREMONT DR NORTH OF IROQUOIS AVE. THE BRINE CENTRATE MAIN INCLUDES A PRESSURE REDUCING VAULT.



VICINITY MAP
NO SCALE

PROJECT TEAM

AECOM ENGINEERING - (619) 610.7700
AIR-X UTILITY SURVEYORS - (760) 480.2347
KATZ & ASSOCIATES - (858) 452.0031
MICHAEL BAKER INTERNATIONAL - (858) 614.5000
RFYEAGER ENGINEERING - (619) 647.6265

MAJOR STREETS:

MORENA BLVD, CHICAGO ST, AND CLAIREMONT DR.

FIELD DATA

BENCHMARK: NBP GAINES STREET AND NAPA STREET
ELEV = 21.742

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER CITY OF SAN DIEGO VERTICAL CONTROL

BASIS OF BEARINGS / COORDINATES:

THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983 CCS 83 ZONE 6 (EPOCH 1991.35)

BASED LOCALLY UPON FIELD OBSERVED TIES TO THE FOLLOWING CONTROL POINTS:

POINT #	NORTHING (GRID)	EASTING (GRID)
133	1899568.65	6270011.50
1037	1855580.54	6271247.23
1040	1854289.08	6276169.63

REFERENCES: ROS 14492

TOPOGRAPHY SOURCE: MBI

DATE OF SURVEY: JANUARY 25, 2017 - FEBRUARY 10, 2017

SURVEY NOTE: THIS SURVEY TIES IN HORIZONTALLY AND VERTICALLY TO CAD AERIAL MAPPING PROJECT "LAKE MIRAMAR ALIGNMENT". SAID MAPPING DATA WAS PROVIDED TO MBIFOR INTERNAL USE. AERIAL MAPPING WAS PERFORMED BY GPSI ON OCTOBER 24, 2015 (GPSI PROJECT NO. 15-843)

OWNER

SAN DIEGO PUBLIC UTILITIES DEPARTMENT
912 TOPAZ WAY
SAN DIEGO, CA 92123
PHONE NUMBER (858) 292-6300

MONUMENTATION / SURVEY NOTES

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED WITH COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.

LEGEND

IMPROVEMENTS	STANDARD DRAWINGS	SYMBOL
SEWER FORCEMAIN & BRINE CENTRATE MAIN	SDS-101, SDS-110 (TYPE C)	
SEWER VAULT		
SEWER MANHOLE/LINED	SDS-106, SDS-107, SDS-108, SDM-113, SDS-120, M-03A, SM-07	
SEWER VAULT WITH VENT		
WATER MAIN & APPURTENANCES	SDW-105, SDW-110, SDW-151, SDW-161	
VALVES WITH CAPS AND WELLS	SDW-109, SDW-152, SDW-153, WV-05	
FIRE SERVICE CONNECTION ASSEMBLY & BACKFLOW PREVENTER (WHERE APPLICABLE)	SDM-105, SDW-109, SDW-118, SDW-152, SDW-153	
6" FIRE HYDRANT ASSEMBLY & MARKER 2-PORT UNLESS SPECIFIED AS 3-PORT	SDM-105, SDW-104, SDW-109, SDW-152, SDW-153	
1" WATER SERVICE UNLESS OTHERWISE SPECIFIED	SDM-105, SDW-107, SDW-134, SDW-135, SDW-136, SDW-137, SDW-138, SDW-149, SDW-150, WS-03	
BLOW-OFF ASSEMBLY	SDM-105, SDW-106, SDW-143, SDW-144, SDW-145, SDW-146, WB-05	
AIR & VACUUM VALVE	SDM-105, SDW-117, SDW-158, SDW-159, SDW-160	
CORROSION TEST STATION		
IMPRESSED CURRENT CATHODIC PROTECTION RECTIFIER ASSEMBLY		
CUTTING AND PLUGGING ABANDONED WATER MAIN	WP-03	
TRANSITION / REPAIR COUPLING	SEE APPROVED MATERIALS LIST	
ABANDON OR REMOVE INTERFERING MAIN		
EX CONCRETE ENCASEMENT OF UTILITY		
EX RIGHT OF WAY		
EX STREET CENTERLINE		
SURVEY MONUMENT	M-10A, M-10B, M-10C	
FIBER OPTIC PULL BOX		
TRENCH RESURFACING	SDG-107, SDG-108, SDG-113	

DECLARATION OF RESPONSIBLE CHARGE

* I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

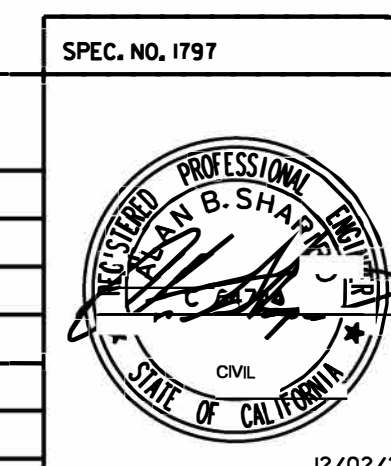
ALAN SHAPIRO
DATE 12/02/2021

G-01

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH

COVER SHEET

AS-BUILT INFORMATION	
MATERIALS	MANUFACTURER
PIPE CL 235 (WATER)	-
PIPE SDR 35 (SEWER)	-
GATE VALVES	-
FIRE HYDRANTS	-
SEWER MANHOLES	-
REHABILITATE SEWER MANHOLES	-
REHABILITATE SEWER MAIN	-



CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 01 OF 339 SHEETS			
APPROVED BY:	DATE: 12-28-21	FOR ENGINEER: REYANIEL MARTIN	DATE: 09/09/20
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	JL/RR		
ADDENDUM A	AECOM		1/13/22
PROJECT MANAGER	J. BERMUDO	PROJECT ENGINEER	A. ABUTIN
SEE SHEETS	CCS27 COORDINATE	SEE SHEETS	CCS83 COORDINATE
DATE STARTED		DATE COMPLETED	
CONTRACTOR		INSPECTOR	

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.
	1/13/2022	40067-I-D, 40067-S-D, 40067-207-D ADDED NEW SHEETS 40067-327-D THROUGH 40067-332-D	

WARNING
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

The City of
SAN DIEGO Public Utilities

MORENA PUMP STATION & CONVEYANCE SYSTEM

SHEET NO.	DISCIPLINE CODE	TITLE	DESCRIPTION
MECHANICAL			
213	M-01	MECHANICAL PLAN	PRV PLAN AND SECTION
214	M-02	MECHANICAL DETAILS	PRV VAULT NO.1 PIPING PLAN AND SECTIONS
215	M-03	MECHANICAL DETAILS	PRV VAULT NO.2 PIPING PLAN AND SECTIONS
216	M-04	MECHANICAL DETAILS	MISCELLANEOUS DETAILS-1
217	M-05	MECHANICAL DETAILS	MISCELLANEOUS DETAILS-2
218	M-06	MECHANICAL DETAILS	MISCELLANEOUS DETAILS-3
P & ID			
219	I-01	INSTRUMENTATION	GENERAL NOTES, SYMBOLS, LEGEND, & ABBREVIATIONS - 1
220	I-02	INSTRUMENTATION	GENERAL NOTES, SYMBOLS, LEGEND, & ABBREVIATIONS - 2
221	I-03	INSTRUMENTATION	GENERAL NOTES, SYMBOLS, LEGEND, & ABBREVIATIONS - 3
222	I-04	INSTRUMENTATION	PRV VAULT P&ID
223	I-05	INSTRUMENTATION	PLUG VAULT P&ID
CATHODIC PROTECTION			
224	CP-01	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE BI/B2
225	CP-02	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE BI/B2
226	CP-03	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
227	CP-04	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
228	CP-05	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
229	CP-06	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
230	CP-07	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP - PACKAGE B2
231	CP-08	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP - PACKAGE B2
232	CP-09	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
233	CP-10	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
234	CP-11	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
235	CP-12	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP - PACKAGE B3
236	CP-13	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP - PACKAGE B3
237	CP-14	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP - PACKAGE B3
238	CP-15	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
239	CP-16	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
240	CP-17	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
241	CP-18	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
242	CP-19	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
STREET RESURFACING			
243	C-200	STREET RESURFACING PLAN	STA. 673+46 'BRINE' CUSTER ST. TO STA. 24+87 'FM' MORENA BLVD.
244	C-201	STREET RESURFACING PLAN	STA. 24+87 MORENA BLVD. TO STA. 43+37 W. MORENA BLVD
245	C-202	STREET RESURFACING PLAN	STA. 43+37 TO STA. 63+36 W. MORENA BLVD.
246	C-203	STREET RESURFACING PLAN	STA. 63+36 W. MORENA BLVD. TO STA. 83+40 MORENA BLVD.
247	C-204	STREET RESURFACING PLAN	STA. 83+40 WEST MORENA BLVD TO STA. 106+53 CHICAGO ST
248	C-205	STREET RESURFACING PLAN	STA. 106+53 CHICAGO ST TO STA. 127+48 DENVER ST
249	C-206	STREET RESURFACING PLAN	STA. 127+48 DENVER ST. TO STA. 146+96 CLAIREMONT DR.
250	C-207	STREET RESURFACING PLAN	STA. 146+96 TO STA. 166+97 CLAIREMONT DR.
251	C-208	STREET RESURFACING PLAN	STA. 166+97 TO STA. 184+00 CLAIREMONT DR.
252	C-209	STREET RESURFACING PLAN	STA. 184+00 TO STA. 207+98 CLAIREMONT DR.
253	C-210	STREET RESURFACING PLAN	STA. 207+98 TO STA. 229+00 CLAIREMONT DR.
254	C-211	STREET RESURFACING PLAN	STA. 229+00 TO STA. 248+00 CLAIREMONT DR.
255	C-212	STREET RESURFACING PLAN	STA. 248+00 TO STA. 268+00 CLAIREMONT DR.
256	C-213	STREET RESURFACING PLAN	STA. 268+00 TO STA. 285+50 CLAIREMONT DR.
257	C-214	STREET RESURFACING PLAN	STA. 285+50 TO STA. 305+49 CLAIREMONT DR.
258	C-215	STREET RESURFACING PLAN	STA. 305+49 TO STA. 326+47 CLAIREMONT DR.
259	C-216	STREET RESURFACING PLAN	STA. 326+47 CLAIREMONT DR. TO STA. 347+01 CLAIREMONT MESA BLVD.
260	C-217	STREET RESURFACING PLAN	STA. 347+01 CLAIREMONT MESA BLVD. TO STA. 368+00 GENESEE AVE.
261	C-218	STREET RESURFACING PLAN	STA. 368+00 TO STA. 368+10 GENESEE AVE.
262	C-219	STREET RESURFACING PLAN	STA. 368+10 TO STA. 408+18 GENESEE AVE.
263	C-220	STREET RESURFACING PLAN	STA. 408+18 TO STA. 428+17 GENESEE AVE.
264	C-221	STREET RESURFACING PLAN	STA. 428+17 TO STA. 447+18 GENESEE AVE.
265	C-222	STREET RESURFACING PLAN	STA. 447+18 TO STA. 466+17 GENESEE AVE.
266	C-223	STREET RESURFACING PLAN	STA. 466+17 TO STA. 487+04 GENESEE AVE.
267	C-224	STREET RESURFACING PLAN	STA. 487+04 GENESEE AVE. TO STA. 508+88 TOWNE CENTRE DR.
268	C-225	STREET RESURFACING PLAN	STA. 508+88 TO STA. 527+88 TOWNE CENTRE DR.
269	C-226	STREET RESURFACING PLAN	STA. 527+88 TO STA. 546+86 TOWNE CENTRE DR.
270	C-227	STREET RESURFACING PLAN	STA. 546+86 TOWNE CENTRE DR. TO 576+74 EXECUTIVE DR.
CURB RAMP			
271	C-228	CURB RAMP LOCATIONS	SHERMAN ST./MORENA BLVD.
272	C-229	CURB RAMP LOCATIONS	BUENOS AVE./W. MORENA BLVD.
273	C-230	CURB RAMP LOCATIONS	VEGA ST./W. MORENA BLVD.
274	C-231	CURB RAMP LOCATIONS	W. MORENA BLVD./MORENA BLVD.
275	C-232	CURB RAMP LOCATIONS	MORENA BLVD.
276	C-233	CURB RAMP LOCATIONS	MORENA BLVD./ JELLETT ST./DENVER ST.
277	C-234	CURB RAMP LOCATIONS	CLAIREMONT DR.
278	C-235	CURB RAMP LOCATIONS	CLAIREMONT DR.
279	C-236	CURB RAMP LOCATIONS	CLAIREMONT DR.

SHEET NO.	DISCIPLINE CODE	TITLE	DESCRIPTION
280	C-237	CURB RAMP LOCATIONS	CLAIREMONT DR.
281	C-238	CURB RAMP LOCATIONS	CLAIREMONT DR.
282	C-239	CURB RAMP LOCATIONS	CLAIREMONT DR.
283	C-240	CURB RAMP LOCATIONS	CLAIREMONT DR.
284	C-241	CURB RAMP LOCATIONS	CLAIREMONT DR.
285	C-242	CURB RAMP LOCATIONS	CLAIREMONT DR.
286	C-243	CURB RAMP LOCATIONS	CLAIREMONT DR.
287	C-244	CURB RAMP LOCATIONS	CLAIREMONT DR./ CLAIREMONT MESA BLVD.
288	C-245	CURB RAMP LOCATIONS	CLAIREMONT MESA BLVD./GENESEE AVE.
289	C-246	CURB RAMP LOCATIONS	GENESEE AVE.
290	C-247	CURB RAMP LOCATIONS	GENESEE AVE.
291	C-248	CURB RAMP LOCATIONS	GENESEE AVE.
292	C-249	CURB RAMP LOCATIONS	GENESEE AVE.
293	C-250	CURB RAMP LOCATIONS	GENESEE AVE.
294	C-251	CURB RAMP LOCATIONS	NOBLE DR.
295	C-252	CURB RAMP LOCATIONS	TOWNE CENTRE DR.
296	C-253	CURB RAMP LOCATIONS	TOWNE CENTRE DR.
297	C-254	CURB RAMP LOCATIONS	TOWNE CENTRE DR.
298	C-255	CURB RAMP DETAILS	SHERMAN ST./ CUSTER ST. - LOCATION 3 AND 8
299	C-256	CURB RAMP DETAILS	W. MORENA BLVD./ BUENOS AVE. - LOCATION 22
300	C-257	CURB RAMP DETAILS	W. MORENA BLVD./ MORENA BLVD. - LOCATION 30 AND 33
301	C-258	CURB RAMP DETAILS	W. MORENA BLVD./ MORENA BLVD. - LOCATION 31 AND 32
302	C-259	CURB RAMP DETAILS	MORENA BLVD./ LISTER ST. - LOCATION 60 AND 61
303	C-260	CURB RAMP DETAILS	CLAIREMONT DR./ DENVER ST. - LOCATION 84, 85, AND 86
304	C-261	CURB RAMP DETAILS	CLAIREMONT DR./ HARTFORD CT./BURGENER BLVD. - LOCATION 89 AND 104
305	C-262	CURB RAMP DETAILS	CLAIREMONT DR./ CALLE NEIL - LOCATION 111, 112, 114, 115 AND 116
306	C-263	CURB RAMP DETAILS	CLAIREMONT DR./ BLACKFOOT AVE - LOCATION 117 AND 118
307	C-264	CURB RAMP DETAILS	CLAIREMONT DR./ KNAB ST. - LOCATION 123 AND 124
308	C-265	CURB RAMP DETAILS	CLAIREMONT DR./ CHIPPEWA CT./ DALLES AVE. - LOCATION 151 AND 155
309	C-266	CURB RAMP DETAILS	CLAIREMONT DR./ FEATHER AVE. / MET CT. - LOCATION 159 AND 163
310	C-267	CURB RAMP DETAILS	CLAIREMONT DR./ FOX AVE - LOCATION 165 AND 166
311	C-268	CURB RAMP DETAILS	CLAIREMONT DR./ OPLIN AVE - LOCATION 185 AND 187
312	C-269	CURB RAMP DETAILS	GENESEE AVE./ CLAIREMONT MESA BLVD. - LOCATION 217 AND 220
313	C-270	CURB RAMP DETAILS	GENESEE AVE. - LOCATION 232, AND 233
314	C-271	CURB RAMP DETAILS	GENESEE AVE./ ANGL CT. - LOCATION 238
315	C-272	CURB RAMP DETAILS	GENESEE AVE./ RADOLFF LN. - LOCATION 242 AND 244
316	C-273	CURB RAMP DETAILS	NOBEL DR./ LOMBARD PL. - LOCATION 277 AND 278
317	C-274	CURB RAMP DETAILS	TOWNE CENTRE DR./ EXCALIBUR WY. - LOCATION 291, 292, 293, AND 294
318	C-275	CURB RAMP DETAILS	TOWNE CENTRE DR./ TOWN CENTRE GATEWAY - LOCATION 300 AND 302
319	C-276	CURB RAMP DETAILS	TOWN CENTRE DR./ TOWN CENTRE GATEWAY - LOCATION 305 AND 306
320	G-08A	GENERAL NOTES	ENVIRONMENTAL MITIGATION NOTES
321	G-08B	GENERAL NOTES	ENVIRONMENTAL MITIGATION NOTES
321	G-10	HORIZ ALIGN REPORT 1	SHERMAN STA 10+00 TO STA 19+94.55
322	G-11	HORIZ ALIGN REPORT 2	FORCEMAIN STA 10+00 TO STA 130+50.27
323	G-12	HORIZ ALIGN REPORT 3	FORCEMAIN STA 130+50.27 TO STA 184+00
324	G-13	HORIZ ALIGN REPORT 4	BRINE-CENTRATE STA 674+00 TO STA 814+10.12
325	G-14	HORIZ ALIGN REPORT 5	BRINE-CENTRATE STA 814+10.12 TO STA 851+00
326	C-277	WATER RELOCATION PLAN	STA 14+00 TO STA 19+94.55 SHERMAN ST.
327	C-278	MONUMENTATION MAP	SHERMAN ST.
328	C-279	MONUMENTATION MAP	W MORENA BLVD./ MORENA BLVD.
329	C-280	MONUMENTATION MAP	W MORENA BLVD./ MORENA BLVD.
330	C-281	MONUMENTATION MAP	MORENA BLVD./ JELLETT ST. / DENVER ST.
331	C-282	MONUMENTATION MAP	CLAIREMONT DR.
332	C-283	MONUMENTATION MAP	CLAIREMONT DR.
333	C-284	MONUMENTATION MAP	CLAIREMONT DR.
334	C-285	MONUMENTATION MAP	CLAIREMONT DR.
335	C-286	MONUMENTATION MAP	CLAIREMONT DR.
336	C-287	MONUMENTATION MAP	CLAIREMONT DR.
337	C-288	MONUMENTATION MAP	CLAIREMONT DR.
338	C-289	MONUMENTATION MAP	CLAIREMONT DR./ CLAIREMONT MESA BLVD./ GENESEE AVE.
339	C-290	MONUMENTATION MAP	GENESEE AVE.

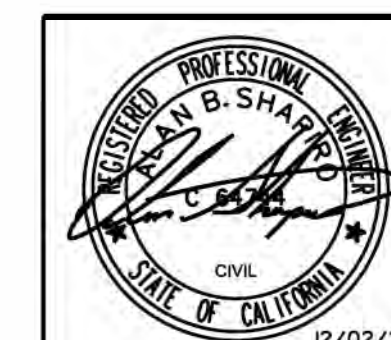
- DISCIPLINE CODE**
- G GENERAL
 - D DEMOLITION
 - C CIVIL
 - CP CATHODIC PROTECTION
 - L LANDSCAPE
 - A ARCHITECTURAL
 - S STRUCTURAL
 - M MECHANICAL
 - E ELECTRICAL
 - I INSTRUMENTATION
 - SC STAGE CONSTRUCTION
 - T TRAFFIC CONTROL
 - DE DETOUR

G-05

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH

SHEET INDEX - 2

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 05 OF 339 SHEETS		SEWER WBS B-15141		
APPROVED BY: <i>[Signature]</i> FOR THE ENGINEER REYHANEH MARTIN PRINT DCE NAME DATE: 12-28-21 DATE: 89963 RCE#	SUBMITTED BY: J. BERMUDO PROJECT MANAGER	CHECKED BY: A. ABUTIN PROJECT ENGINEER		
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	LW			
ADDENDUM A	AECOM	<i>[Signature]</i>		
CONTRACTOR		DATE STARTED		40067-05 -D
INSPECTOR		DATE COMPLETED		



WORK BY CITY FORCES

LEGEND

- EXISTING WATER MAIN
 - PRESSURE ZONE BOUNDARY
 - PROPOSED WATER MAIN
 - ===== PROPOSED HIGHLINE ALIGNMENT
 - FIRE HYDRANT TO REMAIN IN SERVICE DURING CONSTRUCTION
 - FIRE HYDRANT TO BE REMOVED AND RELOCATED
 - ⊗ FIRE HYDRANT TO BE REPLACED
-
- ③ CITY FORCES NOTE NUMBER (THIS SHEET)
 - ②/24/6 CITY FORCES NOTE NUMBER (PLAN & PROFILE SHEET)
 - ②/24/6 PLAN & PROFILE "D" SHEET NUMBER

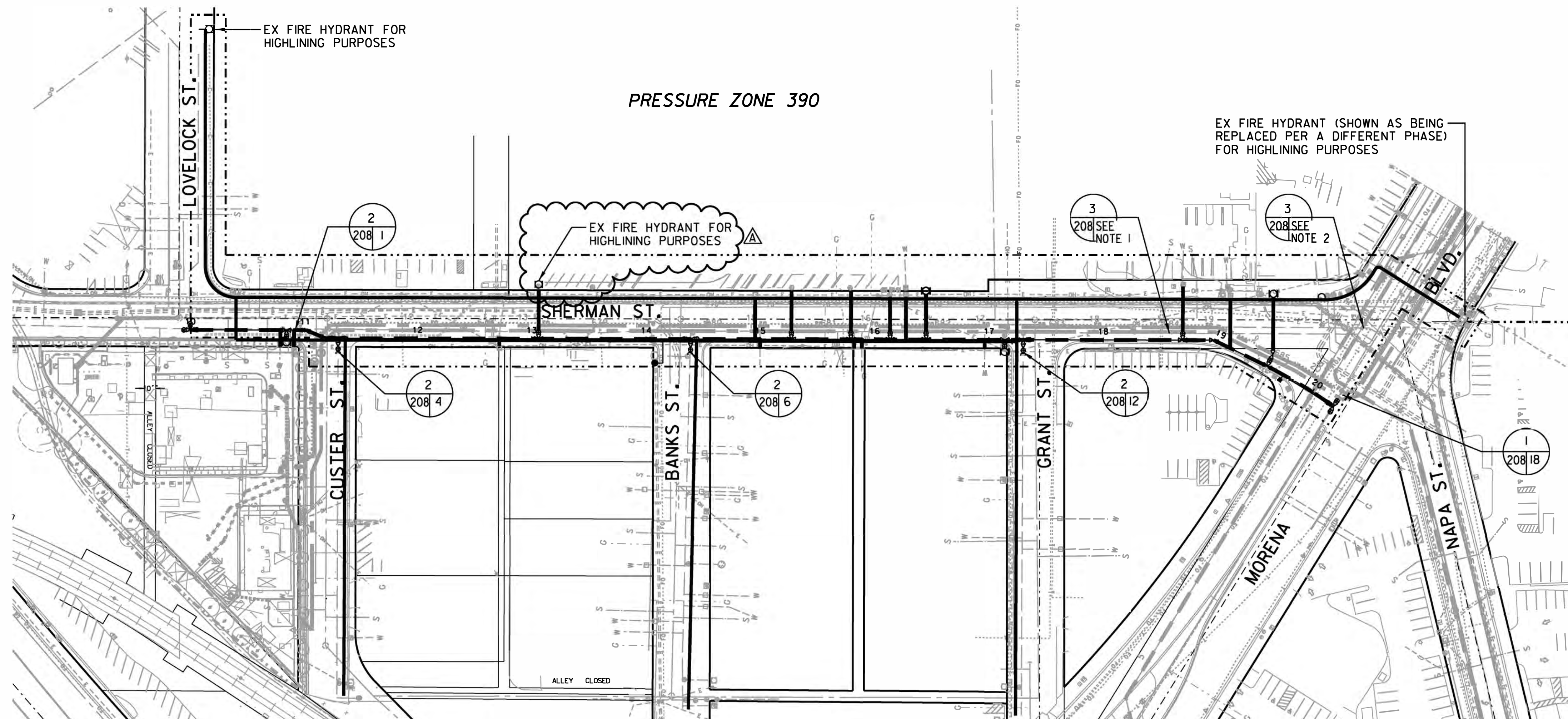
BC --- BEFORE CONTRACTOR
AC --- AFTER CONTRACTOR

WORK BY CITY FORCES

- ① BC - TEE/CROSS CUT-IN, OPEN/CLOSE VALVE(S)
AC - RECONNECT. OPEN VALVE(S)
- ② BC - CUT & PLUG
AC - RECONNECT
- ③ BC - CUT AND ABANDON
- ④ AC - WET TAP
- ⑤ BC - CLOSE EX. VALVE (REPLACE IF NEEDED)
AC - OPEN EX. VALVE

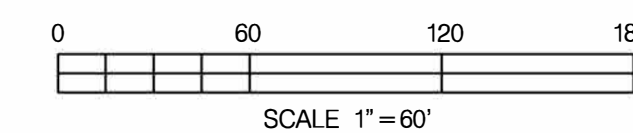
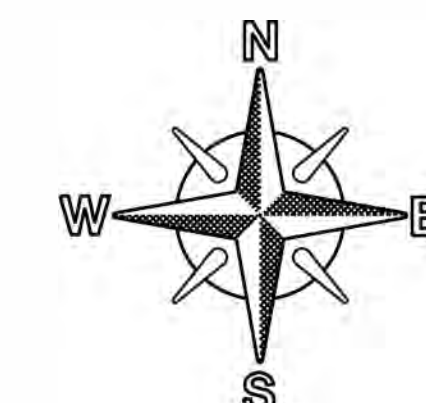
AREA TO BE HIGHLINED IN PHASES

⊡ PHASE I



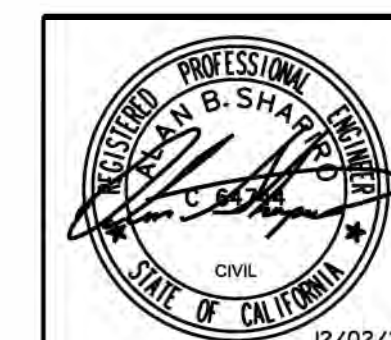
NOTES:

1. EX 8" AC WTR TO BE PLUGGED AND ABANDONED IN PLACE PER SECTION 306-3.3.1 (WHITEBOOK).
2. EX 10" AC WTR TO BE REMOVED DURING THE CONSTRUCTION OF 30" BRINE PIPELINE.
3. THE CONTRACTOR SHALL INSTALL A 2-INCH HIGHLINE, CONNECT TEMPORARY SERVICES, INSTALL NEW PIPELINE AS SHOWN ON PLANS, DISINFECT (PER AWWA C651 AND AMENDMENTS THERETO), TEST AND REINSTALL SERVICES BEFORE PROCEEDING TO THE NEXT PHASE.
4. NO STRUCTURE SHALL BE MORE THAN 1000 FEET FROM A "LIVE" FIRE HYDRANT AT ANY TIME DURING CONSTRUCTION THE DISTANCES SHALL BE MEASURED USING STREETS, PRIVATE ROADS, OR OTHER ROUTES DRIVEN BY EMERGENCY VEHICLES.
5. CONTRACTOR SHALL COORDINATE HIGHLINE PHASING WITH CONTRACT 40380-D.



C-198

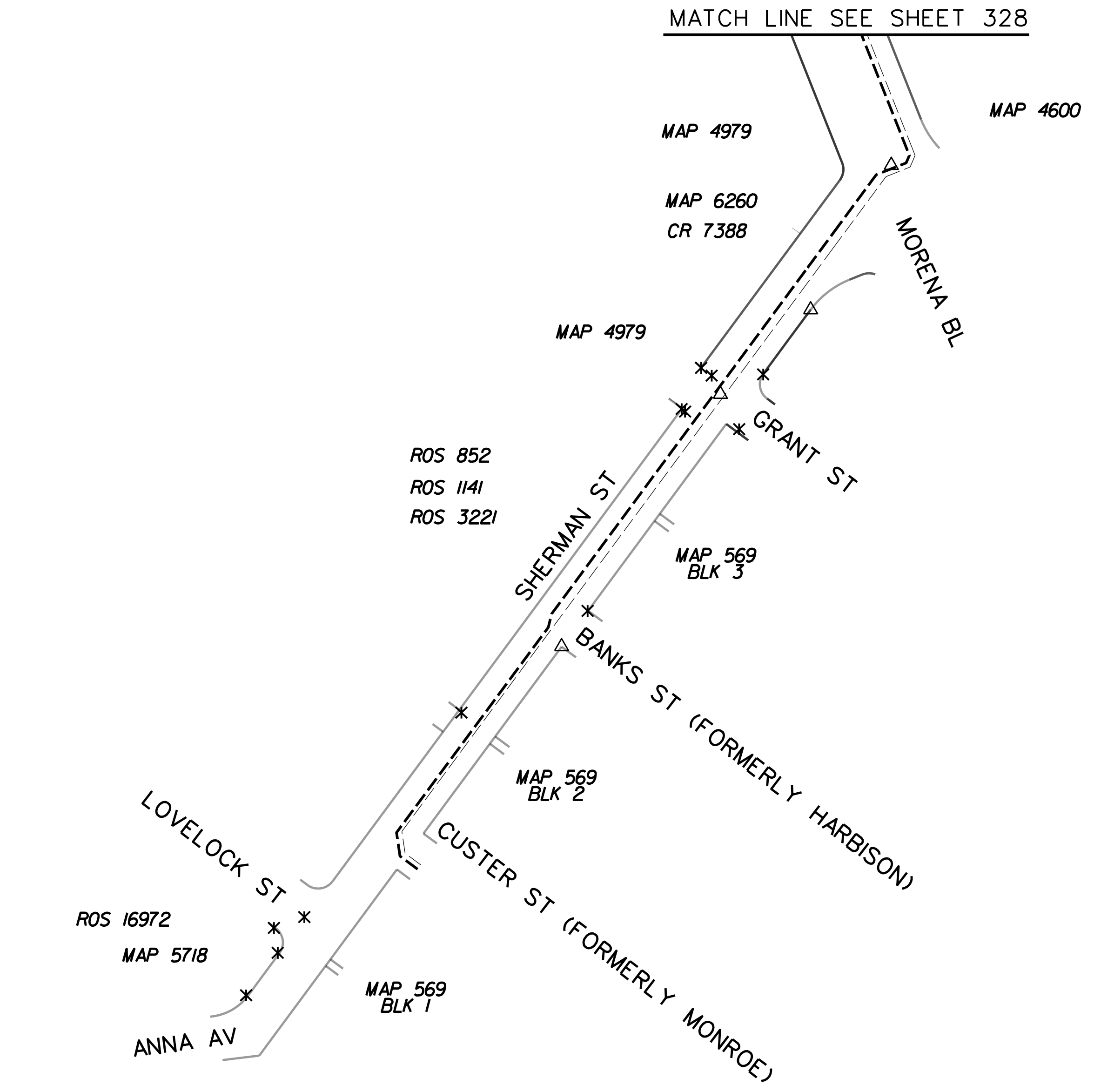
PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE SOUTH WORK BY CITY FORCES WATER RELOCATION IN SHERMAN ST.			
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 207 OF 339 SHEETS			WATER WBS S-16027
APPROVED: <i>Reynold Martin</i> FOR CITY ENGINEER REYNAHER MARTIN PRINT DCE NAME	DATE 12-28-21 89993 RCE#	SUBMITTED BY: J. BERMUDO PROJECT MANAGER	
CHECKED BY: A. ABUTIN PROJECT ENGINEER	DATE STARTED DATE COMPLETED		
DESCRIPTION ORIGINAL ADDENDUM A	BY RR AECOM	APPROVED <i>Reynold Martin</i>	DATE 1-13-22
SEE SHEETS CCS27 COORDINATE SEE SHEETS CCS83 COORDINATE			40067-207-D



CONTRACTOR INSPECTOR

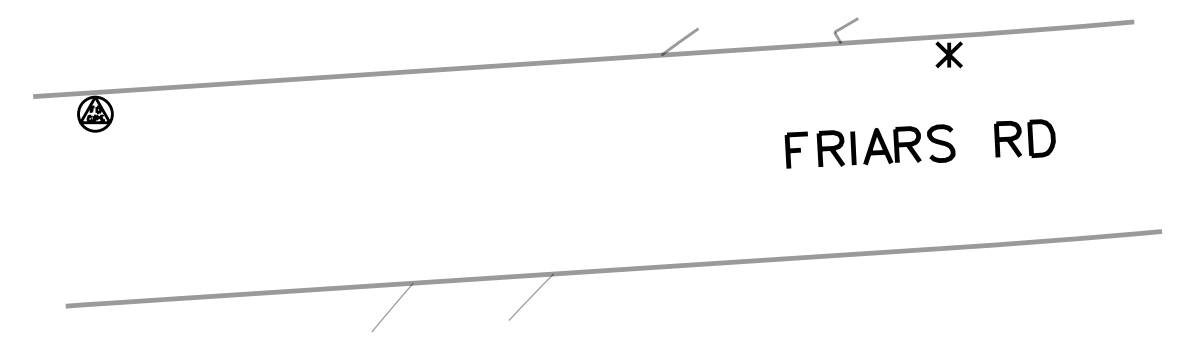
DATE STARTED DATE COMPLETED

WORK BY CITY FORCES



MATCH LINE SEE SHEET 328

LEGEND	
✱	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
⊠	LOCATION OF SURVEY BENCH MARK
⊕	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
----	PROPOSED SEWER FORCEMAIN
----	PROPOSED BRINE CENTRATE

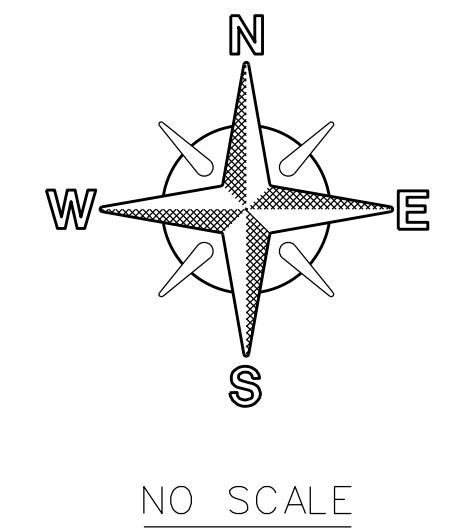


MONUMENTATION / SURVEY NOTES:

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C-278

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP**

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 327 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 RCE#	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER
DESCRIPTION ADDENDUM A	BY KWH	CHIEF ENGINEER ALLAN ABUTIN PROJECT ENGINEER
APPROVED: <i>Reyhaneh Martin</i>	DATE 1/18/22	COORDINATOR 218-1707 CCS27 COORDINATE
		6268407-1858444 CCS83 COORDINATE
CONTRACTOR	DATE STARTED	40067-327-D
INSPECTOR	DATE COMPLETED	

CONSULTANT

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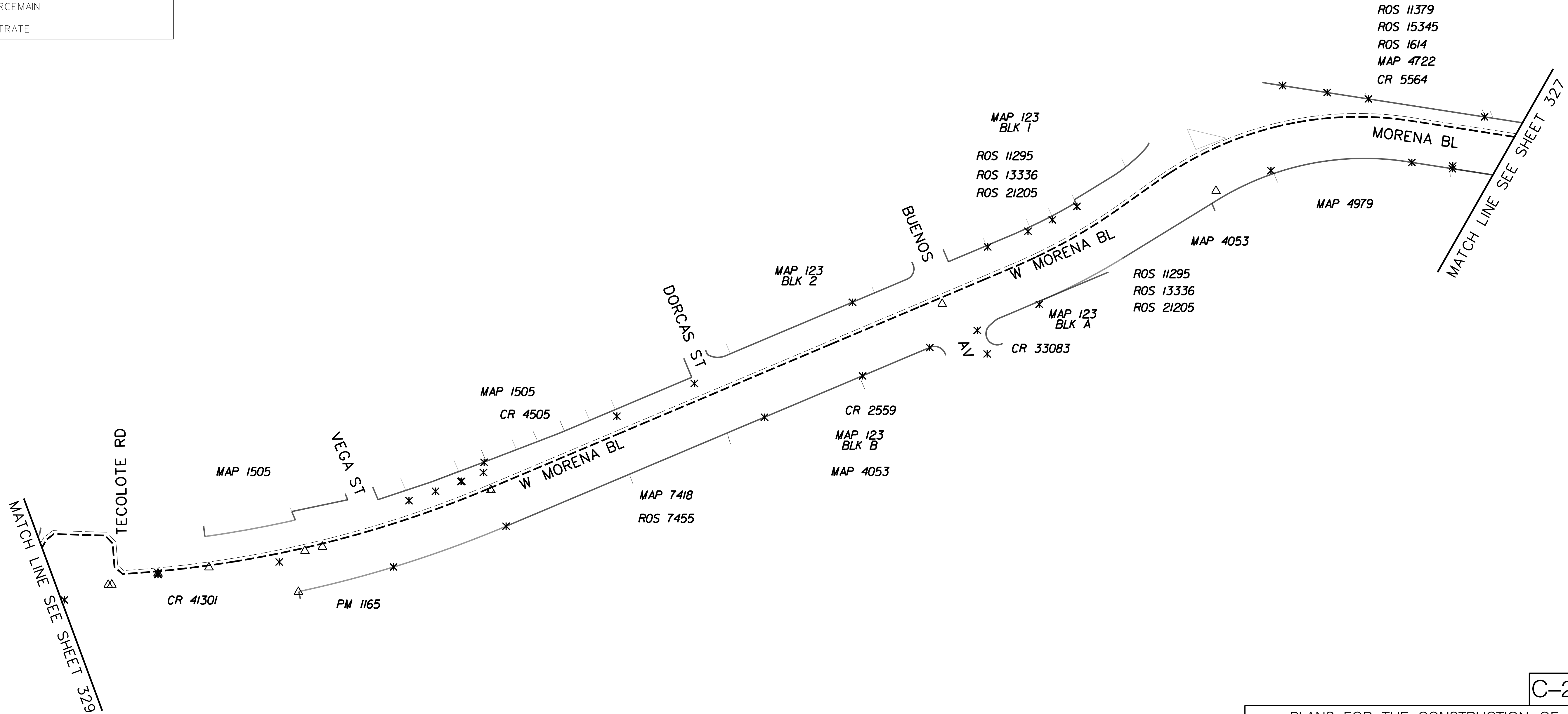
2710 Loker Avenue West
Suite 100
Carlsbad, California 92010
760-931-7700
Fax: 760-931-8880
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NEW SHEET

LEGEND	
✱	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
▣	LOCATION OF SURVEY BENCH MARK
⊕	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
---	PROPOSED SEWER FORCEMAIN
---	PROPOSED BRINE CENTRATE



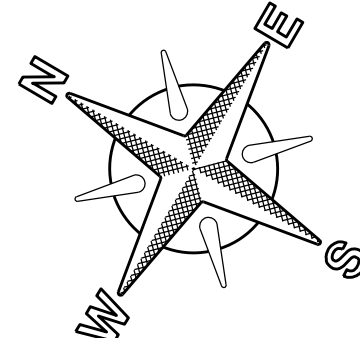
C-279

MONUMENTATION / SURVEY NOTES:

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NO SCALE

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP

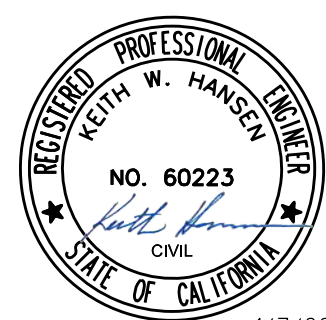
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 328 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 RCE#	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER
DESCRIPTION ADDENDUM A	BY KWH	CHIEF ENGINEER ALLAN ABUTIN PROJECT ENGINEER
APPROVED: <i>Reyhaneh Martin</i>	DATE 1/18/22	218-1707 CCS27 COORDINATE
		6268407-1858444 CCS83 COORDINATE
CONTRACTOR	DATE STARTED	40067-328-D
INSPECTOR	DATE COMPLETED	

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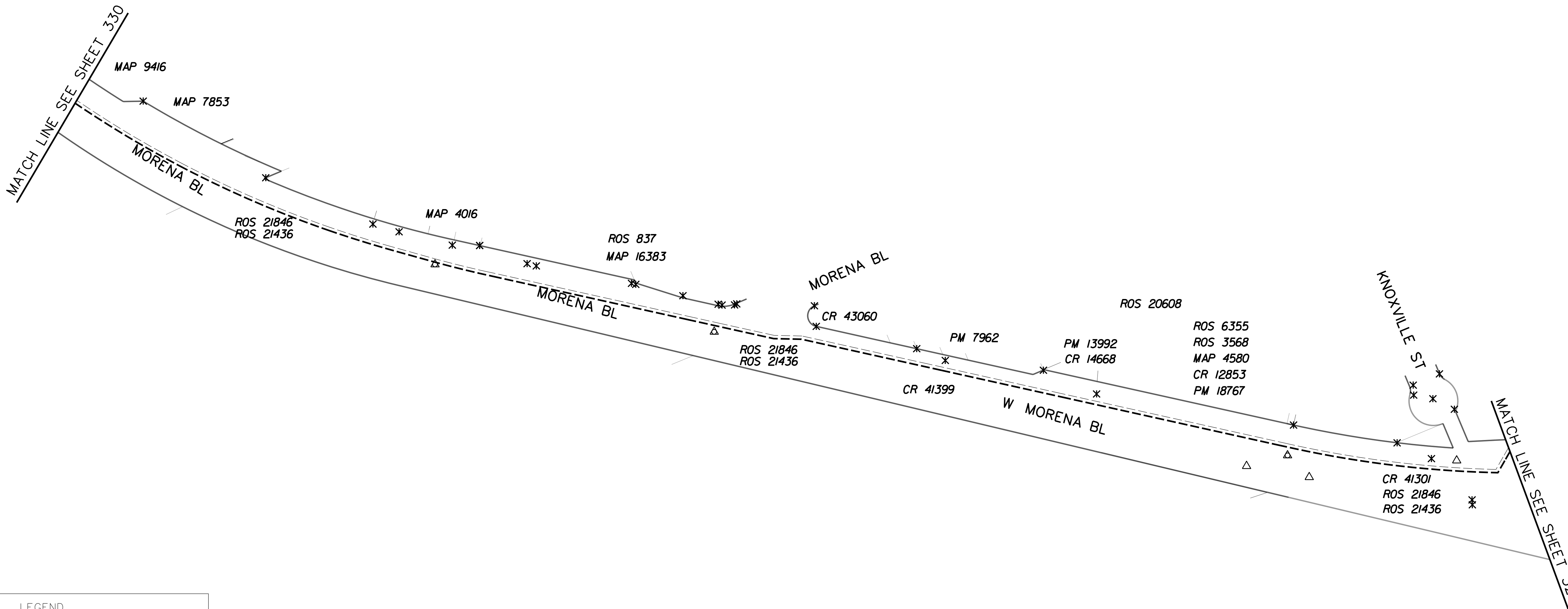
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C-280

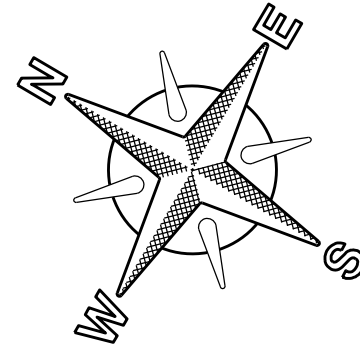


MONUMENTATION / SURVEY NOTES:

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NO SCALE

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP**

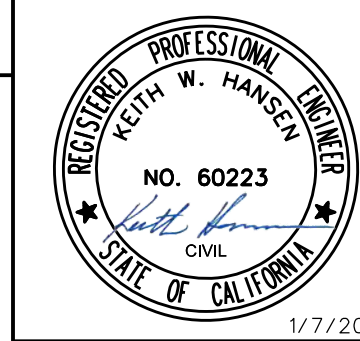
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 329 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 RCE#	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER DRAWN BY: ALLAN ABUTIN PROJECT ENGINEER
DESCRIPTION ADDENDUM A	BY KWH	DATE 1/18/22
DATE STARTED		DATE COMPLETED
CONTRACTOR		INSPECTOR
6268407-1858444 CCS27 COORDINATE		40067-329-D CCS83 COORDINATE

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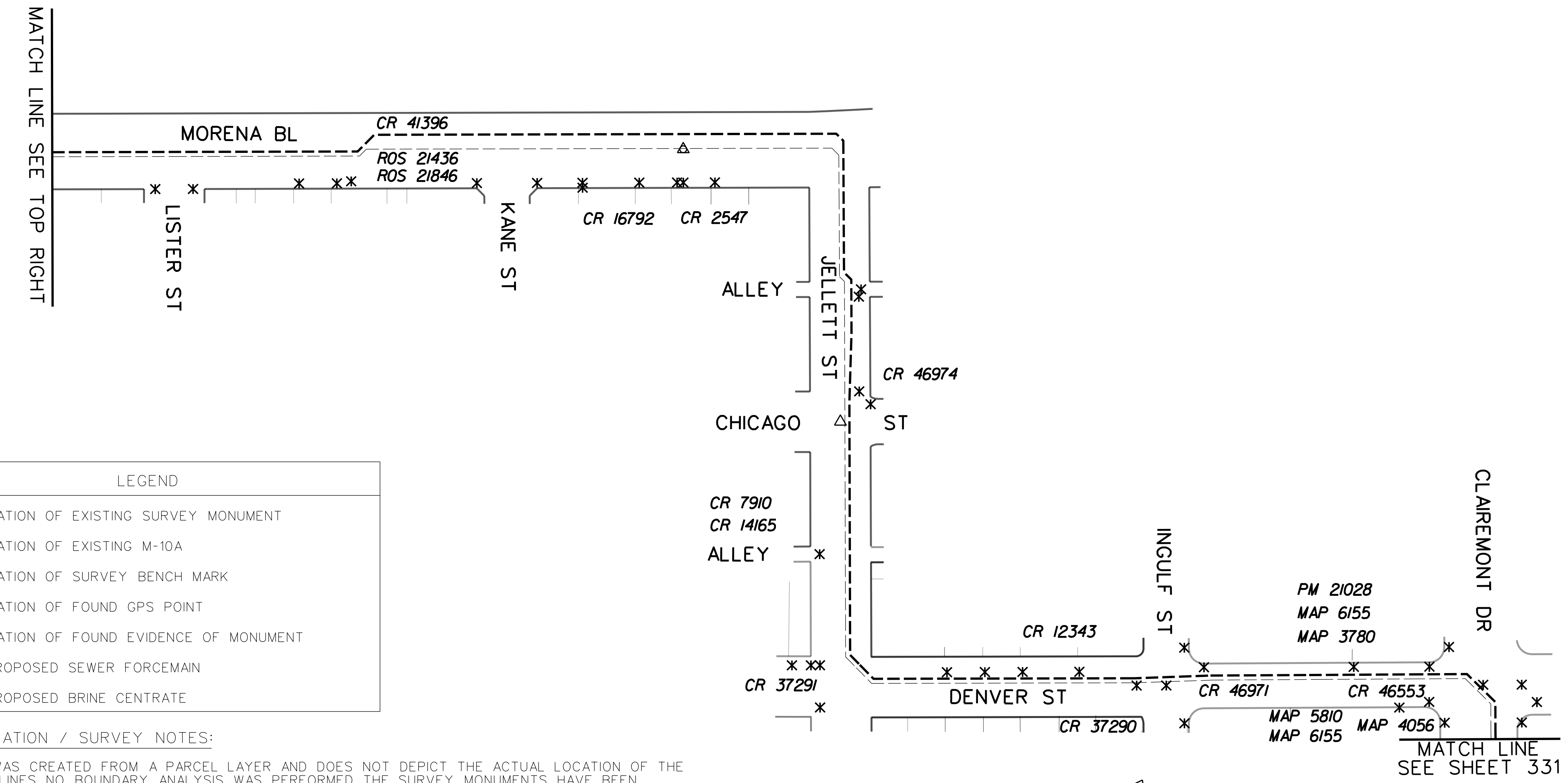
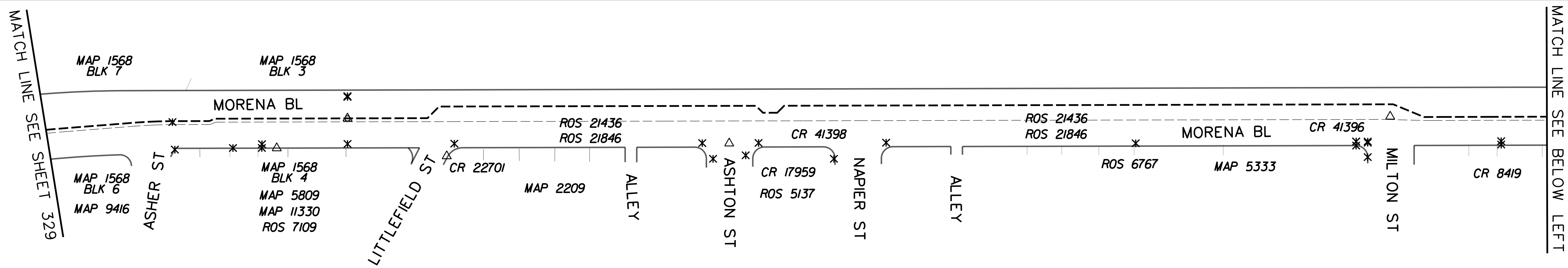
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NEW SHEET



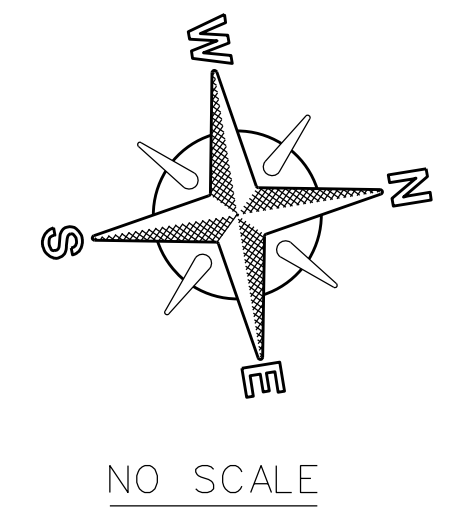
LEGEND	
✱	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
⊠	LOCATION OF SURVEY BENCH MARK
⊙	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
- - - -	PROPOSED SEWER FORCEMAIN
- · - · -	PROPOSED BRINE CENTRATE

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C-281

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH**

MONUMENTATION MAP

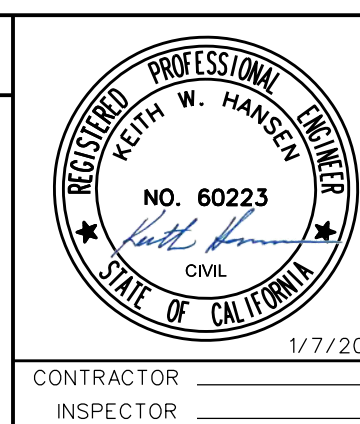
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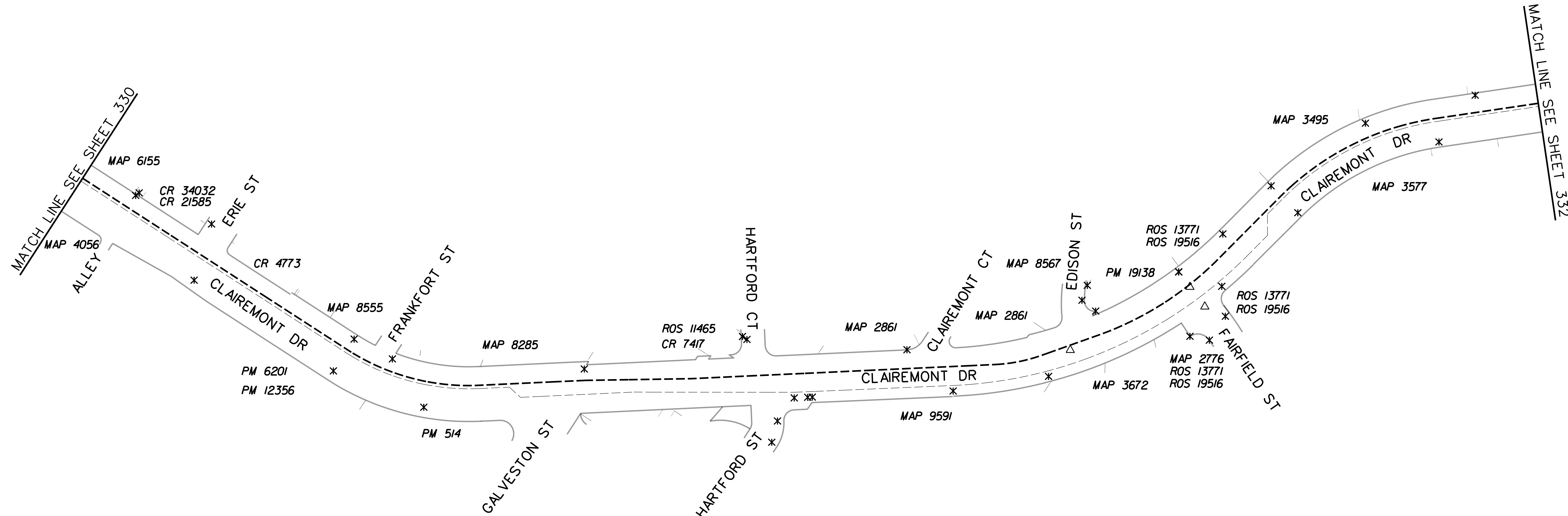
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CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 330 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 RCE#	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER
DESCRIPTION ADDENDUM A	BY KWH	CHIEF ENGINEER ALLAN ABUTIN PROJECT ENGINEER
APPROVED: <i>Reyhaneh Martin</i>	DATE 1/18/22	FILED
CONTRACTOR		DATE STARTED
INSPECTOR		DATE COMPLETED
		4268407-1858444 CCS27 COORDINATE
		40067-330-D CCS83 COORDINATE



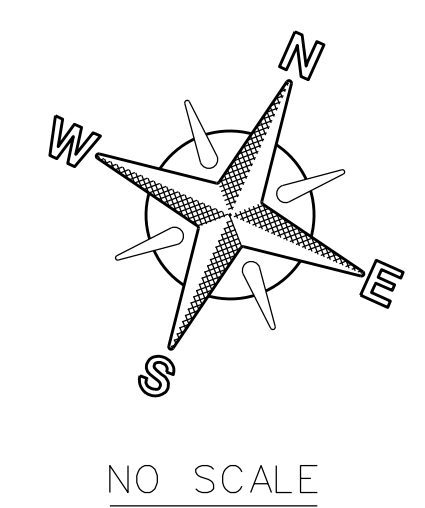
LEGEND	
X	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
□	LOCATION OF SURVEY BENCH MARK
⊙	LOCATION OF FOUND GPS POINT
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NO SCALE

C-282

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP**

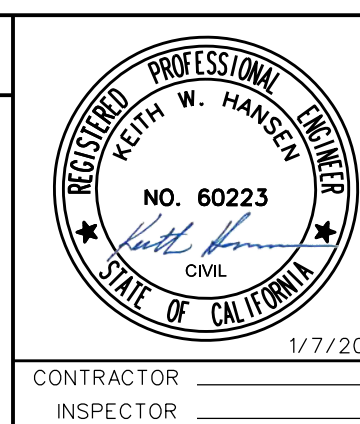
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 331 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 RCE#	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER CHECKED BY: ALLAN ABUTIN PROJECT ENGINEER
DESCRIPTION ADDENDUM A	BY KWH	DATE 1/18/22
218-1707 CCS27 COORDINATE		6268407-1858444 CCS83 COORDINATE
CONTRACTOR		DATE STARTED
INSPECTOR		DATE COMPLETED
		40067-331-D

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2710 Loker Avenue West
Suite 100
Carlsbad, California 92010
760-931-7700
Fax: 760-931-8880
OdayConsultants.com

Civil Engineering
Planning
Processing
Surveying



NEW SHEET

PWP MORENA CONVEYANCE MIDDLE (40067-D)

CONTRACTOR'S RESPONSIBILITIES

- PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
- NOTIFY SDG&E AT LEAST 30 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (I.E., 69 KV & HIGHER)
- LOCATE AND RECONNECT ALL SEWER LATERALS. LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. LATERAL RECORDS ARE AVAILABLE TO THE CONTRACTOR AT THE WATER DEPARTMENT, 2797 CAMINITO CHOLLAS. LOCATE THE IMPROVEMENTS THAT WILL BE AFFECTED BY LATERAL REPLACEMENTS.
- EXCAVATE AROUND WATER METER BOX (CITY PROPERTY SIDE) TO DETERMINE IN ADVANCE, THE SIZE OF EACH SERVICE BEFORE TAPPING MAIN.
- CITY FORCES, WHEN SPECIFIED OR SHOWN ON THE PLANS, WILL MAKE PERMANENT CUTS & PLUGS AND CONNECTIONS.
- KEEP EXISTING MAINS IN SERVICE IN LIEU OF HIGH-LINING, UNLESS OTHERWISE SPECIFIED AND OR SHOWN ON PLANS.
- THE LOCATIONS OF EXISTING BUILDINGS AS SHOWN ON THE PLAN ARE APPROXIMATE.
- STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE GREENBOOK STANDARD SPECIFICATIONS SECTION 402-UTILITIES.
- EXISTING UTILITY CROSSING AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAN VIEW.
- ALL ADVANCE METERING INFRASTRUCTURE (AMI) DEVICES ATTACHED TO THE WATER METER OR LOCATED IN OR NEAR WATER METER BOXES, COFFINS, OR VAULTS SHALL BE PROTECTED AT ALL TIMES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE COATED AND HOLIDAY FREE AS SPECIFIED IN THE WHITEBOOK. IF USING WAX TAPE, OVERLAP EXISTING METALLIC PIPING BY 12 INCHES ON EACH SIDE. IF ANY BURIED PIPE MATERIALS ARE TO BE CHANGED FROM NONMETALLIC TO METALLIC DURING THE CONSTRUCTION PHASE, THIS CHANGE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY'S CORROSION ENGINEER.

CONSTRUCTION STORM WATER PROTECTION NOTES

- TOTAL SITE DISTURBANCE AREA (ACRES) 6.4 AC
HYDROLOGIC UNIT/ WATERSHED Penasquitos HU/Mission Bay Watershed
San Diego HU/SD River Watershed
HYDROLOGIC SUBAREA NAME & NO. Miramar HA (906,40), Tecolote HA (906,50)
Mission San Diego HSA (907,11)
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
 SWPPP
THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT (CGP) ORDER 2009-0009-DWO AS AMENDED BY ORDER 2010-0014-DWO AND 2012-0006-DWO
TRADITIONAL: RISK LEVEL 1 2 3
LUP: RISK TYPE 1 2 3
- CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW

PERMANENT STORM WATER BMP CATEGORY:

- PRIORITY DEVELOPMENT PROJECT
 STANDARD DEVELOPMENT PROJECT
 PDP EXEMPT
 NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS

EXISTING STRUCTURES

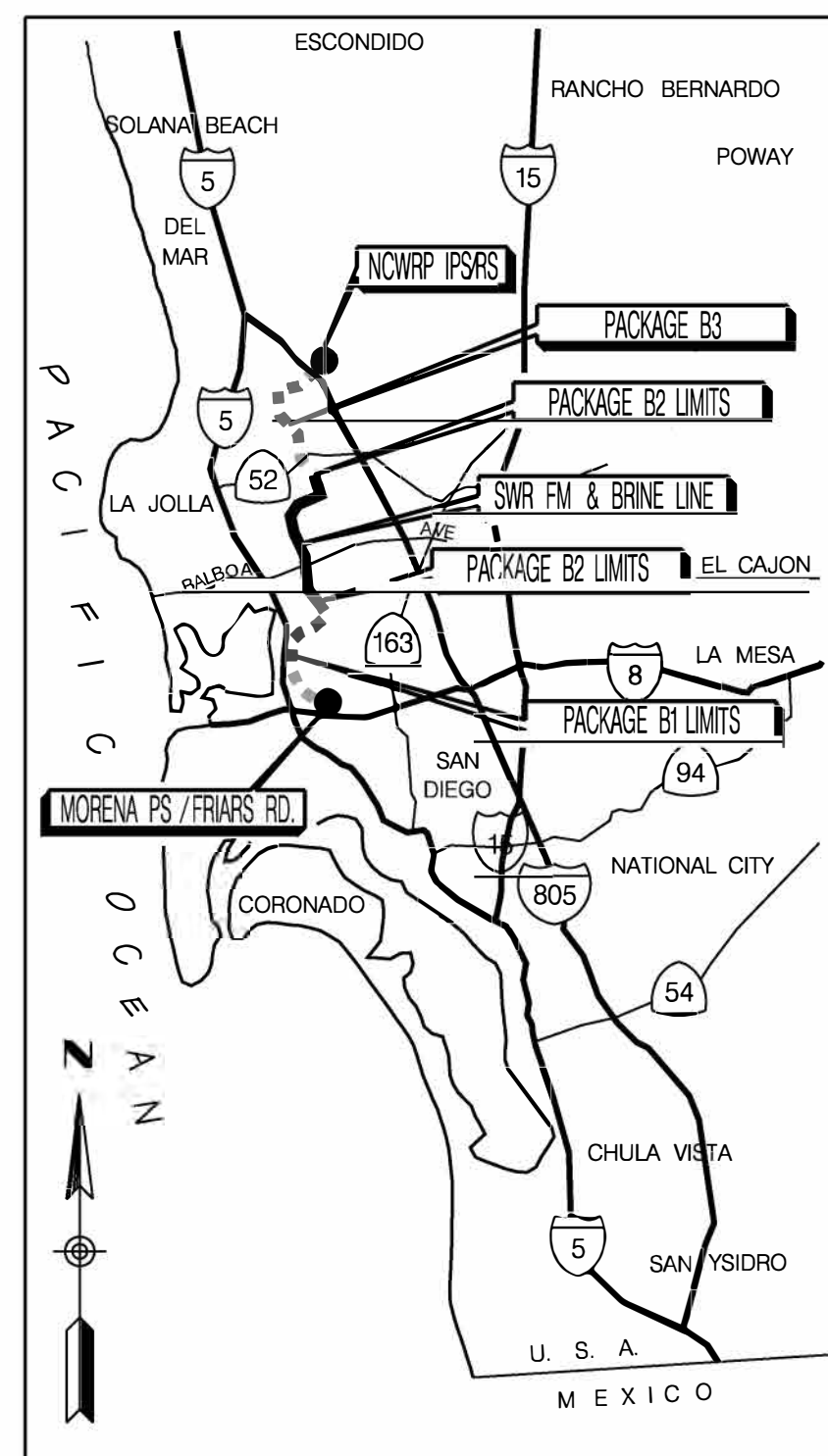
EX WATER MAIN & VALVES	--- -- ● --- --	EX TRAFFIC SIGNAL	⊗ TS
EX WATER METER	--- -- □ --- --	EX STREET LIGHT	✦ SL
EX FIRE HYDRANT	○ -- ●	GAS MAIN	-----
EX SEWER MAIN & MANHOLES	--- -- ○ --- --	ELEC. COND., TEL. COND., CATV	--- E --- T --- C ---
EX DRAINS	=====	RAILROAD, TROLLEY TRACKS	
EX PAVEMENT (PROFILE)	//////	EX CONCRETE ENCASUREMENT OF UTILITY	-----
EX GROUND LINE (PROFILE)	//////	EX RIGHT OF WAY	-----
EX STREET CENTERLINE	-----		

WORK TO BE DONE

THE PROJECT CONSISTS OF THE CONSTRUCTION FOR APPROX 18,400 LF OF NEW 48-INCH WASTEWATER FORCEMAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE, BEGINNING AT FORCEMAIN STATION 184+00 AND BRINE CENTRATE STATION 85+00 AT CLAIREMONT DR NORTH OF IROUQUOIS AVE TO FORCEMAIN STATION 368+00 AND BRINE CENTRATE STATION 1034+32 AT GENESEE AVE NORTH OF LEHRER DR.

MAJOR STREETS:

CLAIREMONT DR, CLAIREMONT MESA BLVD, GENESEE AVE



VICINITY MAP
NO SCALE

PROJECT TEAM

AECOM ENGINEERING - (619) 610.7700
AIR-X UTILITY SURVEYORS - (760) 480.2347
KATZ & ASSOCIATES - (858) 452.0031
MICHAEL BAKER INTERNATIONAL - (858) 614.5000
RYEAGER ENGINEERING - (619) 647.6265

MAJOR STREETS:

CLAIREMONT DR, CLAIREMONT MESA BLVD, AND GENESEE AVE.

FIELD DATA

BENCHMARK: NBP GAINES STREET AND NAPA STREET
ELEV = 21.742

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER CITY OF SAN DIEGO VERTICAL CONTROL

BASIS OF BEARINGS / COORDINATES:

THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983 CCS 83 ZONE 6 (EPOCH 1991.35)
BASED LOCALLY UPON FIELD OBSERVED TIES TO THE FOLLOWING CONTROL POINTS:

POINT#	NORTHING (GRID)	EASTING (GRID)
133	1899568.65	6270011.50
1037	1855580.54	6271247.23
1040	1854289.08	6276169.63

REFERENCES: ROS 14492

TOPOGRAPHY SOURCE: MBI

DATE OF SURVEY: JANUARY 25, 2017 - FEBRUARY 10, 2017

SURVEY NOTE: THIS SURVEY TIES IN HORIZONTALLY AND VERTICALLY TO CAD AERIAL MAPPING PROJECT 'LAKE MIRAMAR ALIGNMENT'. SAID MAPPING DATA WAS PROVIDED TO MBI FOR INTERNAL USE. AERIAL MAPPING WAS PERFORMED BY GPSI ON OCTOBER 24, 2015 (GPSI PROJECT NO. 15-843)

OWNER

SAN DIEGO PUBLIC UTILITIES DEPARTMENT
9192 TOPAZ WAY
SAN DIEGO, CA 92123
PHONE NUMBER (858) 292-6300

MONUMENTATION / SURVEY NOTES

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED WITH COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.

LEGEND

IMPROVEMENTS

SEWER FORCEMAIN & BRINE CENTRATE MAIN

SEWER VAULT

SEWER MANHOLE/PVC LINED

SEWER VAULT WITH VENT

VALVES WITH CAPS AND WELLS

BLOW-OFF ASSEMBLY

AIR & VACUUM VALVE

SURVEY MONUMENT

FIBER OPTIC PULL BOX

TRENCH RESURFACING

FOR ADDITIONAL SYMBOLS SEE RESURFACING, CURB RAMP, AND TRAFFIC CONTROL SHEETS.

STANDARD DRAWINGS

SDS-101, SDS-110 (TYPE C)

SDS-106, SDS-107, SDS-108, SDM-113, SDS-120, M-03A, SM-07

SDW-109, SDW-152, SDW-153, WV-05

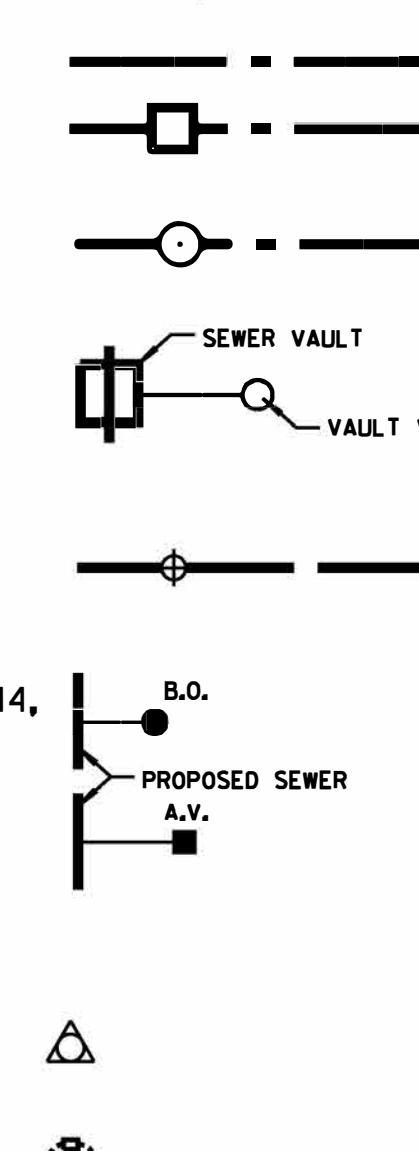
SDM-105, SDW-106, SDW-143, SDW-144, SDW-145, SDW-146, WB-05

SDM-105, SDW-117, SDW-158, SDW-159, SDW-160

M-10A, M-10B, M-10C

SDG-107, SDG-108

SYMBOL



DECLARATION OF RESPONSIBLE CHARGE

*I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ALAN SHAPIRO *[Signature]* 12/02/2021
DATE

G-01

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE

COVER SHEET

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.
▲	01/13/22	40067-01-D, 40067-05-D, 40067-254-D TO 40067-260-D ADDED SHEETS 40067-333-D THROUGH 40067-339-D	

WARNING
0 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

The City of
SAN DIEGO Public Utilities

AS-BUILT INFORMATION	
MATERIALS	MANUFACTURER
PIPE CL 235 (WATER)	-
PIPE SDR 35 (SEWER)	-
GATE VALVES	-
FIRE HYDRANTS	-
SEWER MANHOLES	-
REHABILITATE SEWER MANHOLES	-
REHABILITATE SEWER MAIN	-

SPEC. NO. 1797A	CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 01 OF 339 SHEETS	SEWER WBS B-15141
<i>[Signature]</i>	APPROVED: <i>[Signature]</i> 12-28-21 FOR CITY ENGINEER: REY-MANUEL MARTIN DATE: 03/08/22 PRINT DGE NAME: RCE#	SUBMITTED BY: J. BERMUDO PROJECT MANAGER
<i>[Signature]</i>	CHECKED BY: A. ABUTIN PROJECT ENGINEER	SEE SHEETS CCS27 COORDINATE
	DESCRIPTION: ORIGINAL BY: JL/RR APPROVED: P. H... DATE: 01/13/22 FILMED:	SEE SHEETS CCS83 COORDINATE
CONTRACTOR: 12/02/21	DATE STARTED:	40067-01 -D
INSPECTOR:	DATE COMPLETED:	

▲ CHANGED TOTAL NUMBER OF SHEETS

ADDENDUM A

PWP MORENA CONVEYANCE MIDDLE

PWP MORENA CONVEYANCE MIDDLE (40067-D)

CONTRACTOR'S RESPONSIBILITIES

- PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
- NOTIFY SDG&E AT LEAST 30 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (I.E., 69 KV & HIGHER)
- LOCATE AND RECONNECT ALL SEWER LATERALS. LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. LATERAL RECORDS ARE AVAILABLE TO THE CONTRACTOR AT THE WATER DEPARTMENT, 2797 CAMINITO CHOLLAS. LOCATE THE IMPROVEMENTS THAT WILL BE AFFECTED BY LATERAL REPLACEMENTS.
- EXCAVATE AROUND WATER METER BOX (CITY PROPERTY SIDE) TO DETERMINE IN ADVANCE, THE SIZE OF EACH SERVICE BEFORE TAPPING MAIN.
- CITY FORCES, WHEN SPECIFIED OR SHOWN ON THE PLANS, WILL MAKE PERMANENT CUTS & PLUGS AND CONNECTIONS.
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- STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE GREENBOOK STANDARD SPECIFICATIONS SECTION 402-UTILITIES.
- EXISTING UTILITY CROSSING AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAN VIEW.
- ALL ADVANCE METERING INFRASTRUCTURE (AMI) DEVICES ATTACHED TO THE WATER METER OR LOCATED IN OR NEAR WATER METER BOXES, COFFINS, OR VAULTS SHALL BE PROTECTED AT ALL TIMES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE COATED AND HOLIDAY FREE AS SPECIFIED IN THE WHITEBOOK. IF USING WAX TAPE, OVERLAP EXISTING METALLIC PIPING BY 12 INCHES ON EACH SIDE. IF ANY BURIED PIPE MATERIALS ARE TO BE CHANGED FROM NONMETALLIC TO METALLIC DURING THE CONSTRUCTION PHASE, THIS CHANGE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY'S CORROSION ENGINEER.

CONSTRUCTION STORM WATER PROTECTION NOTES

- TOTAL SITE DISTURBANCE AREA (ACRES) 6.4 AC
HYDROLOGIC UNIT/ WATERSHED Penasquitos HU/Mission Bay Watershed
San Diego HU/SD River Watershed
HYDROLOGIC SUBAREA NAME & NO. Miramar HA (906,40), Tecolote HA (906,50)
Mission San Diego HSA (907,11)
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
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THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001 AS AMENDED BY R9-2015-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT (CGP) ORDER 2009-0009-DWO AS AMENDED BY ORDER 2010-0014-DWO AND 2012-0006-DWO
TRADITIONAL: RISK LEVEL 1 2 3
LUP: RISK TYPE 1 2 3
- CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW

PERMANENT STORM WATER BMP CATEGORY:

- PRIORITY DEVELOPMENT PROJECT
 STANDARD DEVELOPMENT PROJECT
 PDP EXEMPT
 NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS

EXISTING STRUCTURES

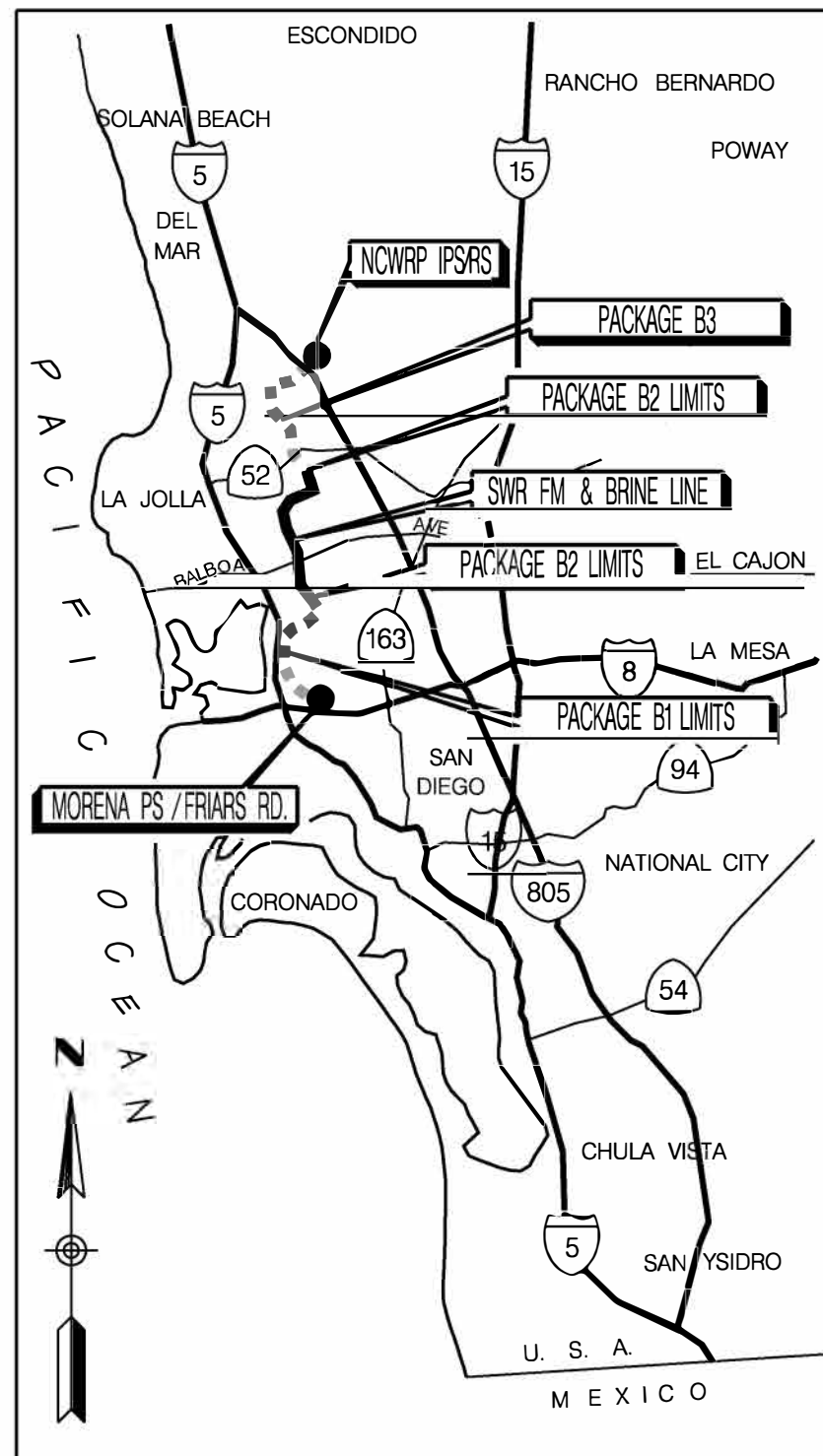
EX WATER MAIN & VALVES	---	EX TRAFFIC SIGNAL	⊗ TS
EX WATER METER	---	EX STREET LIGHT	+ SL
EX FIRE HYDRANT	○-○	GAS MAIN	----
EX SEWER MAIN & MANHOLES	-----○-----	ELEC. COND., TEL. COND., CATV	---E---T---C---
EX DRAINS	=====	RAILROAD, TROLLEY TRACKS	
EX PAVEMENT (PROFILE)	////	EX CONCRETE ENCASUREMENT OF UTILITY	-----
EX GROUND LINE (PROFILE)		EX RIGHT OF WAY	-----
EX STREET CENTERLINE	-----		

WORK TO BE DONE

THE PROJECT CONSISTS OF THE CONSTRUCTION FOR APPROX 18,400 LF OF NEW 48-INCH WASTEWATER FORCEMAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE, BEGINNING AT FORCEMAIN STATION 184+00 AND BRINE CENTRATE STATION 85+00 AT CLAIREMONT DR NORTH OF IROQUOIS AVE TO FORCEMAIN STATION 368+00 AND BRINE CENTRATE STATION 1034+32 AT GENESEE AVE NORTH OF LEHRER DR.

MAJOR STREETS:

CLAIREMONT DR, CLAIREMONT MESA BLVD, GENESEE AVE



VICINITY MAP
NO SCALE

PROJECT TEAM

AECOM ENGINEERING - (619) 610.7700
AIR-X UTILITY SURVEYORS - (760) 480.2347
KATZ & ASSOCIATES - (858) 452.0031
MICHAEL BAKER INTERNATIONAL - (858) 614.5000
RFYEAGER ENGINEERING - (619) 647.6265

MAJOR STREETS:

CLAIREMONT DR, CLAIREMONT MESA BLVD, AND GENESEE AVE.

FIELD DATA

BENCHMARK: NBP GAINES STREET AND NAPA STREET
ELEV = 21.742

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER CITY OF SAN DIEGO VERTICAL CONTROL

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BASED LOCALLY UPON FIELD OBSERVED TIES TO THE FOLLOWING CONTROL POINTS:

POINT#	NORTHING (GRID)	EASTING (GRID)
133	1899568.65	6270011.50
1037	1855580.54	6271247.23
1040	1854289.08	6276169.63

REFERENCES: ROS 14492

TOPOGRAPHY SOURCE: MBI

DATE OF SURVEY: JANUARY 25, 2017 - FEBRUARY 10, 2017

SURVEY NOTE: THIS SURVEY TIES IN HORIZONTALLY AND VERTICALLY TO CAD AERIAL MAPPING PROJECT "LAKE MIRAMAR ALIGNMENT". SAID MAPPING DATA WAS PROVIDED TO MBI FOR INTERNAL USE. AERIAL MAPPING WAS PERFORMED BY GPSI ON OCTOBER 24, 2015 (GPSI PROJECT NO. 15-843)

OWNER

SAN DIEGO PUBLIC UTILITIES DEPARTMENT
9192 TOPAZ WAY
SAN DIEGO, CA 92123
PHONE NUMBER (858) 292-6300

MONUMENTATION / SURVEY NOTES

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IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED WITH COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.

LEGEND

IMPROVEMENTS

SEWER FORCEMAIN & BRINE CENTRATE MAIN

SEWER VAULT

SEWER MANHOLE/PVC LINED

SEWER VAULT WITH VENT

VALVES WITH CAPS AND WELLS

BLOW-OFF ASSEMBLY

AIR & VACUUM VALVE

SURVEY MONUMENT

FIBER OPTIC PULL BOX

TRENCH RESURFACING

FOR ADDITIONAL SYMBOLS SEE RESURFACING, CURB RAMP, AND TRAFFIC CONTROL SHEETS.

STANDARD DRAWINGS

SDS-101, SDS-110 (TYPE C)

SDS-106, SDS-107, SDS-108, SDM-113, SDS-120, M-03A, SM-07

SDW-109, SDW-152, SDW-153, WV-05

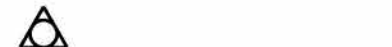
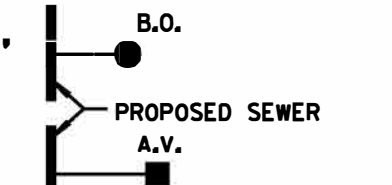
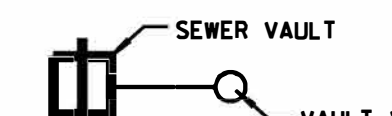
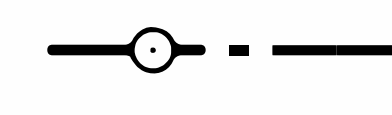
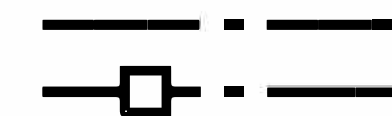
SDM-105, SDW-106, SDW-143, SDW-144, SDW-145, SDW-146, WB-05

SDM-105, SDW-117, SDW-158, SDW-159, SDW-160

M-10A, M-10B, M-10C

SDG-107, SDG-108

SYMBOL



DECLARATION OF RESPONSIBLE CHARGE

*I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ALAN SHAPIRO

12/02/2021

DATE

G-01

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE

COVER SHEET

SPEC. NO. 1797A	CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 01 OF 339 SHEETS	SEWER WBS B-15141
APPROVED: [Signature] FOR THE ENGINEER REY-MANUEL MARTIN PRINT DCE NAME	12-28-21 DATE 08983 RCE#	SUBMITTED BY: J. BERMUDO PROJECT MANAGER
DESCRIPTION	BY	APPROVED
ORIGINAL	JL/RR	DATE
ADDENDUM A	AECOM	DATE FILMED
		12/13/22
CONTRACTOR	DATE STARTED	
INSPECTOR	DATE COMPLETED	
		40067-01 -D

CONSTRUCTION CHANGE / ADDENDUM				WARNING
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	0 1
▲	01/13/22	40067-01-D, 40067-05-D, 40067-254-D TO 40067-260-D ADDED SHEETS 40067-333-D THROUGH 40067-339-D		

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

The City of
SAN DIEGO Public Utilities

AS-BUILT INFORMATION	
MATERIALS	MANUFACTURER
PIPE CL 235 (WATER)	-
PIPE SDR 35 (SEWER)	-
GATE VALVES	-
FIRE HYDRANTS	-
SEWER MANHOLES	-
REHABILITATE SEWER MANHOLES	-
REHABILITATE SEWER MAIN	-



12/02/21

▲ CHANGED TOTAL NUMBER OF SHEETS

ADDENDUM A

PWP MORENA CONVEYANCE MIDDLE

SHEET INDEX

SHEET NO.	DISCIPLINE CODE	TITLE	DESCRIPTION
MECHANICAL			
213	M-01	MECHANICAL PLAN	PRV PLAN AND SECTION
214	M-02	MECHANICAL DETAILS	PRV VAULT NO. 1 PLAN AND SECTIONS
215	M-03	MECHANICAL DETAILS	PRV VAULT NO. 2 PLAN AND SECTIONS
216	M-04	MECHANICAL DETAILS	MISCELLANEOUS DETAILS-1
217	M-05	MECHANICAL DETAILS	MISCELLANEOUS DETAILS-2
218	M-06	MECHANICAL DETAILS	MISCELLANEOUS DETAILS-3
P & ID			
219	I-01	INSTRUMENTATION	GENERAL NOTES, SYMBOLS, LEGEND & ABBREVIATIONS - 1
220	I-02	INSTRUMENTATION	GENERAL NOTES, SYMBOLS, LEGEND, & ABBREVIATIONS - 2
221	I-03	INSTRUMENTATION	GENERAL NOTES, SYMBOLS, LEGEND, & ABBREVIATIONS - 3
222	I-04	INSTRUMENTATION	PRV VAULT P&ID
223	I-05	INSTRUMENTATION	PLU VAULT P&ID
CATHODIC PROTECTION			
224	CP-01	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE BI/B2
225	CP-02	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE BI/B2
226	CP-03	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
227	CP-04	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
228	CP-05	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
229	CP-06	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
230	CP-07	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE B2
231	CP-08	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE B2
232	CP-09	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
233	CP-10	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
234	CP-11	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
235	CP-12	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE B3
236	CP-13	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE B3
237	CP-14	CATHODIC PROTECTION PLAN	CATHODIC PROTECTION SITE PLAN ICCP PACKAGE B3
238	CP-15	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
239	CP-16	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
240	CP-17	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
241	CP-18	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
242	CP-19	CATHODIC PROTECTION DETAILS	CATHODIC PROTECTION DETAILS
STREET RESURFACING			
243	C-200	STREET RESURFACING PLAN	STA. 673+46 BRINE CUSTER ST. TO STA. 24+55 FM MORENA BLVD.
244	C-201	STREET RESURFACING PLAN	STA. 24+55 MORENA BLVD. TO STA. 43+05 W. MORENA BLVD
245	C-202	STREET RESURFACING PLAN	STA. 43+05 TO STA. 63+04 W. MORENA BLVD.
246	C-203	STREET RESURFACING PLAN	STA. 63+04 W. MORENA BLVD. TO STA. 83+09 MORENA BLVD.
247	C-204	STREET RESURFACING PLAN	STA. 83+09 TO STA. 103+00 MORENA BLVD.
248	C-205	STREET RESURFACING PLAN	STA. 103+00 TO STA. 127+48 MORENA BLVD.
249	C-206	STREET RESURFACING PLAN	STA. 127+48 DENVER ST. TO STA. 146+96 CLAREMONT DR.
250	C-207	STREET RESURFACING PLAN	STA. 146+96 TO STA. 166+97 CLAREMONT DR.
251	C-208	STREET RESURFACING PLAN	STA. 166+97 TO STA. 184+00 CLAREMONT DR.
252	C-209	STREET RESURFACING PLAN	STA. 184+00 TO STA. 207+98 CLAREMONT DR.
253	C-210	STREET RESURFACING PLAN	STA. 207+98 TO STA. 229+00 CLAREMONT DR.
254	C-211	STREET RESURFACING PLAN	STA. 229+00 TO STA. 248+00 CLAREMONT DR.
255	C-212	STREET RESURFACING PLAN	STA. 248+00 TO STA. 268+00 CLAREMONT DR.
256	C-213	STREET RESURFACING PLAN	STA. 268+00 TO STA. 285+50 CLAREMONT DR.
257	C-214	STREET RESURFACING PLAN	STA. 285+50 TO STA. 305+49 CLAREMONT DR.
258	C-215	STREET RESURFACING PLAN	STA. 305+49 TO STA. 326+47 CLAREMONT DR.
259	C-216	STREET RESURFACING PLAN	STA. 326+47 CLAREMONT DR. TO STA. 347+01 CLAREMONT MESA BLVD.
260	C-217	STREET RESURFACING PLAN	STA. 347+01 CLAREMONT MESA BLVD. TO STA. 368+00 GENESEE AVE.
261	C-218	STREET RESURFACING PLAN	STA. 673+46 BRINE CUSTER ST. TO STA. 24+55 FM MORENA BLVD.
262	C-219	STREET RESURFACING PLAN	STA. 388+10 TO STA. 408+18 GENESEE AVE.
263	C-220	STREET RESURFACING PLAN	STA. 408+18 TO STA. 428+17 GENESEE AVE.
264	C-221	STREET RESURFACING PLAN	STA. 428+17 TO STA. 447+16 GENESEE AVE.
265	C-222	STREET RESURFACING PLAN	STA. 447+16 TO STA. 466+17 GENESEE AVE.
266	C-223	STREET RESURFACING PLAN	STA. 466+17 TO STA. 487+04 GENESEE AVE.
267	C-224	STREET RESURFACING PLAN	STA. 487+04 GENESEE AVE. TO STA. 508+88 TOWNE CENTRE DR.
268	C-225	STREET RESURFACING PLAN	STA. 508+88 TO STA. 527+88 TOWNE CENTRE DR.
269	C-226	STREET RESURFACING PLAN	STA. 527+88 TO STA. 546+86 TOWNE CENTRE DR.
270	C-227	STREET RESURFACING PLAN	STA. 546+86 TOWNE CENTRE DR. TO 576+74 EXECUTIVE DR.
CURB RAMP			
271	C-228	CURB RAMP LOCATIONS	SHERMAN ST./MORENA BLVD.
272	C-229	CURB RAMP LOCATIONS	BUENOS AVE./W. MORENA BLVD.
273	C-230	CURB RAMP LOCATIONS	VEGA ST./W. MORENA BLVD.
274	C-231	CURB RAMP LOCATIONS	W. MORENA BLVD./MORENA BLVD.
275	C-232	CURB RAMP LOCATIONS	MORENA BLVD.
276	C-233	CURB RAMP LOCATIONS	MORENA BLVD./WELLS ST./DENVER ST.
277	C-234	CURB RAMP LOCATIONS	CLAREMONT DR.
278	C-235	CURB RAMP LOCATIONS	CLAREMONT DR.
279	C-236	CURB RAMP LOCATIONS	CLAREMONT DR.

SHEET INDEX

SHEET NO.	DISCIPLINE CODE	TITLE	DESCRIPTION
280	C-237	CURB RAMP LOCATIONS	CLAREMONT DR.
281	C-238	CURB RAMP LOCATIONS	CLAREMONT DR.
282	C-239	CURB RAMP LOCATIONS	CLAREMONT DR.
283	C-240	CURB RAMP LOCATIONS	CLAREMONT DR.
284	C-241	CURB RAMP LOCATIONS	CLAREMONT DR.
285	C-242	CURB RAMP LOCATIONS	CLAREMONT DR.
286	C-243	CURB RAMP LOCATIONS	CLAREMONT DR.
287	C-244	CURB RAMP LOCATIONS	CLAREMONT DR./CLAREMONT MESA BLVD.
288	C-245	CURB RAMP LOCATIONS	CLAREMONT MESA BLVD./GENESEE AVE.
289	C-246	CURB RAMP LOCATIONS	GENESEE AVE.
290	C-247	CURB RAMP LOCATIONS	GENESEE AVE.
291	C-248	CURB RAMP LOCATIONS	GENESEE AVE.
292	C-249	CURB RAMP LOCATIONS	GENESEE AVE.
293	C-250	CURB RAMP LOCATIONS	GENESEE AVE.
294	C-251	CURB RAMP LOCATIONS	NOBLE DR.
295	C-252	CURB RAMP LOCATIONS	TOWNE CENTRE DR.
296	C-253	CURB RAMP LOCATIONS	TOWNE CENTRE DR.
297	C-254	CURB RAMP LOCATIONS	TOWNE CENTRE DR.
298	C-255	CURB RAMP DETAILS	SHERMAN ST./WELLS ST. - LOCATION 3 AND 8
299	C-256	CURB RAMP DETAILS	W. MORENA BLVD./BUENOS AVE. - LOCATION 22
300	C-257	CURB RAMP DETAILS	W. MORENA BLVD./ MORENA BLVD. - LOCATION 30 AND 33
301	C-258	CURB RAMP DETAILS	W. MORENA BLVD./ MORENA BLVD. - LOCATION 31 AND 32
302	C-259	CURB RAMP DETAILS	MORENA BLVD./ LISTER ST. - LOCATION 60 AND 61
303	C-260	CURB RAMP DETAILS	CLAREMONT DR./ DENVER ST. - LOCATION 84, 85, AND 86
304	C-261	CURB RAMP DETAILS	CLAREMONT DR./ HARTFORD CT./BURGENER BLVD. - LOCATION 89 AND 104
305	C-262	CURB RAMP DETAILS	CLAREMONT DR./ CALLE NEIL - LOCATION 111, 112, 114, 115 AND 116
306	C-263	CURB RAMP DETAILS	CLAREMONT DR./ BLACKFOOT AVE - LOCATION 117 AND 118
307	C-264	CURB RAMP DETAILS	CLAREMONT DR./ KNAPP ST. - LOCATION 123 AND 124
308	C-265	CURB RAMP DETAILS	CLAREMONT DR./ CHIPPEWA CT./ DALLES AVE. - LOCATION 151 AND 155
309	C-266	CURB RAMP DETAILS	CLAREMONT DR./ FEATHER AVE./ EMET CT. - LOCATION 159 AND 163
310	C-267	CURB RAMP DETAILS	CLAREMONT DR./ FOX AVE - LOCATION 165 AND 166
311	C-268	CURB RAMP DETAILS	CLAREMONT DR./ JOPLIN AVE - LOCATION 185 AND 187
312	C-269	CURB RAMP DETAILS	GENESEE AVE./ CLAREMONT MESA BLVD. - LOCATION 217 AND 220
313	C-270	CURB RAMP DETAILS	GENESEE AVE. - LOCATION 227 AND 233
314	C-271	CURB RAMP DETAILS	GENESEE AVE./ LISTER CT. - LOCATION 238
315	C-272	CURB RAMP DETAILS	GENESEE AVE./ MADOFF LN. - LOCATION 242 AND 244
316	C-273	CURB RAMP DETAILS	NOBEL DR./ LOMBARD PL. - LOCATION 277 AND 278
317	C-274	CURB RAMP DETAILS	TOWNE CENTRE DR./ EXALTING WY. - LOCATION 291, 292, 293, AND 294
318	C-275	CURB RAMP DETAILS	TOWNE CENTRE DR./ TOWNE CENTRE GATEWAY - LOCATION 300 AND 302
319	C-276	CURB RAMP DETAILS	TOWNE CENTRE DR./ TOWNE CENTRE GATEWAY - LOCATION 305 AND 306
320	G-08A	GENERAL NOTES	ENVIRONMENTAL MITIGATION NOTES
321	G-08B	GENERAL NOTES	ENVIRONMENTAL MITIGATION NOTES
ALIGNMENT REPORTS			
322	G-10	HORIZ ALIGN REPORT 1	FORCEMAIN STA 184+00 TO STA 359+47.76
323	G-11	HORIZ ALIGN REPORT 2	FORCEMAIN STA 359+47.76 TO STA 368+00
324	G-12	HORIZ ALIGN REPORT 3	BRINE-CENTRATE STA 851+00 TO STA 1018+85.58
325	G-13	HORIZ ALIGN REPORT 4	BRINE-CENTRATE STA 1018+85.58 TO STA 1034+32
326	G-27A	WATER RELOCATION PLAN	STA 4+00 TO STA 20+18.57 CLAREMONT ST.
327	C-278	MONUMENTATION MAP	SHERMAN ST.
328	C-279	MONUMENTATION MAP	W. MORENA BLVD./ MORENA BLVD.
329	C-280	MONUMENTATION MAP	W. MORENA BLVD./ MORENA BLVD.
330	C-281	MONUMENTATION MAP	MORENA BLVD./ WELLS ST./ DENVER ST.
331	C-282	MONUMENTATION MAP	CLAREMONT DR.
332	C-283	MONUMENTATION MAP	CLAREMONT DR.
333	C-284	MONUMENTATION MAP	CLAREMONT DR.
334	C-285	MONUMENTATION MAP	CLAREMONT DR.
335	C-286	MONUMENTATION MAP	CLAREMONT DR.
336	C-287	MONUMENTATION MAP	CLAREMONT DR.
337	C-288	MONUMENTATION MAP	CLAREMONT DR.
338	C-289	MONUMENTATION MAP	CLAREMONT DR./ CLAREMONT MESA BLVD./ GENESEE AVE.
339	C-290	MONUMENTATION MAP	GENESEE AVE.


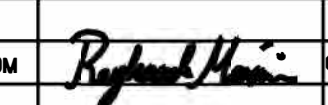
TRAFFIC CONTROL PLANS			
T1-T2	T-O1, T-O2	COVER	NOTES AND SIGNAGE AND KEY MAP
T3-T19	SC-113 TO SC-201	STAGE CONSTRUCTION	CLAREMONT DR. FROM CALLE NEIL TO CLAREMONT MESA BLVD
T19-T140	T53-113 TO T6-201	TRAFFIC CONTROL	CLAREMONT MESA BLVD FROM CLAREMONT DR TO GENESEE AVE
T141-T151	DE-112 TO DE-200	DETOUR SHEETS	GENESEE AVE FROM CLAREMONT MESA BLVD TO NORTH OF LEHRER DR

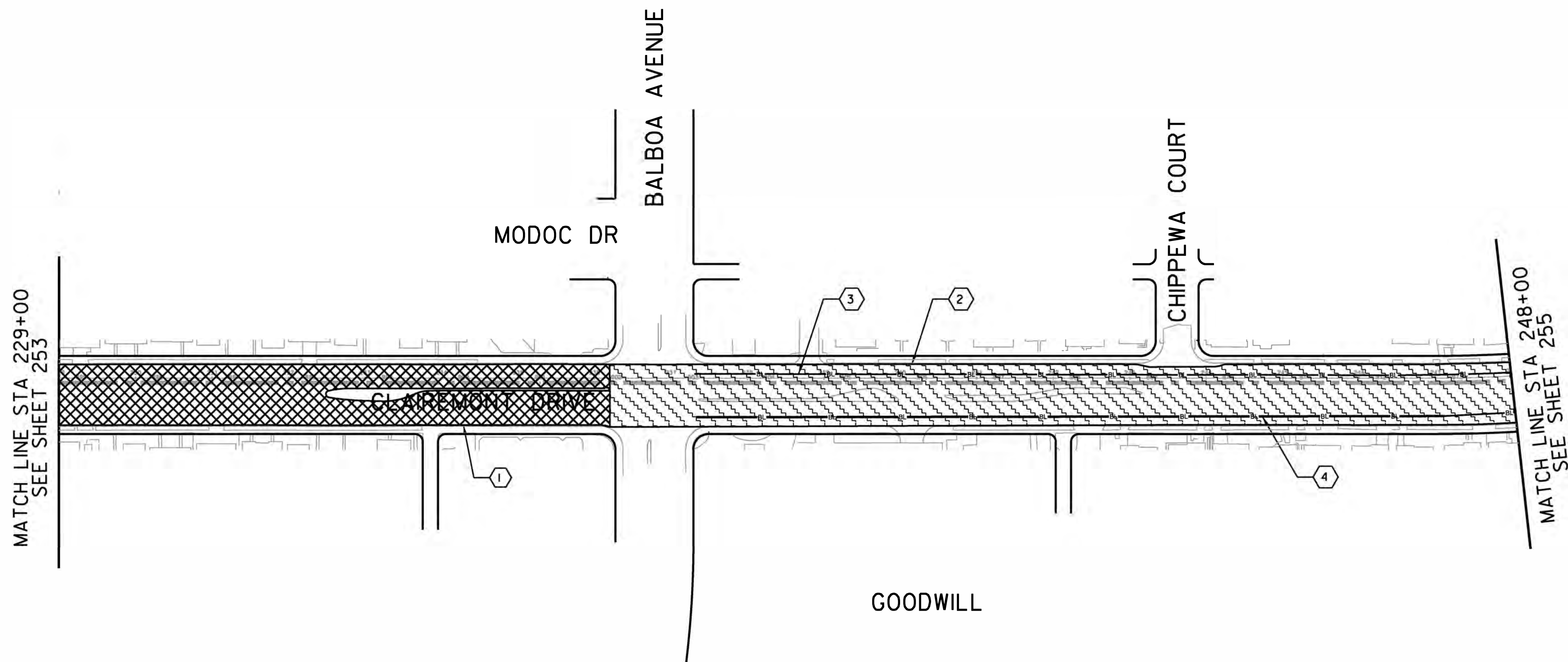
- DISCIPLINE CODE**
- G GENERAL
 - D DEMOLITION
 - C CIVIL
 - CP CATHODIC PROTECTION
 - L LANDSCAPE
 - A ARCHITECTURAL
 - S STRUCTURAL
 - M MECHANICAL
 - E ELECTRICAL
 - I INSTRUMENTATION
 - SC STAGE CONSTRUCTION
 - T TRAFFIC CONTROL
 - DE DETOUR

G-05

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE

SHEET INDEX - 2

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 05 OF 339 SHEETS		SUBMITTED BY J. BERMUDO PROJECT MANAGER
APPROVED  FOR THE ENGINEER REYNAHER MARTIN PRINT DCE NAME		DATE 12-28-21 89963 RCE#
DESCRIPTION ORIGINAL	BY LW AECOM	APPROVED  DATE 01/13/22
ADDENDUM A	AECOM	FILED SEE SHEETS CCS27 COORDINATE SEE SHEETS CCS83 COORDINATE
CONTRACTOR INSPECTOR		DATE STARTED DATE COMPLETED 40067-05 -D



LEGEND	
	APPROXIMATE LIMITS OF RESURFACE AC OVERLAY
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT: SDG-106

NOTE:
THE ACTUAL PAVING WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES									
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	WIDTH	APPROX. AREA (SF)	
①	CLAIREMONT DR*	SS-007271 SS-007270	44.37 79.526	FULL WIDTH COLD MILLING AND AC OVERLAY 3"	229+00	236+20	80'	56,788	
②	CLAIREMONT DR*	SS-007258	96.24	SLURRY SEAL TYPE II/III	236+20	248+00	80'	94,264	
③	CLAIREMONT DR*	SS-007271 SS-007270 SS-007258	44.37 79.526 96.24	SLURRY SEAL TYPE I	237+41	248+00	10'	10,677	
④	CLAIREMONT DR*	SS-007271 SS-007270 SS-007258	44.37 79.526 96.24	SLURRY SEAL TYPE I	237+41	248+00	10'	10,713	
									TOTAL AREA OF SLURRY SEAL TYPE I 21,390 SF
									TOTAL AREA OF SLURRY SEAL TYPE II 94,264 SF
									TOTAL AREA OF SLURRY SEAL TYPE III 94,264 SF
									TOTAL AREA OF FULL WIDTH COLD MILLING AND AC OVERLAY 3" 56,788 SF

*STATIONS BASED ON FORCEMAIN LINE

MATCH LINE STA 229+00
SEE SHEET 253

MATCH LINE STA 248+00
SEE SHEET 255

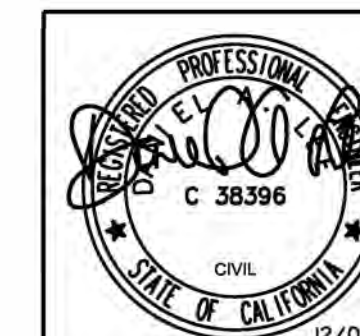
C-211

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN

STA. 229+00 TO STA. 248+00 CLAIREMONT DR.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 254 OF 339 SHEETS

SEWER
WBS B-15141



APPROVED: *Raymond Martin* 12-28-21
FOR CITY ENGINEER DATE
REYHANEH MARTIN 89993
PRINT DCE NAME RCE#

SUBMITTED BY
J. BERMUDO
PROJECT MANAGER

CHECKED BY
A. ABUTIN
PROJECT ENGINEER

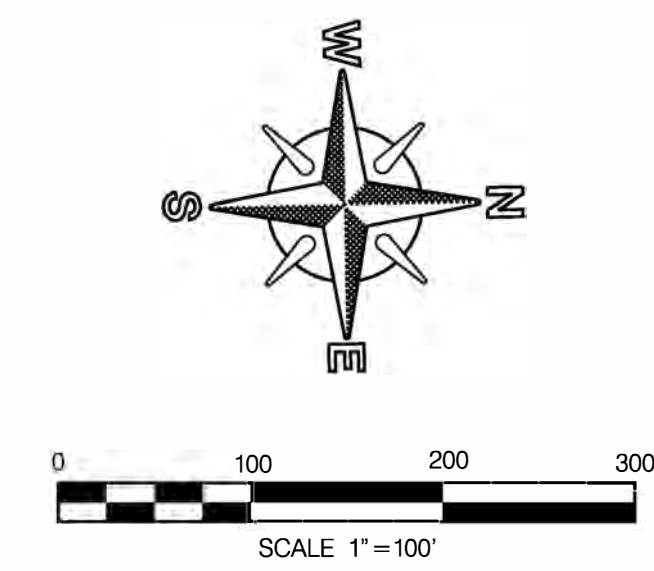
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				
ADDENDUM A	AECOM	<i>Raymond Martin</i>	01/13/22	

234-1707
CCS27 COORDINATE

6268407-187444
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

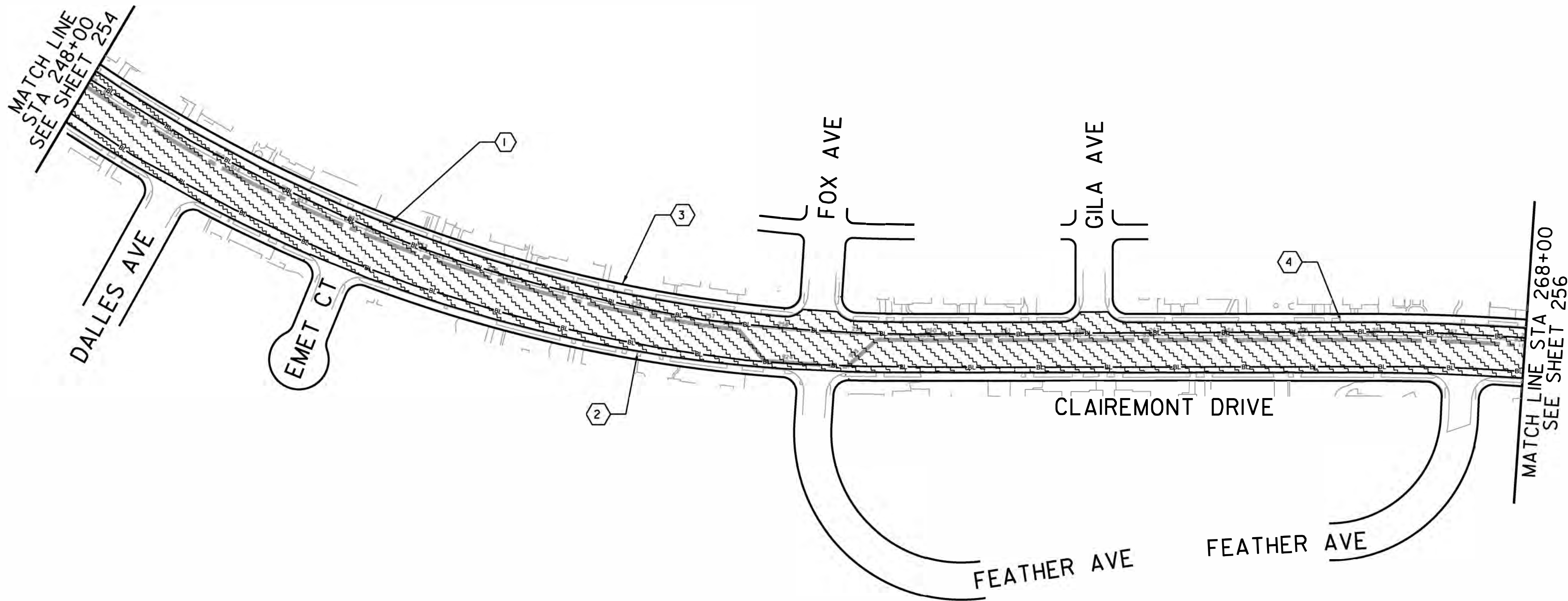
40067-254-D



△ CORRECTED LEGEND

ADDENDUM A

CLAIREMONT DR.

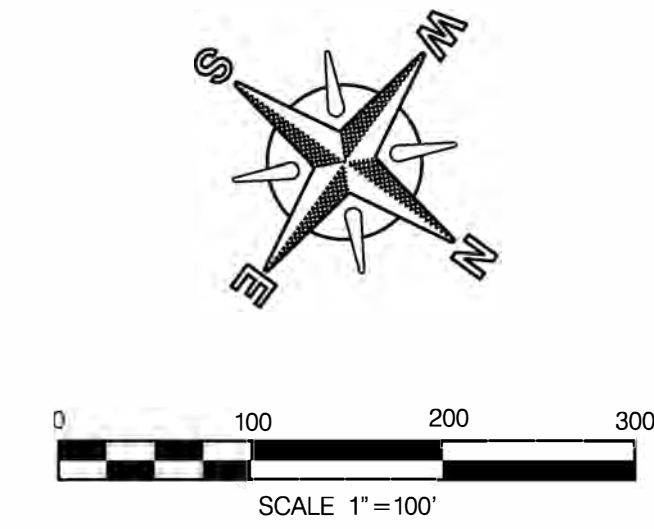


LEGEND	
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT; SDG-106

NOTE:
THE ACTUAL AREA WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES							
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	APPROX. AREA (SF)
①	CLAIREMONT DR•	SS-007258 SS-007257 SS-007256 SS-007255 SS-007254 SS-007253	96.24 77.672 82.384 76.888 78.064 90	SLURRY SEAL TYPE II/III	248+00	268+00	145,382
②	CLAIREMONT DR•	SS-007258 SS-007257 SS-007256 SS-007255 SS-007254 SS-007253	96.24 77.672 82.384 76.888 78.064 90	SLURRY SEAL TYPE I	248+00	268+00	20,000
③	CLAIREMONT DR•	SS-007258 SS-007257 SS-007256	96.24 77.672 82.384	SLURRY SEAL TYPE I	248+00	258+20	11,220
④	CLAIREMONT DR•	SS-007255 SS-007254 SS-007253	76.888 78.064 90	SLURRY SEAL TYPE I	258+20	268+00	9,800
					TOTAL AREA OF SLURRY SEAL TYPE I 41,020 SF		
					TOTAL AREA OF SLURRY SEAL TYPE II 145,382 SF		
					TOTAL AREA OF SLURRY SEAL TYPE III 145,382 SF		

*STATIONS BASED ON FORCEMAIN LINE



C-212

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN

STA. 248+00 TO STA. 268+00 CLAIREMONT DR.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 255 OF 339 SHEETS

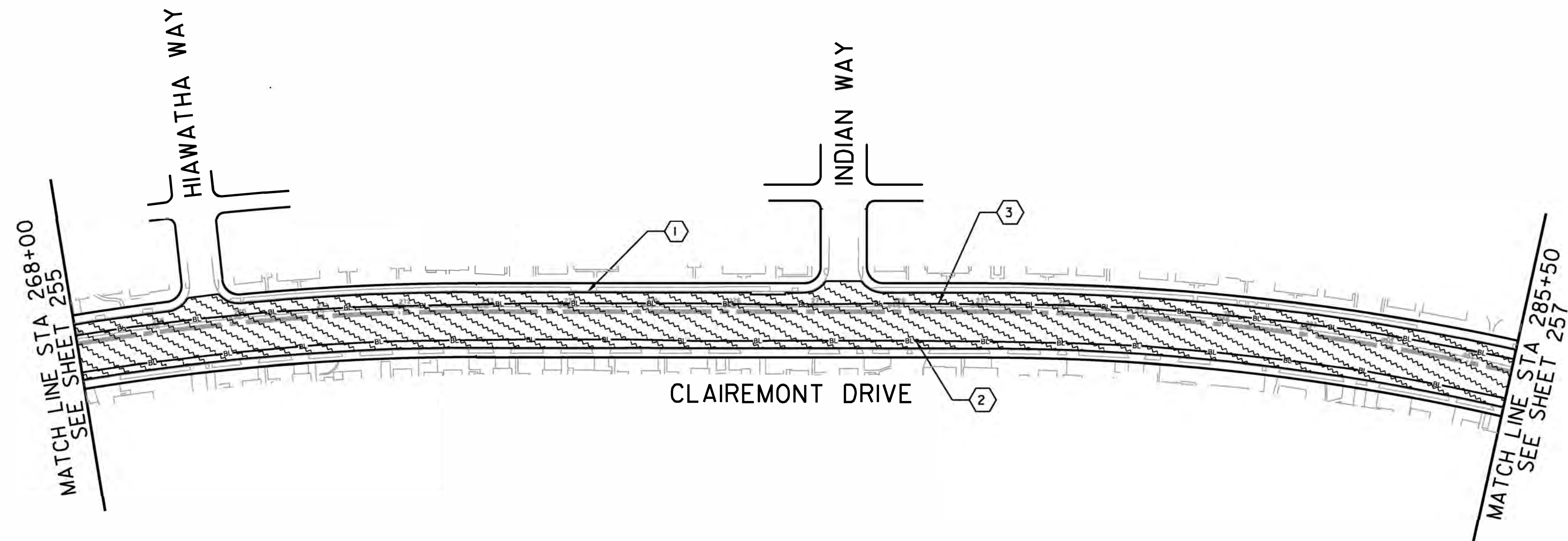
APPROVED BY: <i>R. Martin</i> FOR CHIEF ENGINEER REYHANER MARTIN PRINT DCE NAME	DATE: 12-28-21 88993 RCE#	SEWER WBS: B-15141 SUBMITTED BY: J. BERMUDO PROJECT MANAGER CHECKED BY: A. ABUTIN PROJECT ENGINEER
DESCRIPTION: ORIGINAL	BY: AECOM	APPROVED: <i>R. Martin</i>
DATE: 01/13/22	FILMED:	
CONTRACTOR: INSPECTOR:		DATE STARTED: DATE COMPLETED:

238-1707
CCS27 COORDINATE
6268407-1878444
CCS83 COORDINATE
40067-255-D

△ CORRECTED LEGEND

ADDENDUM A

CLAIREMONT DR.



LEGEND	
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT: SDG-106

NOTE:
THE ACTUAL AREA WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES								
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	WIDTH	APPROX. AREA (SF)
①	CLAIREMONT DR•	SS-007253 SS-007252 SS-007251	90 78.918 78.096	SLURRY SEAL TYPE II/III	268+00	285+50	72'	119,650
②	CLAIREMONT DR•	SS-007253 SS-007252 SS-007251	90 78.918 78.096	SLURRY SEAL TYPE I	268+00	285+50	10'	17,500
③	CLAIREMONT DR•	SS-007253 SS-007252 SS-007251	90 78.918 78.096	SLURRY SEAL TYPE I	268+00	285+50	10'	17,500
TOTAL AREA OF SLURRY SEAL TYPE I 35,000 SF								
TOTAL AREA OF SLURRY SEAL TYPE II 119,650 SF								
TOTAL AREA OF SLURRY SEAL TYPE III 119,650 SF								

*STATIONS BASED ON FORCEMAIN LINE

C-213

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN

STA. 268+00 TO STA. 285+50 CLAIREMONT DR.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 256 OF 339 SHEETS

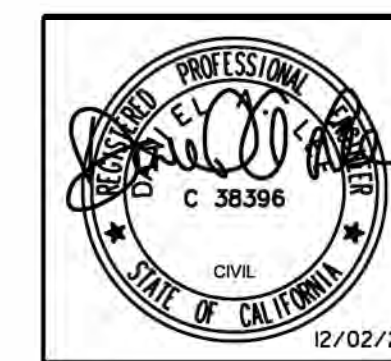
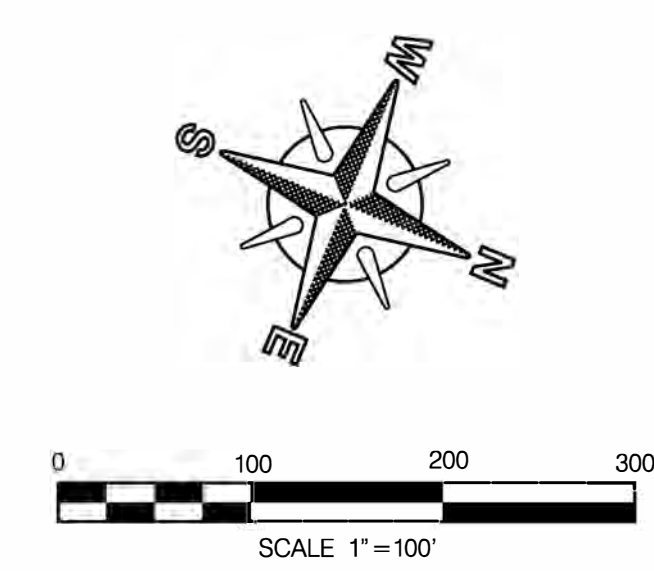
APPROVED: *Reynold Martin* 12-28-21
FOR CITY ENGINEER: SEYMENH MARTIN 89993
PRINT DCE NAME: REYNOLD MARTIN RCE#

DATE: 12-28-21
DATE: 01/13/22

DATE FILMED: 01/13/22

CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

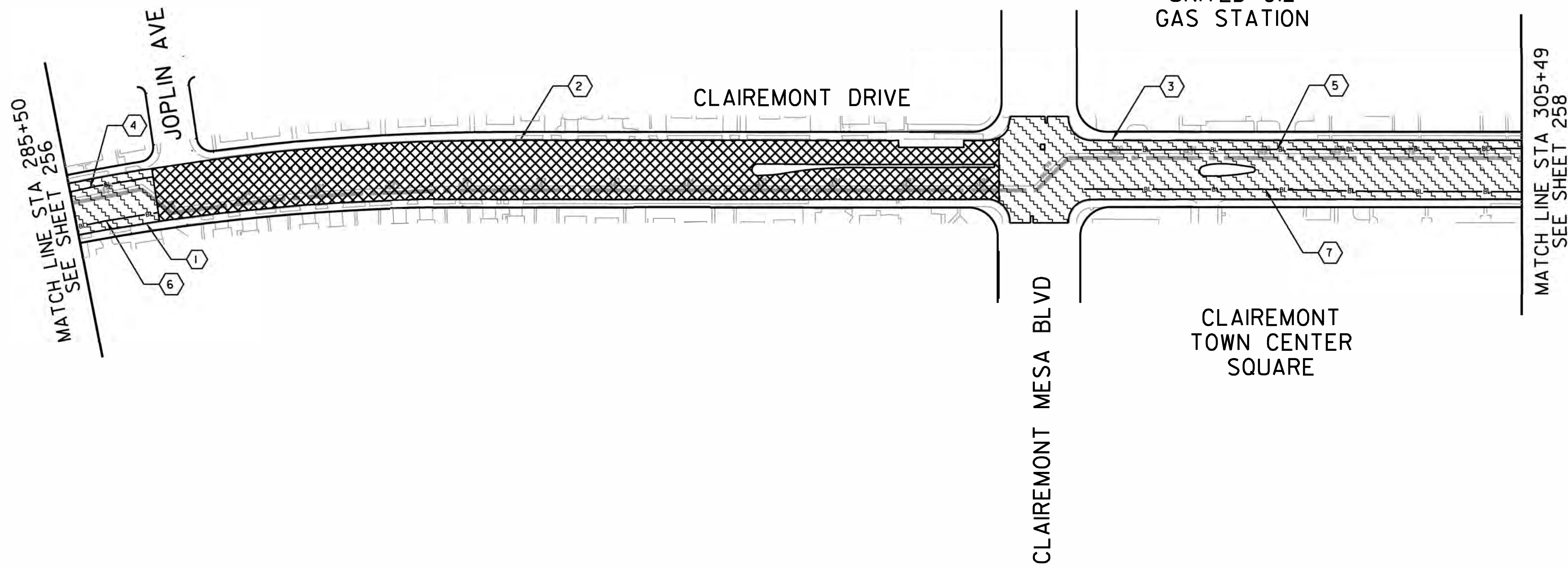
SEWER WBS: B-15141
SUBMITTED BY: J. BERMUDO PROJECT MANAGER
CHECKED BY: A. ABUTIN PROJECT ENGINEER
238-1701
6264207-1878444
40067-256-D



△ CORRECTED LEGEND

ADDENDUM A

CLAIREMONT DR.



LEGEND	
	APPROXIMATE LIMITS OF RESURFACE AC OVERLAY
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT: SDG-106

NOTE:
THE ACTUAL AREA WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES								
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	WIDTH	APPROX. AREA (SF)
①	CLAIREMONT DR*	SS-007251	78.096	SLURRY SEAL TYPE II/III	285+50	286+80	72'	8,091
②	CLAIREMONT DR*	SS-007269	88.948	FULL WIDTH COLD MILLING AND AC OVERLAY 3"	285+50	298+20	72'	86,562
③	CLAIREMONT DR*	SS-007268	92.972	SLURRY SEAL TYPE II/III	298+20	305+49	72'	61,078
④	CLAIREMONT DR*	SS-007251	78.096	SLURRY SEAL TYPE I	285+50	286+80	10'	1,143
⑤	CLAIREMONT DR*	SS-007268	92.972	SLURRY SEAL TYPE I	299+50	305+49	10'	5,951
⑥	CLAIREMONT DR*	SS-007251	78.096	SLURRY SEAL TYPE I	285+50	286+80	10'	1,121
⑦	CLAIREMONT DR*	SS-007268	92.972	SLURRY SEAL TYPE I	299+50	305+49	10'	5,934
TOTAL AREA OF SLURRY SEAL TYPE I 14,149 SF								
TOTAL AREA OF SLURRY SEAL TYPE II 69,169 SF								
TOTAL AREA OF SLURRY SEAL TYPE III 69,169 SF								
TOTAL AREA OF FULL WIDTH COLD MILLING AND AC OVERLAY 3' 86,562 SF								

*STATIONS BASED ON FORCEMAIN LINE

C-214

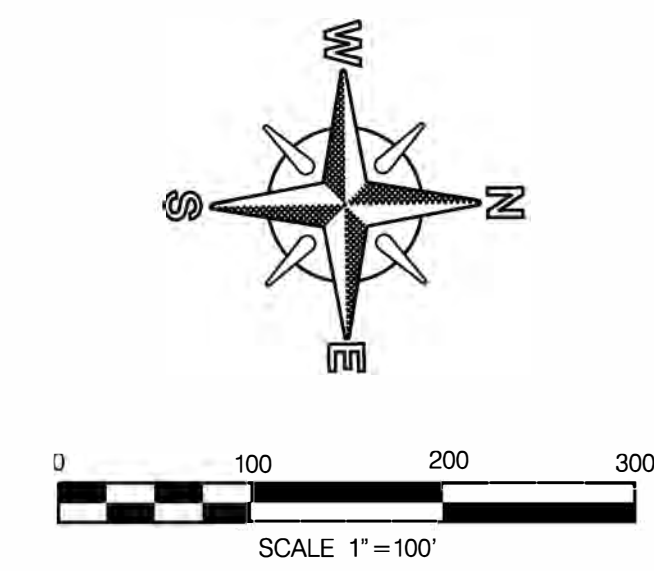
PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN

STA. 285+50 TO STA. 305+49 CLAIREMONT DR.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 257 OF 339 SHEETS

APPROVED FOR THE ENGINEER REYHANER MARTIN PRINT DCE NAME	DATE 01/13/22 RCE#	DATE 12-28-21	DATE 08/09/21	DATE 01/13/22	DATE 01/13/22	DATE 01/13/22	DATE 01/13/22	DATE 01/13/22	DATE 01/13/22
SUBMITTED BY J. BERMUDO PROJECT MANAGER		CHECKED BY A. ABUTIN PROJECT ENGINEER		238-1701 CCS27 COORDINATE		6262407-1878444 CCS83 COORDINATE		40067-257-D	

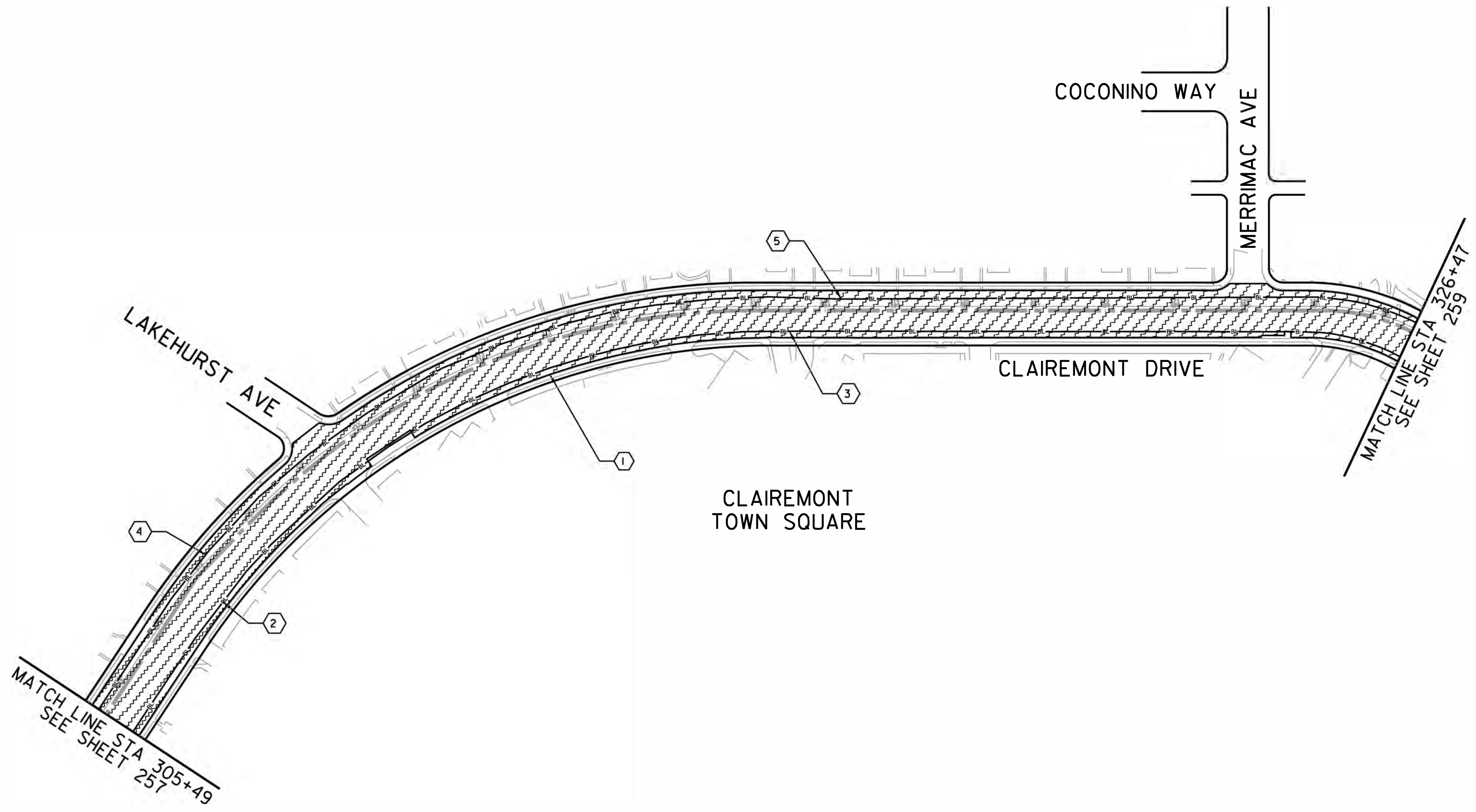
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____



△ CORRECTED LEGEND

ADDENDUM A

CLAIREMONT DR.



LEGEND	
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT: SDG-106

NOTE:
THE ACTUAL AREA WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES									
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	WIDTH	APPROX. AREA (SF)	
①	CLAIREMONT DR•	SS-007268 SS-007250 SS-007248	92.972 90.696 90.372	SLURRY SEAL TYPE II/III	305+49	326+47	70' TO 82'	149,905	
②	CLAIREMONT DR•	SS-007268	92.972	SLURRY SEAL TYPE I	305+49	310+00	10'	4,510	
③	CLAIREMONT DR•	SS-007250 SS-007248	90.696 90.372	SLURRY SEAL TYPE I	310+00	326+47	10' TO 18'	19,831	
④	CLAIREMONT DR•	SS-07268	92.972	SLURRY SEAL TYPE I	305+49	310+00	13'	5,863	
⑤	CLAIREMONT DR•	SS-007250 SS-007248	90.696 90.372	SLURRY SEAL TYPE I	310+00	326+47	13.5'	22,235	
								TOTAL AREA OF SLURRY SEAL TYPE I	52,439 SF
								TOTAL AREA OF SLURRY SEAL TYPE II	149,905 SF
								TOTAL AREA OF SLURRY SEAL TYPE III	149,905 SF

*STATIONS BASED ON FORCEMAIN LINE

C-215

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN
STA. 305+49 TO STA. 326+47 CLAIREMONT DR.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 258 OF 339 SHEETS

APPROVED: *Richard Martin* 12-28-21
FOR CITY ENGINEER: SEYMENHA MARTIN 89993
PRINT DCE NAME: RCE#

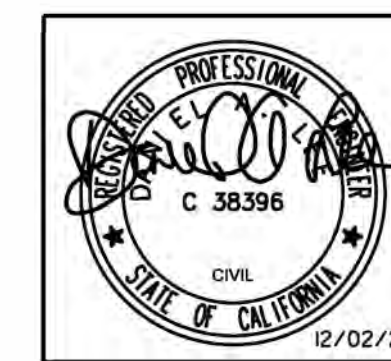
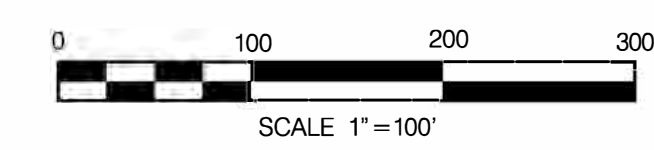
DATE: 01/13/22
RCE#

SEWER WBS: B-15141
SUBMITTED BY: J. BERMUDO
PROJECT MANAGER
CHECKED BY: A. ABUTIN
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				
ADDENDUM A	AECOM	<i>Richard Martin</i>	01/13/22	

242-1707
CCS27 COORDINATE
6268407-1882444
CCS83 COORDINATE
40067-258-D

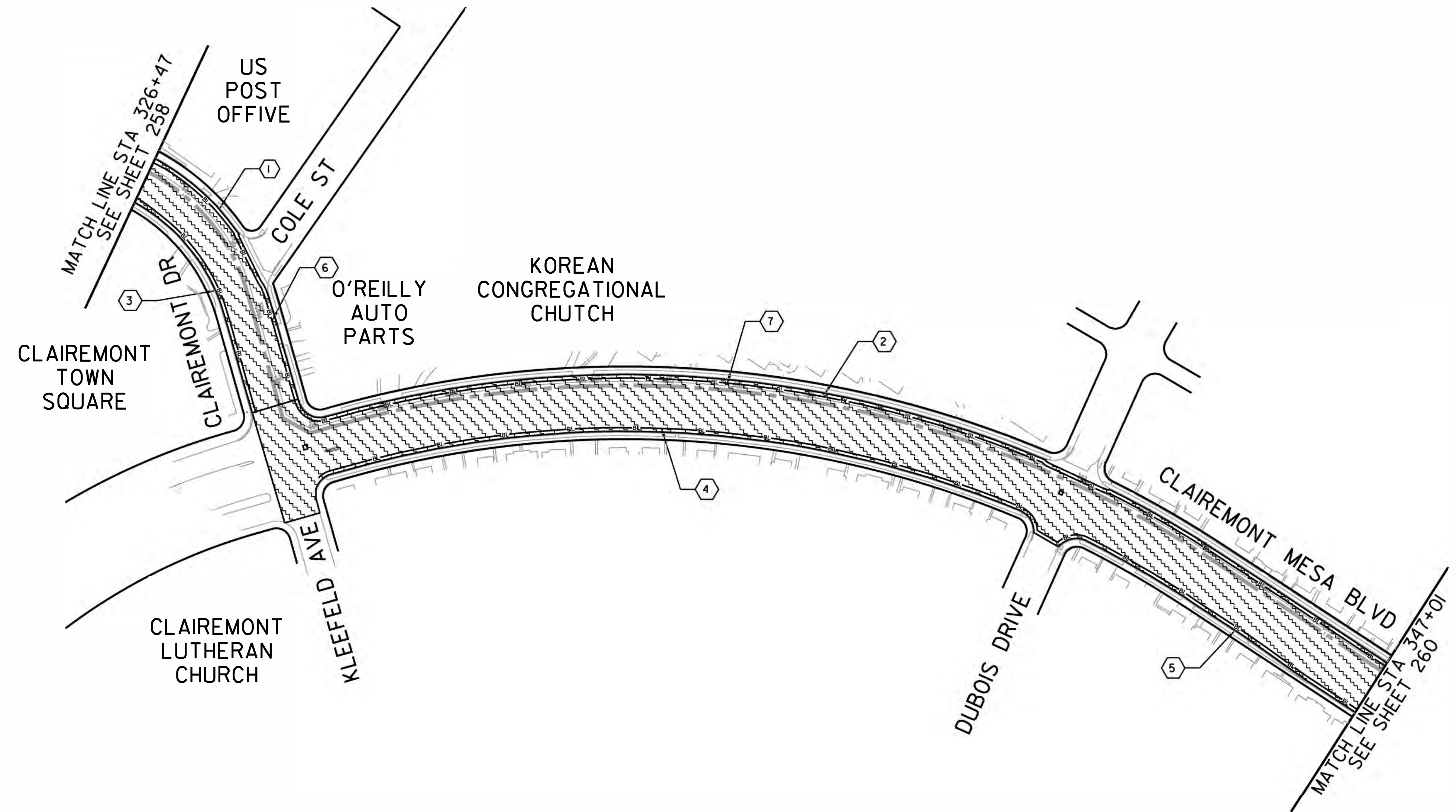
CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____



△ CORRECTED LEGEND

ADDENDUM A

CLAIREMONT DR.



LEGEND	
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT; SDG-106

NOTE:
THE ACTUAL AREA WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES								
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	WIDTH	APPROX. AREA (SF)
①	CLAIREMONT DR*	SS-007248 SS-007249	90.372 66.44	SLURRY SEAL TYPE II/III	326+47	330+39	82'	25,072
②	CLAIREMONT MESA BLVD*	SS-007283 SS-007279	94.36 90.516	SLURRY SEAL TYPE II/III	330+39	347+01	82'	137,476
③	CLAIREMONT DR*	SS-007248 SS-007249	90.372 66.44	SLURRY SEAL TYPE I	326+47	330+39	12.5'	4,900
④	CLAIREMONT MESA BLVD*	SS-007283	94.36	SLURRY SEAL TYPE I	330+39	341+65	7'	7,882
⑤	CLAIREMONT MESA BLVD*	SS-007279	90.516	SLURRY SEAL TYPE I	341+65	347+01	11.2'	6,004
⑥	CLAIREMONT DR*	SS-007248 SS-007249	90.372 66.44	SLURRY SEAL TYPE I	326+47	330+39	13.5' TO 21.5'	6,436
⑦	CLAIREMONT MESA BLVD*	SS-007283	94.36	SLURRY SEAL TYPE I	330+39	347+01	7'	11,207
					TOTAL AREA OF SLURRY SEAL TYPE I 36,429 SF			
					TOTAL AREA OF SLURRY SEAL TYPE II 162,548 SF			
					TOTAL AREA OF SLURRY SEAL TYPE III 162,548 SF			

*STATIONS BASED ON FORCEMAIN LINE

C-216

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN
STA. 326+47 CLAIREMONT DR. TO STA. 347+01 CLAIREMONT MESA BLVD.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 259 OF 339 SHEETS

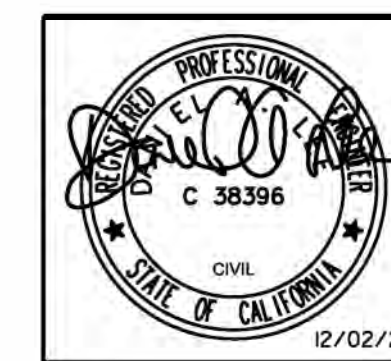
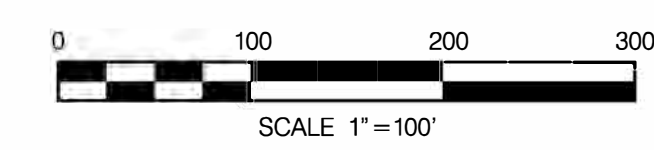
APPROVED: *Reynold Martin* 12-28-21
FOR CITY ENGINEER: SEYMENHA MARTIN 89993
PRINT DCE NAME: RCE#

DATE: 01/13/22
DATE FILMED: 01/13/22

CONTRACTOR: AECOM
INSPECTOR: *Reynold Martin*

DATE STARTED: 12/02/21
DATE COMPLETED:

SEWER WBS: B-15141
SUBMITTED BY: J. BERMUDO
PROJECT MANAGER
CHECKED BY: A. ABUTIN
PROJECT ENGINEER
242-1707
CCS27 COORDINATE: 6268407-1882444
CCS83 COORDINATE: 40067-259-D

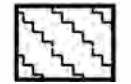




△ CORRECTED LEGEND

ADDENDUM A

CLAIREMONT DR./CLAIREMONT MESA BLVD.

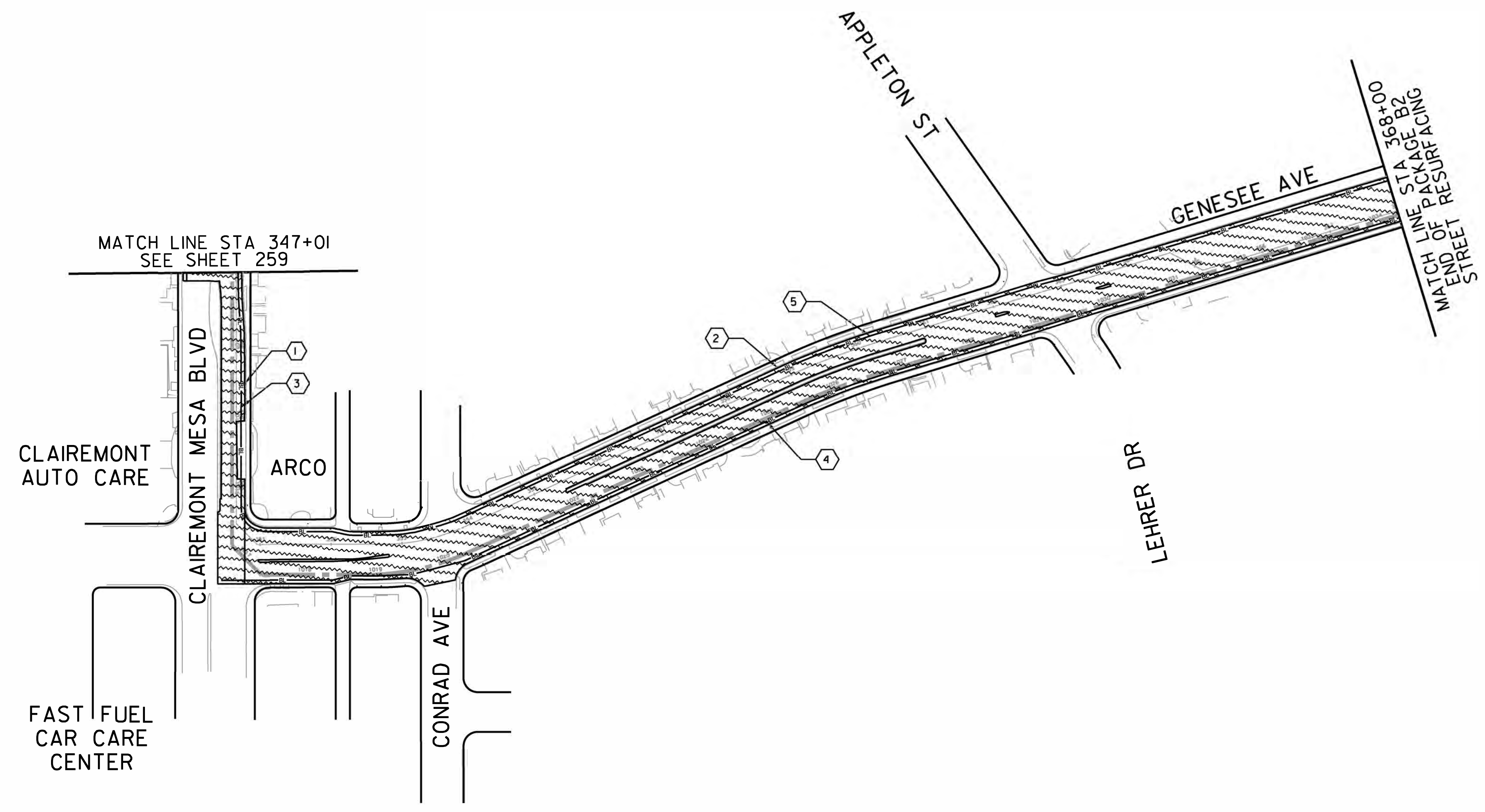
CLAIREMONT MESA BLVD./GENESEE AVE.

LEGEND	
	APPROXIMATE LOCATION OF SLURRY SEAL (TYPE II / III)
	APPROXIMATE LOCATION OF SLURRY SEAL TYPE I OVER BIKE LANE
	LOCATION PER PAVING SCHEDULE NOTES (THIS SHEET) COLD MILLED ASPHALT CONCRETE PAVEMENT; SDG-106

NOTE:
THE ACTUAL AREA WILL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.

PAVING SCHEDULE NOTES									
NO.	LOCATION	STREET SEGMENT ID	OCI	RESTORATION REQUIRED	STATION	STATION	WIDTH	APPROX. AREA (SF)	
①	CLAIREMONT MESA BLVD*	SS-007279	90.516	SLURRY SEAL TYPE II/III	347+01	350+70	35'	14,435	
②	GENESEE AVE*	SS-012024 SS-012005 SS-012023	49.35 71,052 93,148	SLURRY SEAL TYPE II/III	350+70	368+00	68'	116,275	
③	CLAIREMONT MESA BLVD*	SS-007279	90.516	SLURRY SEAL TYPE I	347+01	350+70	5' TO 12'	7,260	
④	GENESEE AVE*	SS-012024 SS-012005 SS-012023	49.35 71,052 93,148	SLURRY SEAL TYPE I	350+70	368+00	10'	17,300	
⑤	GENESEE AVE*	SS-012024 SS-012005 SS-012023	49.35 71,052 93,148	SLURRY SEAL TYPE I	350+70	368+00	10'	17,300	
					TOTAL AREA OF SLURRY SEAL TYPE I 41,860 SF				
					TOTAL AREA OF SLURRY SEAL TYPE II 130,710 SF				
					TOTAL AREA OF SLURRY SEAL TYPE III 130,710 SF				

*STATIONS BASED ON FORCEMAIN LINE



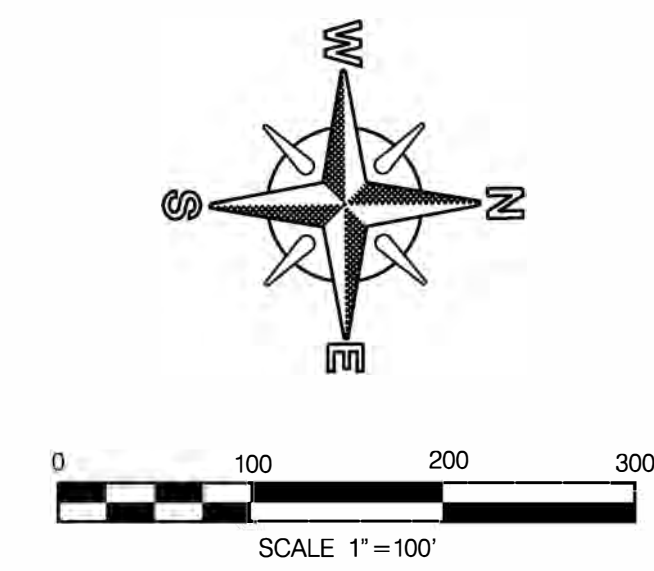
C-217

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
STREET RESURFACING PLAN

STA. 347+01 CLAIREMONT MESA BLVD. TO STA. 368+00 GENESEE AVE.

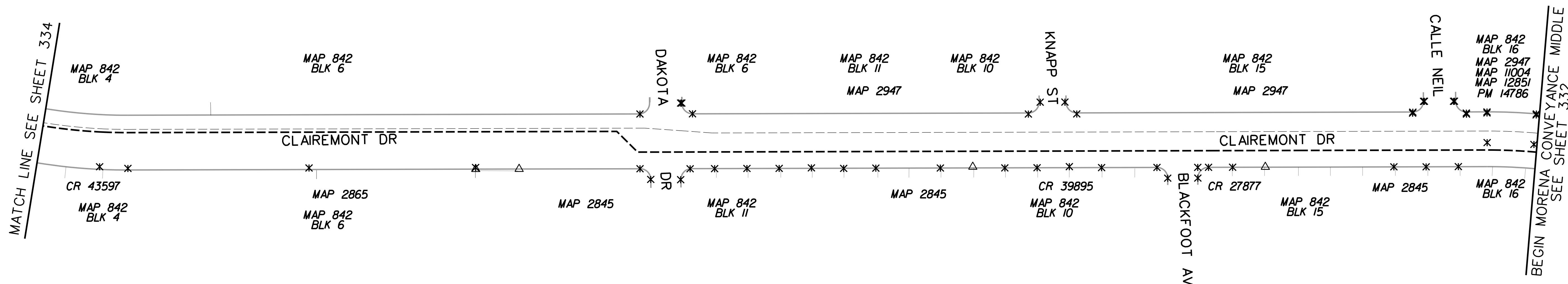
CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 260 OF 339 SHEETS

APPROVED <i>Reynold Martin</i> FOR CITY ENGINEER REYNAHER MARTIN PRINT DCE NAME C 38396	DATE 12-28-21 89993 RCE#	SEWER WBS B-15141 SUBMITTED BY J. BERMUDO PROJECT MANAGER CHECKED BY A. ABUTIN PROJECT ENGINEER
DESCRIPTION ORIGINAL ADDENDUM A	BY AECOM	APPROVED <i>Reynold Martin</i>
DATE 01/13/22	FILMED	242-1707 CCS27 COORDINATE 6268407-1882444 CCS83 COORDINATE
CONTRACTOR INSPECTOR	DATE STARTED DATE COMPLETED	40067-260-D



△ CORRECTED LEGEND

ADDENDUM A



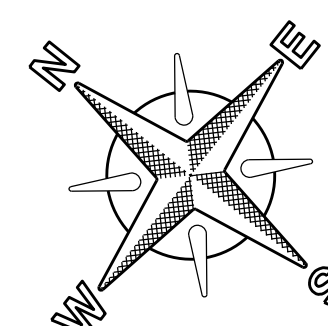
LEGEND	
X	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
□	LOCATION OF SURVEY BENCH MARK
⊕	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
----	PROPOSED SEWER FORCEMAIN
----	PROPOSED BRINE CENTRATE

MONUMENTATION / SURVEY NOTES:

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.



NO SCALE

C-284

PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE MIDDLE MONUMENTATION MAP	
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 333 OF 339 SHEETS	SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 REC#
SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER	ORDERED BY: ALLAN ABUTIN PROJECT ENGINEER
DESCRIPTION ADDENDUM A	BY KWH
APPROVED <i>Reyhaneh Martin</i>	DATE 1/18/22
NO. 60223 CIVIL	DATE STARTED DATE COMPLETED
CONTRACTOR INSPECTOR	218-1707 CCS27 COORDINATE 6268407-1858444 CCS83 COORDINATE 40067-333-D

CONSULTANT

O'Day

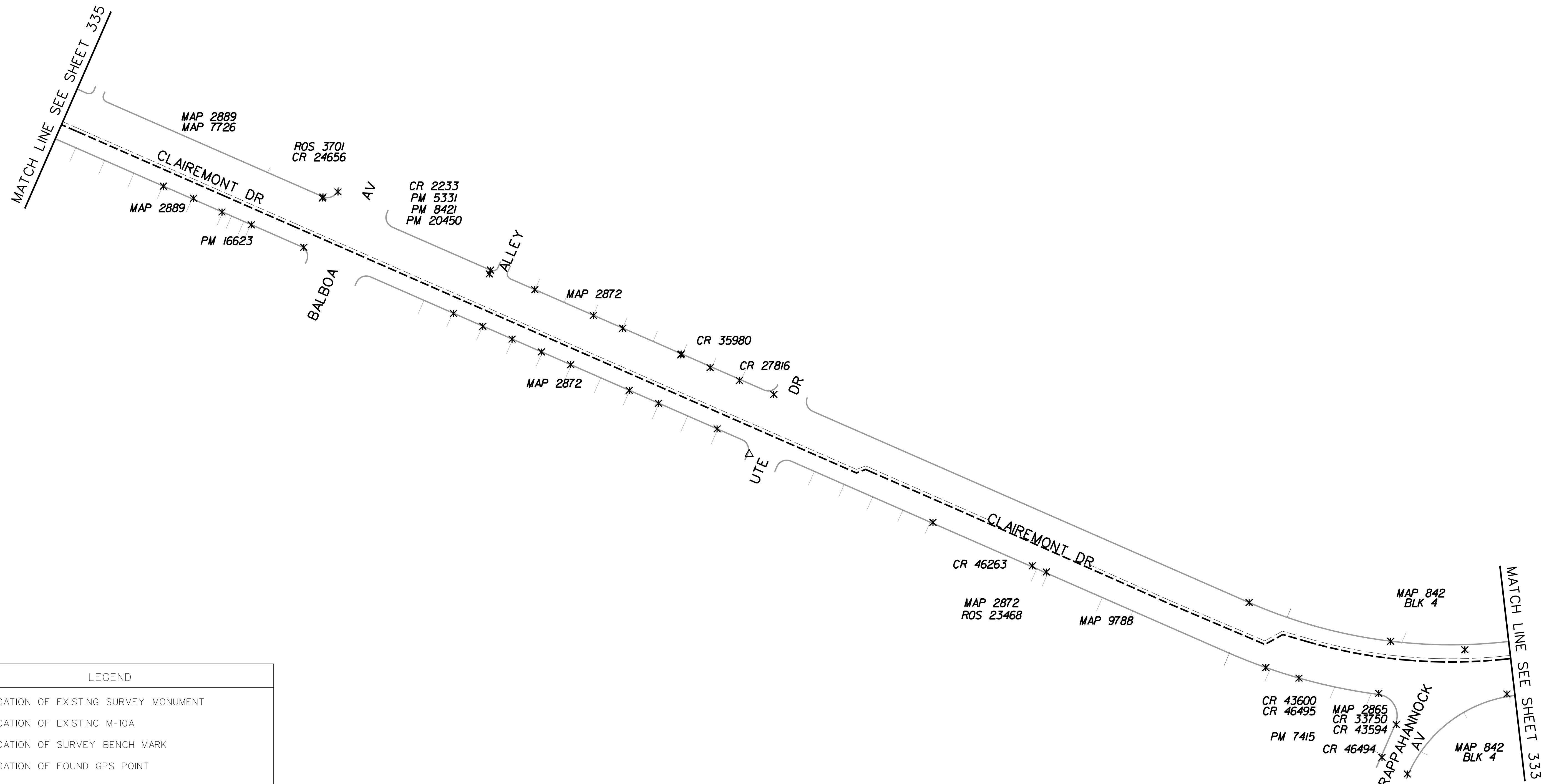
CONSULTANTS

2710 Loker Avenue West
 Suite 100
 Carlsbad, California 92010
 760-931-7700
 Fax: 760-931-8880
 ODayConsultants.com

Civil Engineering
 Planning
 Processing
 Surveying



NEW SHEET



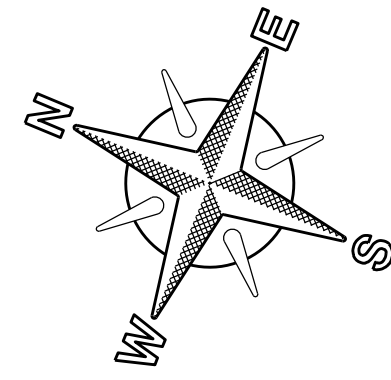
LEGEND	
✱	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
⊠	LOCATION OF SURVEY BENCH MARK
⊙	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
----	PROPOSED SEWER FORCEMAIN
----	PROPOSED BRINE CENTRATE

MONUMENTATION / SURVEY NOTES:

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.



NO SCALE

C-285

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
MONUMENTATION MAP**

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 334 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reynah Martin</i> FOR CITY ENGINEER REYHANH MARTIN PRINT NAME	DATE 12/28/21 89963	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER
DESCRIPTION ADDENDUM A	BY KWH	CHIEF ENGINEER ALLAN ABUTIN PROJECT ENGINEER
APPROVED: <i>Reynah Martin</i>	DATE 1/18/22	218-1707 CCS27 COORDINATE
		6268407-1858444 CCS83 COORDINATE
CONTRACTOR	DATE STARTED	40067-334-D
INSPECTOR	DATE COMPLETED	

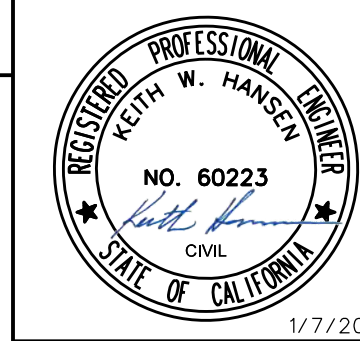
CONSULTANT

O'Day

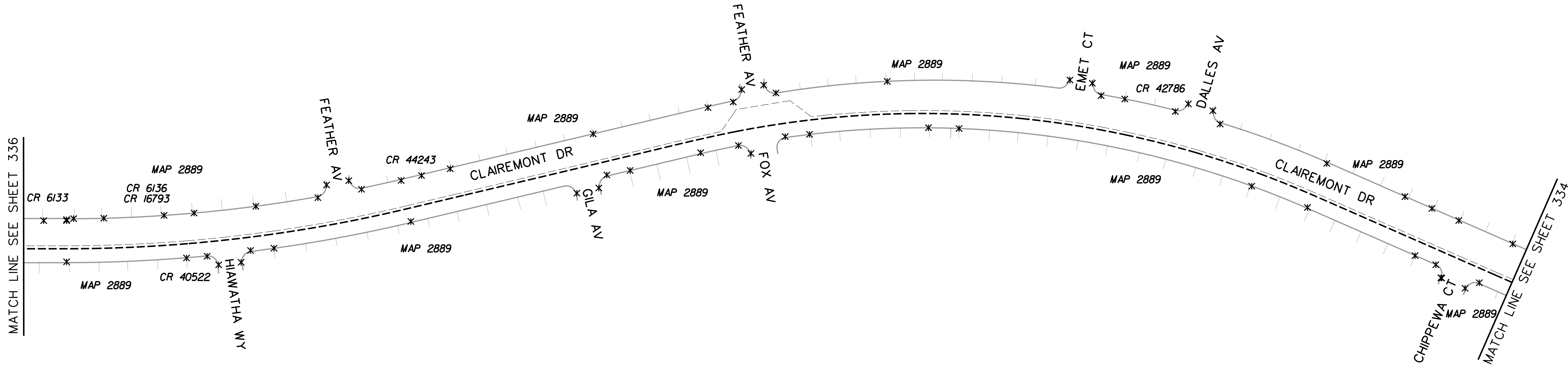
CONSULTANTS

2710 Loker Avenue West
Suite 100
Carlsbad, California 92010
760-931-7700
Fax: 760-931-8880
OdayConsultants.com

Civil Engineering
Planning
Processing
Surveying



NEW SHEET



MATCH LINE SEE SHEET 336

MATCH LINE SEE SHEET 334

LEGEND

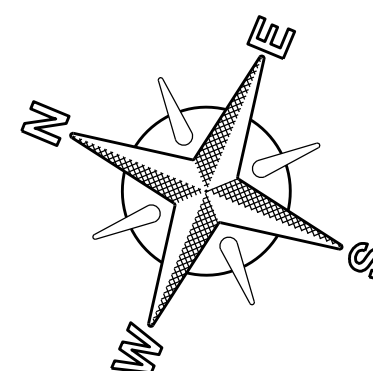
- ✕ LOCATION OF EXISTING SURVEY MONUMENT
- △ LOCATION OF EXISTING M-10A
- ⊠ LOCATION OF SURVEY BENCH MARK
- ⊙ LOCATION OF FOUND GPS POINT
- △ LOCATION OF FOUND EVIDENCE OF MONUMENT
- PROPOSED SEWER FORCEMAIN
- PROPOSED BRINE CENTRATE

MONUMENTATION / SURVEY NOTES:

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

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IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.



NO SCALE

C-286

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE

MONUMENTATION MAP

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND CAPITAL PROJECTS
SHEET 335 OF 339 SHEETS

SEWER
WBS B-15141

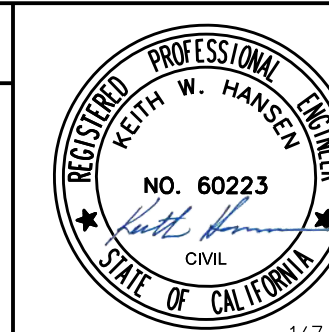
APPROVED: *Reyhaneh Martin* 12/28/21
FOR CITY ENGINEER: REYHANEH MARTIN DATE: 89963
PRINT NAME: REYHANEH MARTIN REC#:

SUBMITTED BY:
JUAN ELLI BERMUDO
PROJECT MANAGER

DESCRIPTION	BY	APPROVED	DATE	FILED
ADDENDUM A	KWH	<i>Reyhaneh Martin</i>	1/18/22	

ORDERED BY:
ALLAN ABUTIN
PROJECT ENGINEER

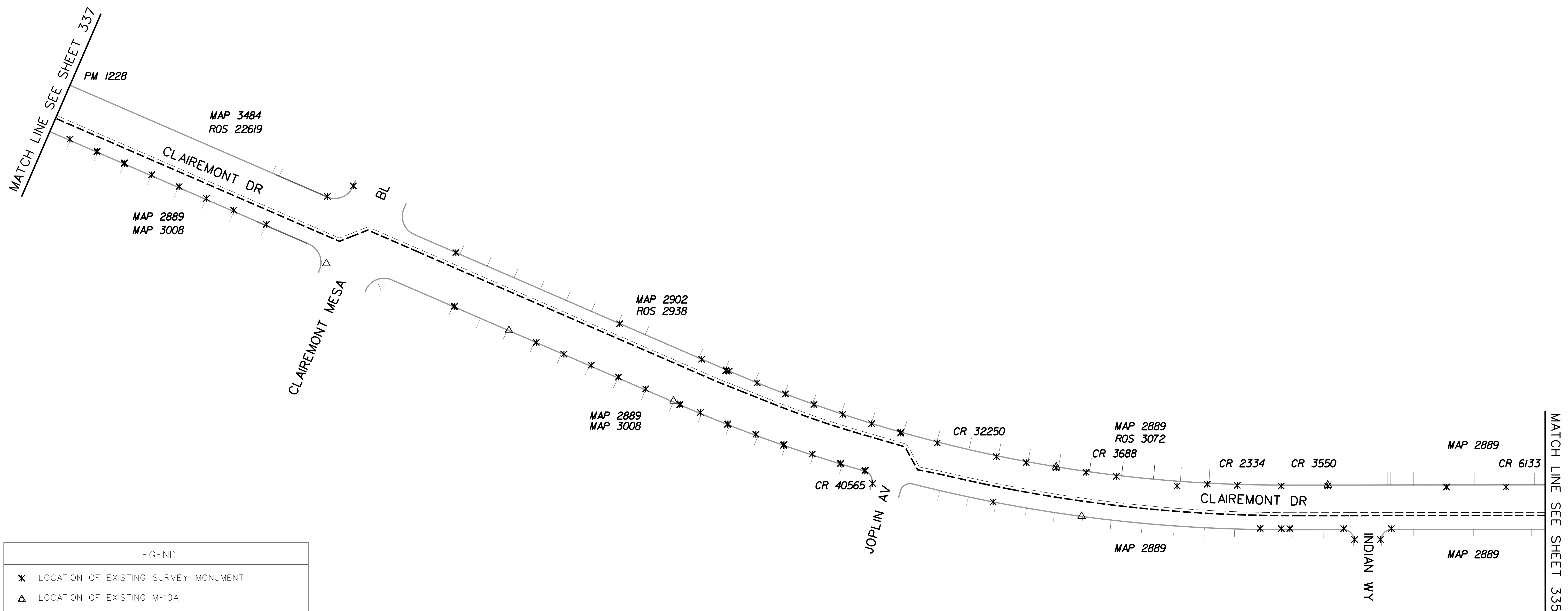
218-1707
CCS27 COORDINATE
6268407-1858444
CCS83 COORDINATE



CONTRACTOR: _____ DATE STARTED: _____
INSPECTOR: _____ DATE COMPLETED: _____

40067-335-D

NEW SHEET



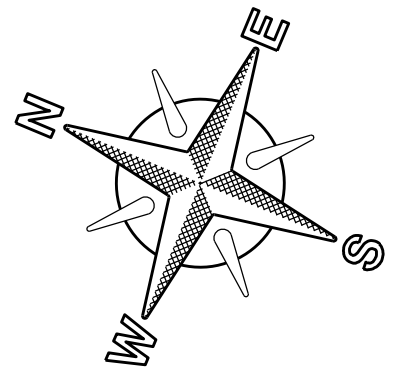
LEGEND	
X	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
□	LOCATION OF SURVEY BENCH MARK
⊕	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
---	PROPOSED SEWER FORCEMAIN
---	PROPOSED BRINE CENTRATE

MONUMENTATION / SURVEY NOTES:

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.



NO SCALE

C-287

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
MONUMENTATION MAP**

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 336 OF 339 SHEETS		SEWER WBS B-15141
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963	SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER
DESIGNER: ADDENDUM A	BY: KWH	CHIEF OF PARTY: ALLAN ABUTIN PROJECT ENGINEER
APPROVED: <i>Reyhaneh Martin</i>	DATE 1/18/22	PROJECT NUMBER: 218-1707 CCS27 COORDINATE
NO. 60223 CIVIL	DATE STARTED	6268407-1858444 CCS83 COORDINATE
CONTRACTOR	DATE COMPLETED	40067-336-D
INSPECTOR		

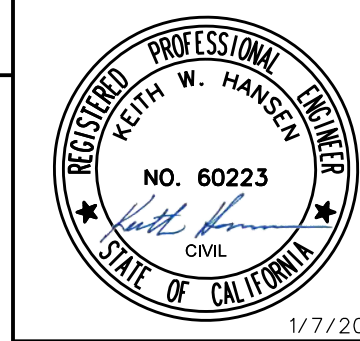
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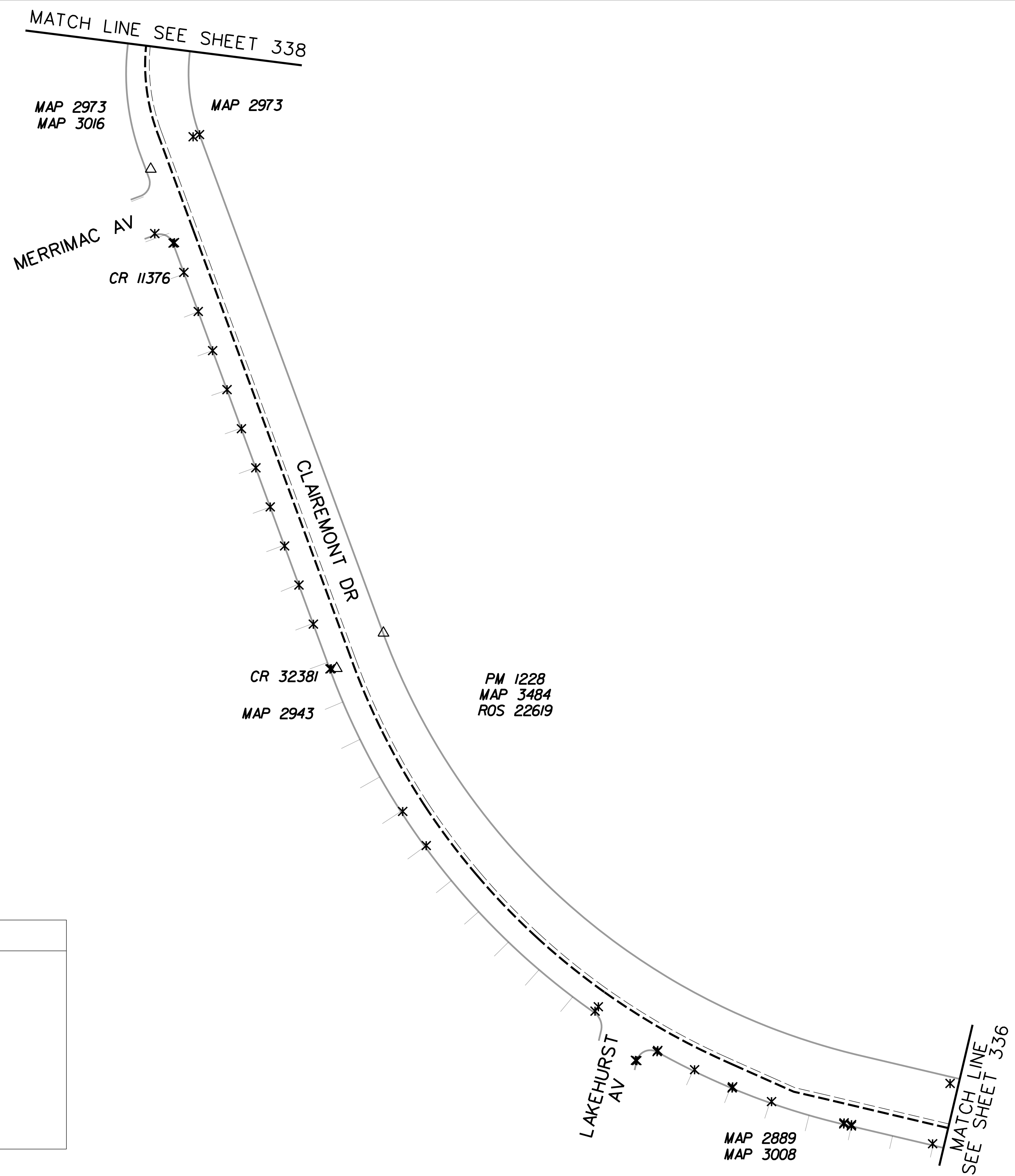
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Carlsbad, California 92010
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Fax: 760-931-8880
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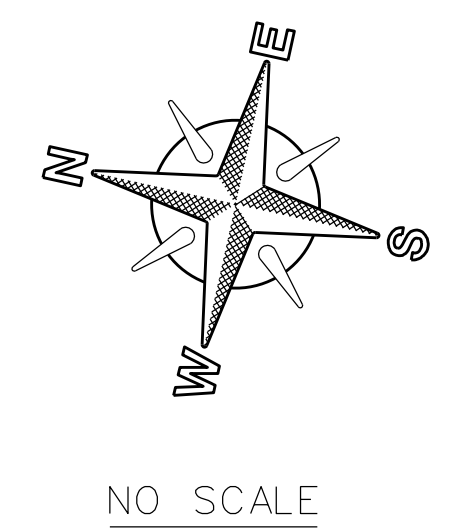
LEGEND	
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△	LOCATION OF EXISTING M-10A
▣	LOCATION OF SURVEY BENCH MARK
⊕	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
---	PROPOSED SEWER FORCEMAIN
---	PROPOSED BRINE CENTRATE

MONUMENTATION / SURVEY NOTES:

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C-288	
PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE MIDDLE MONUMENTATION MAP	
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 337 OF 339 SHEETS	
SEWER WBS B-15141	
APPROVED: <i>Reyhaneh Martin</i> DATE: 12/28/21 FOR CITY ENGINEER: REYHANEH MARTIN DATE: 89963 PRINT NAME: REYHANEH MARTIN REC#:	
SUBMITTED BY: JUAN ELLI BERMUDO PROJECT MANAGER	
CHECKED BY: ALLAN ABUTIN PROJECT ENGINEER	
218-1707 CCS27 COORDINATE	
6268407-1858444 CCS83 COORDINATE	
40067-337-D	

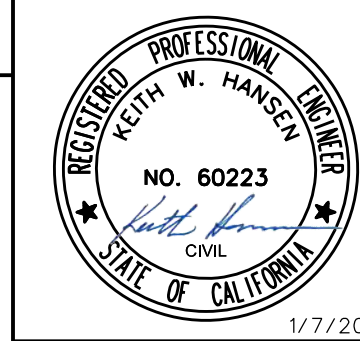
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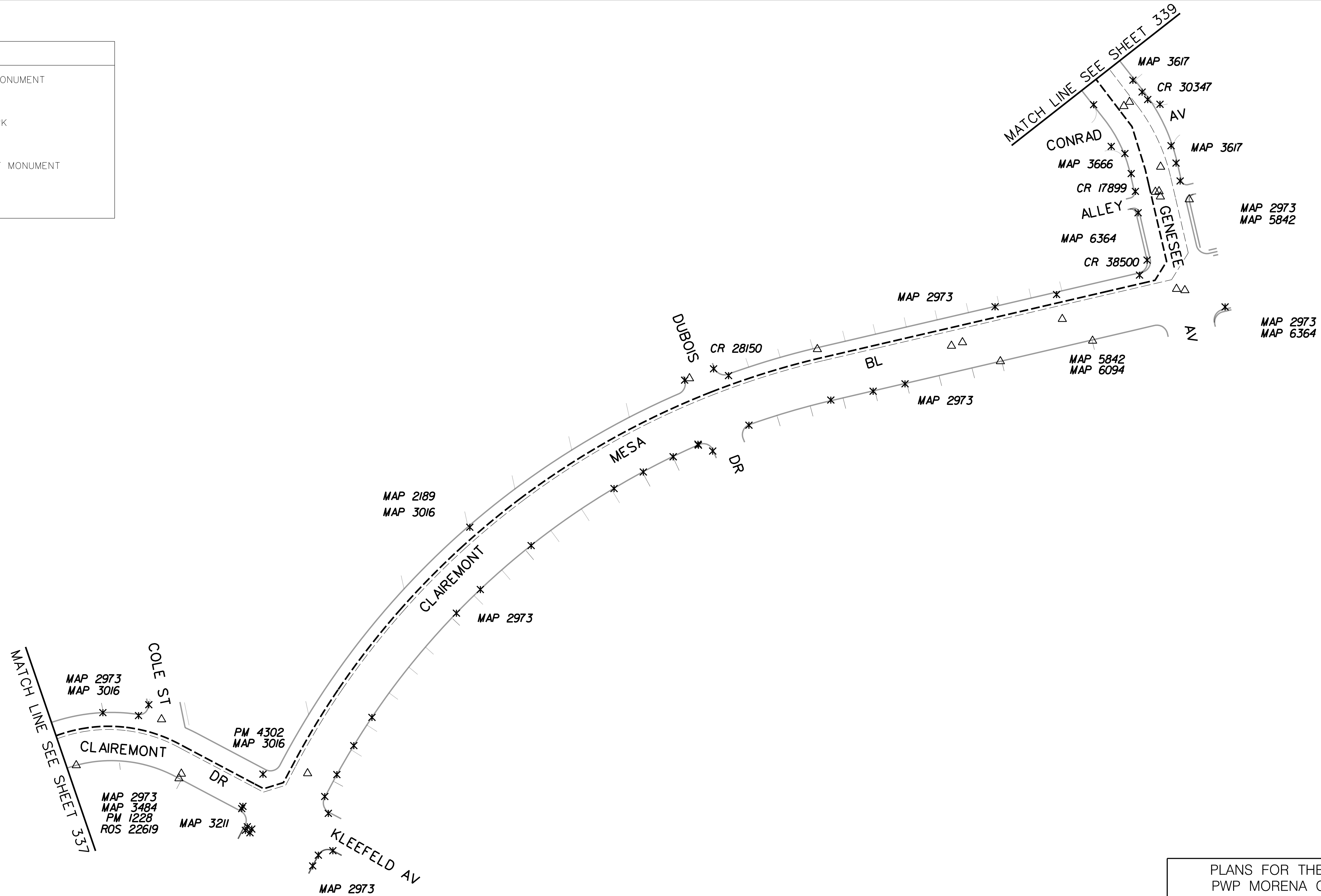
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CONTRACTOR	DATE STARTED
INSPECTOR	DATE COMPLETED

LEGEND

- ✱ LOCATION OF EXISTING SURVEY MONUMENT
- △ LOCATION OF EXISTING M-10A
- ▣ LOCATION OF SURVEY BENCH MARK
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- PROPOSED SEWER FORCEMAIN
- PROPOSED BRINE CENTRATE

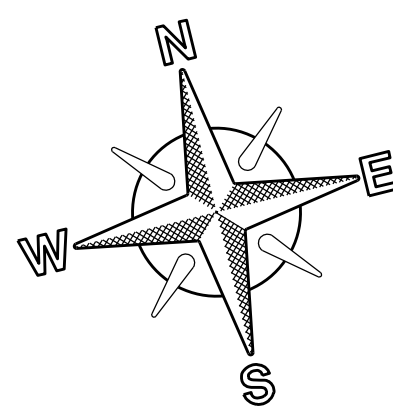


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NO SCALE

C-289

PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE MIDDLE MONUMENTATION MAP			
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 338 OF 339 SHEETS		SEWER WBS B-15141	
APPROVED: <i>Reyhaneh Martin</i> FOR CITY ENGINEER REYHANEH MARTIN PRINT NAME		DATE: 12/28/21 DATE: 89963 REC#	
SUBMITTED BY: <i>Reyhaneh Martin</i> PROJECT ENGINEER		ORDERED BY: JUAN ELLI BERMUDO PROJECT MANAGER	
DESCRIPTION: ADDENDUM A		BY: KWH APPROVED: <i>Reyhaneh Martin</i> DATE: 1/18/22 FILMED:	
6268407-1858444 CCS27 COORDINATE		218-1707 CCS27 COORDINATE	
40067-338-D CCS83 COORDINATE		DATE STARTED: _____ DATE COMPLETED: _____	

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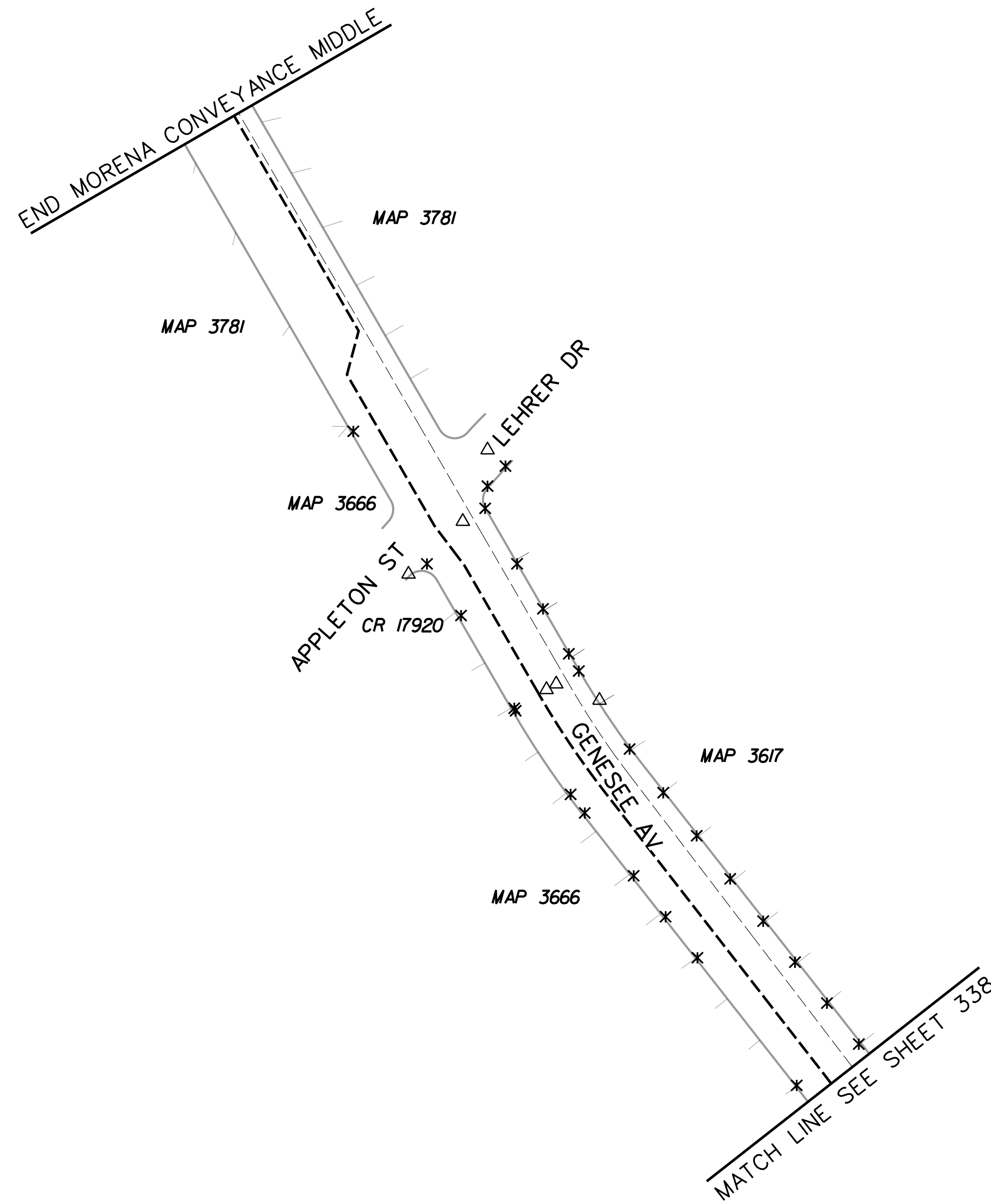
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CONTRACTOR: _____
 INSPECTOR: _____

NEW SHEET

MONUMENTATION MAP



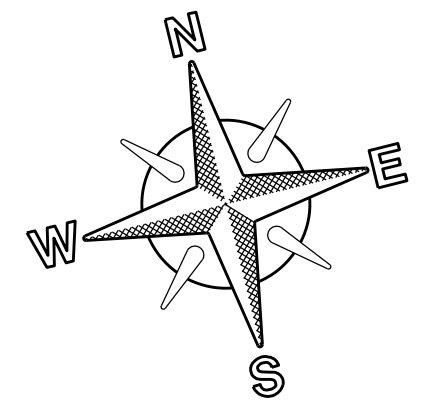
LEGEND	
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NO SCALE

C-290

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE**

MONUMENTATION MAP

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 339 OF 339 SHEETS		SEWER WBS B-15141
APPROVED FOR CITY ENGINEER <i>Reyhaneh Martin</i> REYHANEH MARTIN PRINT NAME	DATE 12/28/21 89963 RCE#	SUBMITTED BY JUAN ELLI BERMUDO PROJECT MANAGER
DESCRIPTION ADDENDUM A	BY KWH	CHIEF ENGINEER ALLAN ABUTIN PROJECT ENGINEER
APPROVED <i>Reyhaneh Martin</i>	DATE 1/18/22	COORDINATOR 218-1707 CCS27 COORDINATE
		6268407-1858444 CCS83 COORDINATE
CONTRACTOR	DATE STARTED	40067-339-D
INSPECTOR	DATE COMPLETED	

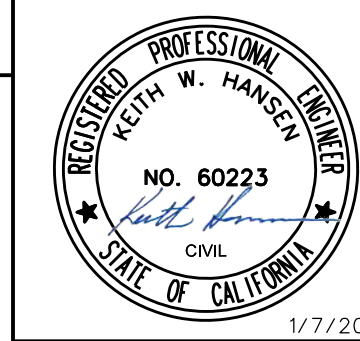
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NEW SHEET

City of San Diego

CITY CONTACT: Stephen Samara, Principal Contract Specialist, Email: SSamara@sandiego.gov
Phone No. (619) 533-3619

ADDENDUM B



FOR

PURE WATER PROGRAM (PWP) MORENA CONVEYANCE SOUTH & MIDDLE AND MORENA CONVEYANCE BIKE LANES (BL)

BID NO.:	<u>K-22-1797-DBB-3-A</u>
SAP NO. (WBS/IO/CC):	<u>B-15141</u>
CLIENT DEPARTMENT:	<u>2000</u>
COUNCIL DISTRICT:	<u>2, 6, 7,</u>
PROJECT TYPE:	<u>JA, KA</u>

BID DUE DATE:

**2:00 PM
MARCH 8, 2022**

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 **EXTENDED AS STATED ON THE COVER PAGE.**

Rania Amen, Director
Engineering & Capital Projects Department

Dated: *February 14, 2022*
San Diego, California

RA/AJ/rd

City of San Diego

CITY CONTACT: Stephen Samara, Principal Contract Specialist, Email: SSamara@sandiego.gov
Phone No. (619) 533-3619

ADDENDUM C



FOR

PURE WATER PROGRAM (PWP) MORENA CONVEYANCE SOUTH & MIDDLE AND MORENA CONVEYANCE BIKE LANES (BL)

BID NO.:	<u>K-22-1797-DBB-3-A</u>
SAP NO. (WBS/IO/CC):	<u>B-15141</u>
CLIENT DEPARTMENT:	<u>2000</u>
COUNCIL DISTRICT:	<u>2, 6, 7,</u>
PROJECT TYPE:	<u>JA, KA</u>

BID DUE DATE:

**2:00 PM
MARCH 17, 2022**

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:

Shapiro,
Alan

Digitally signed by Shapiro, Alan
DN: cn=Shapiro, Alan, ou=USSDG1,
email=Alan.Shapiro@aecom.com
Reason: I have reviewed this
document
Date: 2022.03.01 08:07:50 -08'00'

03/01/2022

Seal:



1) Registered Engineer

Date

Rayhanh Morin

2) For City Engineer

3/01/2022

Seal:



Date

Brian Genovese

3) For City Engineer

3-1-2022

Seal:



Date

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 **EXTENDED AS STATED ON THE COVER PAGE.**

B. INSTRUCTIONS TO BIDDERS

1. To Item 19., **BIDDER'S GUARENTEE OF GOOD FAITH (BID SECURITY) FOR DESIGN-BID-BUILD CONTRACTS**, pages 19 through 20, Sub-item **19.5., DELETE** in its entirety and **SUBSTITUTE** with the following:

- 19.5. Failure to submit the electronic version of the bid security at the time of bid submission AND failure to provide the original by 5PM, 3 working days after the bid opening date shall cause the bid to be rejected and deemed **non-responsive**.

Due to circumstances related to Covid-19, until further notice, all original bid bond submittals must be received by 5 PM, 3 working days after bid opening.

Upon circumstances returning to normal business as usual, the original bid bond shall once again be due by 5 PM the day after bid opening.

Purchasing & Contracting Department
Public Works Division
ATTN: Stephen Samara
1200 3rd Ave., Suite 200, MS56
San Diego, CA 92101

C. ATTACHMENTS

1. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Subitem 1.1.1, page 27, **DELETE** Drawing numbers **40067-1-D, 40067-85-D, 40067-192-D, 40067-207-D, 40067-208-D** and **40067-326-D** in their entirety and **REPLACE** with Drawing numbers **40067-01-D, 40067-85-D, 40067-192-D, 40067-207-D, 40067-208-D** and **40067-326-D**, pages 89 through 94 of this Addendum.

2. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Subitem 1.1.2, page 27, **DELETE** Drawing numbers **40067-1-D** and **40067-192-D** in their entirety and **REPLACE** with Drawing numbers **40067-01-D** and **40067-192-D**, pages 95 through 96 of this Addendum.
3. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1., Sub-item 1.1.3., page 27, **ADD** Drawing numbers **42335-92-D** through **42335-108-D**. PDF of the plans can be found in the link below.

https://drive.google.com/drive/folders/1Te03G8_LKqPIWR4x4VryiCzKh6ERkn6H?usp=sharing

4. To Attachment D, FUNDING AGENCY PROVISIONS, Item 10, DAVIS-BACON WAGE RATES AND PROVISIONS, Sub-Item 10.1, Wage Rates, pages 58 through 87, **DELETE** in their entirety and **SUBSTITUTE** with pages 57 through 88 of this Addendum.
5. To Attachment D, Funding Agency Provisions, Section 13 GOOD FAITH EFFORT DOCUMENTATION SUBMITTALS, Subsection 13.2, pages 102 through 103, **DELETE** in its entirety and **SUBSTITUTE** with the following:

13.2 . The required documentation shall be submitted and logged in at the following address:

CITY OF SAN DIEGO
PURCHASING & CONTRACTING DEPARTMENT,
PUBLIC WORKS DIVISION
1200 3rd Ave., Suite 200, MS56
SAN DIEGO, CA 92101
SUBJECT: AFFIRMATIVE GOOD FAITH EFFORT DOCUMENTATION
BID NO. K-22-1797-DBB-3-A

6. To Attachment H, Escrow Bid Documents, Section 1.5, Submittal, Subsection 1.5.1, pages 568 through 569, **DELETE** in its entirety and substitute with the following:
 - 1.5.1. All bidders shall submit their EBDs within 4 working days of the bid opening. The EBDs shall be submitted in a sealed container (e.g., sealed envelope, box or carton sealed with tape, locked strongbox, etc.), and the container shall be clearly marked on the outside with the Bidder's name, date of submittal, project name,

Contract Number and the words "Escrow Bid Documents". The EBDs shall be submitted to:

Purchasing & Contracting Department,
Public Works Division
1200 3rd Ave., Suite 200, MS56
San Diego, California, 92101
Attention: Stephen Samara

D. BIDDER'S QUESTIONS

- Q1. Question 1: Can subcontractors that are listed under multiple NAICS codes be used as GFE for all of the codes they qualify under, or do we have to pick one? Furthermore, do they count towards the outreach for each NAICS code they are listed under?
- A1. Subcontractors may be listed and counted for all items of work (NAICS codes) for which they qualify for. For participation credit towards fair share goals, credit will be afforded to listed subcontractors based on the work they have been certified to perform.
- Q2. Reference sections 12.5 and 12.6 regarding the "fair share" objectives. Please provide definitions / examples for the four categories: 1) construction 2) supplies 3) services and 4) equipment.
- A2. The City will be evaluating a bidder's efforts related to the fair share objective for Construction category only. This means that participation will be driven by the subcontractors and their certifications as listed in the bid.
- Q3. We assume that the prime contractor lists the "fair share" objective category for the various MBE and WBE subcontractors only on Form 4500-3. Please confirm.
- A3. Form 4500-3 is intended to capture DBE subcontractor performance that has been committed to for the subject project. As a reminder, MBE and WBE firms are a part of the larger DBE universe, therefore, should also be included on the form.
- Q4. Section 12.6 lists separate percentage goals for MBE and WBE. We assume that if a single firm is certified as both a WBE and an MBE, that firm's participation counts towards both goals? Please confirm.

- A4. No. Credit will only be applied to one certification only. Bidder is to identify the certification they intend to request credit for when a subcontractor has multiple certifications.
- Q5. 40 CFR 33.503 section (e) does not indicate that only work self-performed by M/WBE's count as participation. If a first tier M/WBE subcontractor has a lower tier non-DBE that is <50% of the subcontract value, is that 50% performed by the non-DBE counted as participation or is it deducted? Example if M/WBE subcontractor has a subcontract for \$100 and hired a lower tier non-DBE for \$10, does the prime bidder count \$100 or \$90 towards the DBE participation?
- A5. Participation credit is based on the amount of the subcontract, as long as the subcontractor is performing a commercially useful function. In the event that the subcontractor is using a subcontractor (second tier sub), participation credit will be afforded only for work associated to a certified firm that performs a commercially useful function. In the event the tier sub is not certified, the amount shall be deducted from the overall subcontract amount.
- Q6. Are supplies purchased from a DBE counted as participation at 100% of the cost of the material and delivery that is paid to the DBE?
- A6. No. Supplies purchased by a certified MBE/WBE supplier will only receive 60% participation towards the MBE/WBE goal.
- Q7. Are there any commercially useful function rules or guidelines for suppliers beyond being appropriately certified?
- A7. A supplier performs a commercially useful function when they meet the following criteria:
- Execute a distinct element of contract work, including supplying goods/services.
 - Perform, manage, or supervise the work, including supplying goods/services.
 - Perform work that is normal for the firm's business services and functions.

- Are responsible with respect to products, inventories, materials and supplies required for the contract. This includes negotiating price, determining quality and quantity, ordering, installing (if applicable), and paying for the material.
- Are not subcontracting a portion of the work greater than expected by industry practices.
- Are acting or being used as a pass-through or extra participant in the contract.

Q8. Appendix M contains drawings for the Mid Coast Corridor Transit Project. In the City's original Morena Conveyance South Solicitation in September 2021, these plans detailed construction of the Median Barrier Fence and Concrete Barrier Type 60 which were a part of the original scope. Please confirm that this work is no longer part of the scope for the Morena Conveyance South, Middle and Bike Lanes project. Furthermore, please clarify the significance of including these plans in this solicitation.

A8. Bid items for Median Barrier Fence and Concrete Barrier Type 60 were added in this Addendum.

Q9. Reference the South Section plan sheets C-164 to C-167 - Median Replacement. Notes on these plan sheets refer to furnishing and installing new curb and gutter in various median locations where the new pipeline is to be installed.

Where is the work to remove and replace the curb and gutter as shown on these plans to be paid? The proposed curb data tables indicate that there is over 6,000 LF of curb and gutter to be removed and replaced.

Reference the South Section plan sheets C-164 to C-167 - Median Replacement. Notes on these plan sheets refer to replacing raised center median asphalt in kind at various median locations where the new pipeline is to be installed.

Where is the work to replace raised center median asphalt in kind as shown on these plans to be paid? Also, please provide a detail that provides the thickness of the asphalt and any required base or subgrade under the asphalt.

- A9. 1. The cost for replacing the existing median curb and gutter is included in contract price for "Force Main-48"WSP CML & TCMC (3/8" Thk)" and "Brine/centrate-30" WSP CML & TCMC (3/8" Thk)" per WB/SSP 306-15.1.
2. The cost for replacing the existing asphalt median is included in the contract price for "Force Main-48"WSP CML & TCMC (3/8" Thk)" and "Brine/centrate-30" WSP CML & TCMC (3/8" Thk)" per WB/SSP 306-15.1.
3. Assume 3" AC section over 12" native soil compacted to 95% RC for raised median pavement section.

Q10. I have questions regarding the DBE Requirement for this project and the "good faith efforts" required.

Since the project is funded by federal funds the DBE regulations for this project are established by the federal jurisdictions, the primary being the EPA (40 CFR Part 33).

The EPA requirements refer to DBE but there is a reference to "Fair Share Objectives" and those refer to "small" as well as DBE MBE WBE.

12.5 in the "Instruction to Bidders" also references small.

Question 1: Is SBE an additional focus group and, if so, what are the certifications accepted (CA DGS)?

There is a requirement to select a minimum 10 firms for each Work Item or all if there are less than 10

Question 2: Is the requirement for 10 per source (e.g. Caltrans, CPU, SBA DSBS) per work item or 10 from the combined sources per work item?

Question 3: What geographic location(s) are to be included in the searches? San Diego or additional?

Acceptable certifications from State Agencies include Caltrans and CPUC. Please confirm.

There is reference to SBA certification (small disadvantaged businesses). However, on the SBA DSBS site Small Disadvantaged Businesses no longer appear under "Government Certification" but only as "self-certified". See attachment.

Question 4: Please confirm that only "Government Certified" are acceptable and these include:

- 8a
- HUBZone
- Economically Disadvantaged Woman Owned Small
- Woman Owned Small

Contacts are to be made to each firm but "unanswered calls" are NOT satisfactory.

Question 5: How many recalls must be made?

- A10.
1. Bidders should attempt to meet the fair share objectives as noted on Page 9, Section 12.6, of the Notice Inviting Bids. While SBE can be considered a part of the larger disadvantaged universe, and are encouraged to participate on the project, specific goals are not established for this group.
 2. The requirement is at least 10, or all if less than 10 per source per work item as referenced on Page 100 Section 12.6 of Attachment D – Funding Agency Provisions, of the Contract Specifications. As an example, if you are looking for an electrical contractor, the requirement is that the bidder use each database and solicit quotes from at least 10, or all if less than 10, and provide the documentation for each of these.
 3. Bidders should, at a minimum include San Diego County, and any other geographical areas (i.e. Orange County, Los Angeles County, Imperial County, etc.) in which a firm is willing and able to perform work in San Diego. Certifications for DBE, MBE, and WBE are accepted from the California Department of Transportation (Caltrans) and California Public Utilities Commission. Bidders are required to reach out to the SBA and MBDA for additional assistance in locating firms that may be eligible to participate on this contract. Further, bidders should be searching for potential subcontractors using the SBA's subnet database.

4. Refer to the fair share objectives on Page 9, Section 12.6 California State Water Resources Control Board - Clean Water State Revolving Fund (CWSRF), of the Notice of Inviting Bids to determine participation requirements needed for this project. The City will accept certifications from the following agencies for participation credit for this project: California Department of Transportation (Caltrans), California Public Utilities Commission (CPUC) and Small Business Administration (SBA). Self-certification is not considered.
5. Bidders should demonstrate efforts made to attempt to make contact with subcontractors for potential opportunities. There is no set number established for follow-up phone calls.

Q11. The water relocation drawings (C-199/C-277) depict new water and fire services up to the existing meter box or backflow preventer. The Whitebook section 306-15.6 and 306-15.8 states that payment includes meter boxes, lids and backflow preventers. Please confirm that we are to connect to existing meters, meter boxes and backflow preventers and that new appurtenances are not required.

A11. Contractor shall replace meter boxes and lids in accordance with 306-15.6 and 306-15.8. Fire service lines shall be replaced up to the property line.

- Q12. 1. Thrust Blocks – Section 306-15.10 (2) of the Whitebook says: “Thrust blocks and anchor blocks for water mains 16 inches (406.4 mm) and larger shall be included in the Bid item for “Thrust and Anchor Blocks for 16 inch and Larger Water Mains.” However, there is no bid item for the thrust blocks on the 48” and 30” mains. Please clarify.
2. Thrust Blocks – Section 306-8.8.3 (1 d) of the Specifications says: “Unless otherwise shown on the Plans, the quantity of concrete and the bearing area of the pipe against undisturbed soil shall be as shown on the Standard Drawings.” However, Standard Drawing SDW-151 does not have information for thrust blocks on 30” or 48” mains.

Please provide.

3. 12" Water Relocation on Sherman Street – Please clarify which fire services and water services must be kept in service using the 2" highline during construction of the new 12" main.
 4. Access Manway, Blow Off Vault, Air/Vac Valve Vault – Please clarify section 306-16.6 and the various bid items 65, 66, 67 and 101, 102 and 103. For example, is it your intent that ALL Access Manway/Manholes shown on the plans are included in the LUMP SUM bid item for Access Manway/Manhole (making no differentiation between manways required for the 48" main, the 30" main or both.
- A12.
1. Thrust blocks are not needed for large diameter welded steel pipe.
 2. See previous response.
 3. All impacted water services shall remain in service via highline. Fire Services will be notified of the outage by the City in coordination with the contractor.
 4. Yes, these are Lump Sum bid items payable as specified in SSP Section 306-16.6.
- Q13.
1. Please provide as-built information for the 72" PLRCP Sewer located on Morena Blvd. It appears to be within just a few feet of the centerline of the proposed 48" Sewer Forcemain in some locations.
 2. Please refer to bid items 69, 70, 104, and 105. Do the quantities in these striping related bid items include temporary and permanent work?
 3. It appears that there are a number of existing City of San Diego asbestos water mains that cross the proposed Morena Conveyance Pipelines. If the contractor elects to replace the crossing portion of asbestos pipe in advance of installing the Morena Conveyance Pipelines, will PVC C-900 pipe be allowed?
- A13.
1. As builts are provided at the link below for informational purposes.

<https://drive.google.com/drive/folders/1PPUH9t6u1Agz90IxiUfjYG8gmxcLSTHp?usp=sharing>

2. Striping related items are for work related to permanent “replace in place” striping. There are no separate bid items for temporary striping. Temporary striping is part of the Bid Item “Phased Paving” as noted in 306-1.2.6.
 3. PVC C-900 is acceptable when there is between 3ft to 8ft of cover. See City Water Facility Design Guidelines 3.4.1 for acceptable materials.
- Q14. In an effort to provide the best pricing and subcontractor outreach is it possible to have the bid date Pushed back 3 weeks on the above referenced project. Please advise.
- A14. Refer to cover page of this Addendum for the extension of bid due date.
- Q15. In A:16 in Addendum A, the City states, “Work on C-164, C-165, Etc. is covered by “Median Curb and Gutter (Type B2) and “Colored Stamped Concrete Raised Median””. There is no bid item for “Median Curb and Gutter (Type B2)”. Please clarify under what bid item the B-2 curb and gutter shown on the median restoration drawings is paid.
- A15. 1. The cost for replacing the existing median curb and gutter is included in contract price for “Force Main-48”WSP CML & TCMC (3/8” Thk)” and “Brine/centrate-30” WSP CML & TCMC (3/8” Thk)” per WB/SSP 306-15.1.
2. The cost for replacing the existing asphalt median is included in the contract price for “Force Main-48”WSP CML & TCMC (3/8” Thk)” and “Brine/centrate-30” WSP CML & TCMC (3/8” Thk)” per WB/SSP 306-15.1.
3. Assume 3” AC section over 12” native soil compacted to 95% RC for raised median pavement section.
- Q16. Will the Phased Funding Compensation schedule correspond with the three milestone dates identified in Section 6-9 of the Solicitation? If not, how will the phasing be structured?
- A16. No, the Phased funding will be structured by fiscal year from NTP to Final Completion and acceptance of the project as agreed by both parties.

- Q17. Detail 5 on Sheet C-195 notes that Contract "X" and "Y" represent the B packages but does not delineate which B package is representative of Contract "X" or "Y". Would you please clarify this?
- A17. Contract "Y" refers to the PWP Middle Contract, contract "X" refers to the Northern Pkg B3 contract (separate contract).
- Q18. Detail 5 on Sheet C-195 indicates that the 20' connection between Contract "X" and "Y" will be performed by Contract "Y". Which B package does Contract "Y" refer to? Specifically in the case of connecting package B3 to B2, what is the anticipated completion date for package B3 (Morena Conveyance North) at Station 1034+32?
- A18. It is anticipated the northern Pkg B3 contract (separate contract) will be completed at this connection point prior to Morena Conveyance Middle Contractor's arrival. Contractor shall coordinate scheduling with CM team.
- Q19. Package B3 was awarded on February 26, 2021 but construction has not appeared to have started. Will this have any impact on the anticipated NTP date of May-June 2022 for this project that was identified in Addendum A?
- A19. Package B3 is under contract and is performing potholing activities there. Construction Duration will complete in and around the completion of this contract.
- Q20. Are there currently any permits the City is responsible for that are not yet executed/secured that would have an impact on the timing of award and construction of this project?
- A20. No.
- Q21. The last 6 pages of plan set "PWP Morena Conveyance Striping Signage Electrical_Cutsheets_SIGNED_12_10_2021-1" are for the traffic signal loop layouts which will need to be repaired/replaced/restored after the 48" Force main and 30" Brine pipelines are installed. These drawings start at E-05 and go through E-10. Will the missing drawings E-01 to E-04 be provided?
- A21. There are 13 Signalized intersections within the Middle Alignment which requires loop replacement. E-01 thru E-04 is reserved for Northern

Alignment which consist of the following location: Genesee Ave, Nobel Dr, and Towne Centre.

- Q22. Addendum A revised Bid Item 113-Traffic Signal Loop and Appurtenance (Type Q) quantity to 26 and revised Bid Item 114- Traffic Signal Loop and Appurtenance (Type E) quantity to 325. These quantities account for the 13 intersections found on drawings E-05 to E-10 of the plan set "PWP Morena Conveyance Striping Signage Electrical_Cutsheets_SIGNED_12_10_2021-1" , but do not account for the 7 missing intersections which most likely will be found on drawings E-01 to E-04. Will the Army Corp. revise Bid Items 113 and 114 with the increased quantities which will account for the 7 missing intersections?
- A22. Yes. There are 7 additional signalized intersection that will require loop replacement. Plans are provided in this addendum.
- Q23. There are various bid items that include (EOC Type I) or (EOC Type II) in the item description. Please explain what EOC Type 1 and EOC Type II refer to. It appears that the items that include these designations are "Allowance Items" of work with the exception of Bid Item 25 - Portable Changeable Message Signs (EOC Type I). This bid item has a quantity of 35 Months per Addendum A. Please clarify what EOC stands for.
- A23. EOC stands for Equal Opportunity Contracting. For the purposes of achieving the fair share objectives identified in Section 12.6 - California State Water Resources Control Board - Clean Water State Revolving Fund (CWSRF), of the Notice of Inviting Bids; the City percentage calculations will not account for EOC Type II "Field Orders" and "City Contingency" Bid items. Allowance Bid items designated as "EOC Type I" will be considered as part of the Base Bid and will be included in the percentage calculation.
- Q24. It was mentioned in the Pre-Bid meeting that the DBE goal for this project is 9%. The only location that we find in the specifications that some what defines this goal is on page 9 - section 12.6. If you add the % in the MBE and WBE columns for the 4 categories, you arrive at 9%. Question - are the contractors required to obtain the various % as outlined in Section 12.6 or just obtain 9% overall DBE participation? If the contractor is required to obtain the various % in Section 12.6, please clarify - i.e. is the requirement to obtain 2% of the contractors total bid

amount as MBE construction, 1% of the contractors total bid amount as MBE supplier, 1% of the contractors total bid amount as WBE construction etc.

- A24. The City will be evaluating a bidder's efforts related to the fair share objective for Construction category only. The fair share objectives for this project are located on Page 9, Section 12.6 - California State Water Resources Control Board - Clean Water State Revolving Fund (CWSRF), of the Notice of Inviting Bids.
- Q25. Reference Bid Item 13 - Additional Pipeline Appurtenances and Spec Section 306-15.8. 1)Will the contractor be required to supply 40 LF of 48" diameter 3/8" thick Steel Pipe AND 40 LF of 48" diameter 1/4" thick steel pipe? Same question for the 30" steel pipe. 2)Must the steel pipe have tape coating? Without mortar coating, how will the tape coating be protected during shipping and handling? 3)What is the length of pipe required to be attached to each side of the 45 degree and 22.5-degree bends?
- A25. a. Yes, these are common items for both the southern and the middle alignments.
- b. The pipeline appurtenances shall be lined and coated as shown on the contract drawings as specified in Greenbook Section 306-15. SSP 306-15.8 to be revised to state "with" mortar coating. Shipping and Handling shall conform with SSP 209-2.2.9 and Greenbook 306-2.4".
- c. 3 feet min.
- Q26. Just a suggestion for any future revisions to the bid item list. Do not revise the bid item numbers. If a bid item is deleted, just change the quantity to 0. If bid item is added, add it to the end of the existing bid items or use 10A, 10B etc. Revising bid item numbers tends to create confusion when subcontractors and suppliers submit their quotes if they are not aware of the revised bid item numbers.
- A26. Per City standards, the bid items are renumbered with each revision.
- Q27. Please reference plan sheet C-187 (Morena Conveyance Middle) – The Manway tables do not indicate any drains.

The table on C-187 (Morena Conveyance South) shows sizes of drains where required. Are we to assume that no drains are required in any Manways in Morena Conveyance Middle?

A27. Drains for the Morena Conveyance Middle are shown on Dwgs C173, C175, & C176. Drains are not included for every manway structures.

Q28. Reference Addendum A - Bidders Question #16. The answer to the question indicates that the work is covered by "Median Curb and Gutter (Type B2)". We do not find a Bid Item for Median Curb. Please advise?

A28. See response to similar question number 15 as stated below:

The cost for replacing the existing median curb and gutter is included in contract price for "Force Main - 8"WSP CML & TCMC (3/8" Thk)" and "Brine/centrate-30" WSP CML & TCMC (3/8" Thk)" per WB/SSP 306-15.1.

Q29. Can you clarify the total goal commitments for MBE & WBE? Specifications show 4% for MBE (1% Equipment is included) and 3% for WBE (1% Equipment is included). It was mentioned by the City's rep as 5% MBE and 4% WBE during the mandatory pre-bid meeting.

A29. The fair share objectives identified for these projects are located on Page 9, Section 12.6 - California State Water Resources Control Board - Clean Water State Revolving Fund (CWSRF), of the Notice of Inviting Bids.

Q30. Supplementary Special Provisions require a qualified and experienced full-time, on-site Safety Professional (only duty). Under which bid item will the cost for this representative be paid?

A30. The cost shall be included in the contract price. This is same as the full-time scheduler included in this contract.

Q31. Thrust blocks and anchor blocks are required at all bends, tees, dead-ends and reducers. These are not typically required for restrained/welded pipe. Can you confirm the requirement for thrust blocks.

A31. Confirmed, thrust blocks are not required for restrained/welded steel pipe.

- Q32. Is there a baseline of anticipated hours in the monthly allocation of costs associated with the Project Integrator that is required from the project Limited NTP and terminating at Final Completion (C-162)?
- A32. See revised 01 91 14 Specification.
- Q33. Plans require Compaction Grouting at Telecote Creek Crossing. Can a bid item be created for this work; or which item should this cost be bid through (C-162)?
- A33. Cost shall be included in the contract unit price for pipeline as stated in SSP 306-15.1.
- Q34. Plans require Demolition and Improvements at Telecote Creek Crossing. Can a bid item be created for this work; or which item should this cost be bid through?
- A34. Demolition and improvement costs shall be included in the contract unit price for pipeline as stated in SSP 306-15.1.
- Q35. Bid items 17 and 18 provide potholing of utilities not shown. Please confirm that potholing and supporting of shown utilities are incidental to the pipe crossing the work. In addition, will the owner provide a bid item to cover the costs associated with delays, production loss, temporary pipe supports and permanent pipe supports associated with existing utilities not shown on plans?
- A35. Confirmed, potholing of utilities is incidental to the utilities crossing the proposed pipeline. The City will not provide a separate bid item for costs associated with delays, and this cost is included in bid items 17 & 18.
- Q36. Can you clarify the requirements associated with BI 14 - CCTV of Existing Sewer Systems with Lateral Capability? The specifications make note that the item "...cleaning and video inspection of the existing sanitary and storm sewage pipeline and laterals in potential conflict...". How much cleaning is anticipated under the daily rate? Is the contractor expected to vacuum out debris and how will this process be paid as it is difficult to include in a daily rate?
- A36. CCTV preparatory pipeline cleaning procedures are provided in WB Section 306-18.3 part 7.

- Q37. How is the contractor to determine if there are specific areas along the proposed alignment where there is known impacted soil that will need to be monitored prior to construction?
- A37. Geotechnical Data Report provides soil test results and locations of impacted soils. Please note an environmental site assessment was not preformed.
- Q38. Bid Items 40 & 85 Loading, Transportation, and Disposal of soils containing RCRA Hazardous Waste. How was this quantity determined?
- A38. Quantity estimate was based on data from the Geotechnical Report, Cut and Cover Pipeline Portion, Dated January 5, 2018, link provided in 3-9.6. Please note an environmental site assessment was not preformed.
- Q39. Bid Items 41, & 86 Loading, Transportation, and Disposal of Petroleum Contaminated Soil. How was this quantity determined?
- A39. Quantity estimate was based on data from the Geotechnical Report, Cut and Cover Pipeline Portion, Dated January 5, 2018, link provided in 3-9.6. Please note an environmental site assessment was not performed.
- Q40. Section 5.1 - Under Section 5.1 Excavation and Shoring, the second sentence states, "As Discussed Further in Section 4.6" Please clarify where this can be found.
- A40. Please provide referenced section document for a response.
- Q41. Specification section 01 91 14 provides extensive detail regarding the efforts needed for the Integration Period Support.

In Part 1 – Section B states that "the Contractor shall assign the following personnel to the JTG: a. Contractor Startup Manager, Project Integrator, Electrical Subcontractor Management Representative, Ozone Supplier Management Representative, MF Supplier Management Representative, RO Supplier Management Representative, UV Advanced Oxidation Supplier Management Representative" for varying meeting frequencies of Daily, Weekly, and Bi-Weekly. Lastly, Section 1.07 also proceeds to start the "Contractor shall provide personnel, both

supervisory and from the applicable trades, who are experienced in startup, testing, and commissioning for the execution of the work described in these Contract Documents."

In Part 3 – Section 3.01 states an entirely different set of attendees needed of and by the Contractor: Contractor, Contractor's designated quality control representative, Subcontractor's and equipment manufacturer's representatives whom Contractor deems to be directly involved in facility startup, Construction Manager, Engineer's Representative, Owner's operational personnel, Others as required by Contract Documents or as deemed necessary by Contractor or City. Then later in Section 3.13F, it is stated that [for the 120-day time period] that "the Contractor shall provide personnel on a 3-shift, 24-hour per day basis to maintain the Work as directed by the Construction Manager during the Integration Period. The Contractor shall provide a minimum of 2 persons (actual distribution to be as directed by the Construction Manager) for each 8-hour shift. This coverage shall be for 24 hours per day, 7 days per week for the full duration of the period unless otherwise designated by the Construction Manager." Further, in 3.13J and K the Contractor is to have even more personnel and equipment on standby.

Can you clarify if all of this information is for Reference Only and further provide clarity on exactly what the Contractor for this Contract's/Bid's requirements of personnel and frequency of attendance will be for any pre- commissioning meetings, during commission support, 120-day integration period testing, and post- commissioning support?

- A41. See revised 01 91 14 Specification.
- Q42. According to the Solicitation, invitations to DBE's are supposed to be sent 15 days prior to bid date, and that would be today, but none of the bidder's questions regarding the DBE have been answered yet. I'm wondering if you would consider pushing the date back in order to answer the DBE questions so that we are getting the most coverage possible?
- A42. Refer to the cover page of this Addendum for extension of bid due date.
- Q43. It appears that the intent of Bid items 113 & 114 is to pay for the replacement of loops that are broken/damaged during construction by EA. However, Answers A-5 and A-18 in the Bidder's questions state that

Bid items 75 & 110 (LS) “generally includes restoration of existing LOOPS.” Are all loops paid by the EA through Bid Items 113 & 114 or are loops paid throughout all four items 75, 110, 113, & 114? If loops are paid throughout all four items then please clarify what loops are paid by the EA and what loops get covered by the LS items.

- A43. See new Bid Item “3” SCH 80 PVC SD FM” per this addendum.
- Q44. Reference plan sheet 183 of 326. Plans indicate installation of a 3” Stormwater Forcemain. Bid item list does not include a bid item for this work. Where is the installation of this work to be paid?
- A44. See new Bid Item “3” SCH 80 PVC SD FM” per this addendum.
- Q45. For Coverages outlined in Special Provisions Section 5-4.17 Contractor provided insurance that is not covered by the OCIP Insurance, the contract requires General Liability and Auto Liability Limits of a \$5M which is difficult to obtain without the use of excess limits. Please confirm that limit requirements may be met via combination of Primary and Excess Limits.
- A45. Confirmed.
- Q46. The OCIP Builders Risk Coverage outlined Section 5-4.9 does not provide Earthquake Coverage. The Project Area is located in an area with seismic activity. Please clarify the following:
- a. The BRISK provided does not include Earthquake, is the contractor required to procure Earthquake coverage?
 - b. Does CA Code 7105 apply?
- A46. a. Contractor is not required to obtain earthquake coverage per the contract specifications but may obtain the coverage if it deems the risk makes it necessary, at the contractor’s expense.
- b. CA Code 7105 does not apply.
- Q47. We assume that another addendum will be issued to address questions we have submitted that have not been answered. We would like to request that the deadline for pre-bid questions be extended a minimum

of one week to February 16, 2022, so that any questions that may be generated from the upcoming addendum can then be submitted.

- A47. Refer to the cover page of this Addendum for extension of bid due date.
- Q48. What test/method/criteria will be approved and used to measure the effectiveness of the compaction grouting program?
- A48. Post grouting CPT soundings and an evaluation of the proposed settlement of the pipeline based on the CPT readings.
- Q49. Will CPTs be performed at the Tecolote Creek crossing prior to bid?
- A49. CPTs will not be performed at the Tecolote Creek crossing prior to bid.
- Q50. Can a Q&A session be set up with the geotechnical engineer (AECOM)?
- A50. Yes.
- Q51. Will alternative ground-improvement techniques be considered?
- A51. Alternatives will be evaluated, but compaction grouting shall be the basis for bid. Alternatives such as jet grouting were considered, but compaction grouting was selected per the geotechnical recommendations.
- Q52. I am looking thru documents. I see in the solicitation you have a compaction grouting spec. However I do not see a dewatering specification. I know one must exist. Can you point me in the right direction.
- A52. Dewatering is specified in 2018 GB 3-12.6.4.
- Q53. Reference drawing C-85 and AV Vault #7. Note 3 refers to sheet 188 for details. Sheet 188 (drawing C-179) shows a vault containing combination air and vacuum release valves for both the force main and the brine centrate main. The condition for AV Vault #7.
- A53. Question not clear. Type A Vault detail shown for Forcemain and Brine Centrate (where occurs). AV vault #7 located at Brine Sta 762+30 is to be constructed per detail Sheet 188 without the parallel Forcemain pipe.

- Q54. Reference drawing C-85 and the Enlarged Plan showing AV Vault #7. Note 2 refers to sheet 184 (drawing C-175) for profile of the 4-inch drain. The profile for this drain is not included on drawing C-175. Further, the connection of the 4-inch drain to the existing sewer.
- A54. No profile for the 4-inch drain is provided. Connect drain to existing sewer identified at approx. Sta 762+02, IE 6.93 as shown on drawing C-85.
- Q55. Reference drawing C-14 and Blow Off #2A, which does not show a sidewalk vent extending from the blow off vault. Drawing C-178 shows the typical detail for blow off vaults, which includes a sidewalk vent (note 23). Please confirm no sidewalk vent is to be provided at Blow Off #2A.
- A55. Sidewalk vent to be installed at adjacent sidewalk west of Blow Off #2A per Detail 3, sheet 217.
- Q56. Reference the Enlarged Plan on drawing C-07 for Blow Off #2 and the drain per notes 1 and 5. There appears to be an underground valve shown on this drain line. Please identify and detail this valve.
- A56. Reference keyed note 24 on sheet 187 (C-178). Plan locates this valve in median for accessibility.
- Q57. Reference note 4 on drawing C-05 calling for relocation of existing FO line. Please provide size, type, and depth of conduit, limits of relocation and plan and profile of relocation.
- A57. The existing FO is to be relocated by others per callout note 4 on drawing C-05.
- Q58. Reference drawing C-14 and what appears to be a FO pull box 10 feet left of FM STA 112+76. Please confirm a FO pull box is intended here.
- A58. Approximate location of proposed FO pull box is shown on plans. To avoid existing water meter box, exact location to be determined by the Contractor in the field.
- Q59. Reference drawing C-15 and what appears to be a FO pull box 10 feet left of FM STA 117+37. Please confirm a FO pull box is intended here.
- A59. Approximate location of proposed FO pull box is shown on plans. To avoid existing water meter box, exact location to be determined by the Contractor in the field.

- Q60. Reference Detail A on drawing C-181 and the Gas Trap (P-Trap) for vault drains. This detail references standard plan SDS-102. The two drawings are very different. Please clarify how standard plan SDS-102 is to be applied to Detail A on drawing C-181.
- A60. Per note 1 on Detail A, construct a sewer cleanout per SDS-102 with concrete encasement to 6" outside cleanout box and minimum 4" below lowest IE of gas trap per Detail A.
- Q61. The compaction grout horizontal layout and vertical extents are indicated on drawing C-162 (sheet 171-D). It is assumed this layout design has been determined by the Geotechnical Engineer to meet desired settlement and bearing capacity requirements. Specification section 3.02.H.3 indicates the ground improvement contractor is to develop a grout mix design and maximum injection volume as part of their work. Does the design require a minimum grout volume and grout strength? We would expect something like a minimum area ratio of about 10% and 28-day minimum average grout strength of 150 psi would be required.
- A61. Per specifications, the contractor shall submit design for engineer's review & approval. At minimum consider 10% replacement and strength of 150 psi.
- Q62. The soils to be treated with compaction grouting indicated on drawing C-162 (sheet 171-D) are predominantly saturated clays, as indicated in the soil boring logs in this area. During the compaction grouting process these soils will act in an undrained way and should not be expected to result in appreciable densification or increase in SPT or CPT penetration resistance. Any improvement will be by reinforcement rather than densification. Specifications section 3.04.A.1.a indicates post-improvement CPT or SPT penetration testing may be performed by a soil testing firm retained by the Owner and as directed by the Owner's Geotechnical Engineer. Please confirm the Contractor will not be required to achieve increases in post-improvement penetration testing.
- A62. As pre-construction CPTs were not performed, the contractor's scope and price shall include post-construction CPTs to evaluate the soil

strength and evaluate the reinforcement by grouting. The contractor will not be required to show improvement of clayey soils.

- Q63. On sheet 202 of Morena Conveyance it details concrete encasement of existing Utility. After review of the plans no call for this detail is made. Can you clarify where contractor is to use this detail, or what parameters would require the contractor to utilize this detail?
- A63. The pipe support detail is provided as an undercut installation option if needed. The detail is not specified on any layout sheets.
- Q64. On sheet 84 of Morena Conveyance plans call for installation of 3" PVC SD FM, and there is no corresponding bid item. Please confirm how this work will be paid.
- A64. See new Bid Item "3" SCH 80 PVC SD FM".
- Q65. On sheet 85 of Morena Conveyance plans call for Contractor to relocate CATV line, and there is no corresponding bid item. Please confirm how this work will be paid.
- A65. The CATV line identified on Sheet 85 will be relocated by the utility owner.
- Q66. See Morena Conveyance plans sheet C-232 note 6. Please advise if there will be a temporary construction easement to properly construct the new driveway at curb ramp location 54, per the SDG-163 standard drawing. There may be an issue in matching the existing back of sidewalk without going into the private property line.
- A66. There is 10' between edge of curb and the private property line. This should be sufficient to build a SDG-163 driveway. Contractor to investigate field conditions and notify the engineer if issues with building the driveway within the right of way limits.
- Q67. On the Morena Conveyance package B1 plans Sheet C-183 refers to SDG-107 for trench resurfacing. Per note 1 on SDG-107 any trench wider than 7' or longer than 100' is to be constructed per Schedule "J" (SDG-113). Schedule "J" paving requirements are based on Street Classifications. Please provide the street classification for Sherman St, Custer St, Morena Blvd, W Morena Blvd, Milton St, Chicago St, Jellett St, Denver St and Clairemont Dr., Clairemont Mesa Blvd., and Genesee Ave.

- A67. Pavement sections are to follow the provided Detail 5 on Sheet 192.
- Q68. Per Schedule "J" (SDG-113) the pavement restoration thickness for Asphalt and CTB is based on the R-Value. Please provide an R-Value to be used for native soils to be used in trench backfill.
- A68. R-Values will not be provided for the trench areas. See response to previous question.
- Q69. Per Supplementary Special Provisions 3-8.7 a Contractor's Quality Control Plan is required on the project. How will this work be paid? Please consider an additional bid item to pay for this work.
- A69. Per Supplementary Special Provisions 3-8.7 a Contractor's Quality Control Plan is included in the contract price.
- Q70. Per Supplementary Special Provisions 3-8.7.1 there are inspection and documentation requirements for the contractor. Will continuous inspection by the contractor be required on this project? Will the quality inspectors be permitted to perform tasks other than quality inspections and paperwork?
- A70. Per Supplementary Special Provisions 3-8.7.1 there are inspection and documentation requirements which are included in the contract price.
- Q71. Per Whitebook (2018) 3-8.7.2 the Quality Control Plan Administrator shall be a full-time employee of the contractor or consultant? Will the QCP Administrator be required to be full time on the project?
- A71. Per Whitebook (2018) 3-8.7.2 the Quality Control Plan Administrator shall be a full-time employee of the contractor or consultant and shall be included in the contract price.
- Q72. Bid items 37 & 82 "Dewatering Hazardous Contaminated Water" are currently LS items. It is not possible to determine the volume of Hazardous Contaminated Water at time of bid. Please change these bid items to an Allowance to cover additional costs associated with hazardous contaminated water.
- A72. Bid items 37 & 82 "Dewatering Hazardous Contaminated Water" will remain as lump sum items.

- Q73. Per Whitebook (2018) 3-12.8.4 item 12 dewatering water may be discharged into the sewer system. Please confirm that groundwater will be allowed to be discharged into the sewer system? Will bid item 39 & 84 "Dewatering Permit and Discharge Fees (EOC Type I)" be used to pay for fees associated with discharging ground water to the sewer system?
- A73. Dewatering into the sewer system shall be in compliance with 2018 Whitebook 3-12.8.4. Fees associated with discharging ground water to the sewer system shall be paid with Bid items 38 & 83 "Dewatering Permit and Discharge Fees (EOC Type I)".
- Q74. Per Whitebook (2018) 3-12.8 Item 3 when excavating below the groundwater table sheet piles shall be used and driven 5 feet below bottom of excavation. Due to the high concentration of utilities on this project sheet pile shoring will not be feasible in most locations. Will other forms of shoring be allowed in lieu of sheet pile when excavating below groundwater table?
- A74. Yes, other forms of shoring will be considered. Shoring plans are to be submitted for approval per Greenbook specification 5-7.2.2.
- Q75. Per Attachment E SSP 3-14 is deleted entirely and replaced with Attachment F Technical Spec 01 12 01 Partnering. In the Technical Spec reference is made to Whitebook 3-14.1 which indicates partnering costs will be split between contractor and owner. Please confirm that partnering will be required and split 50/50 with the City.
- A75. Confirmed.
- Q76. Per Attachment F Technicals Section 01 32 00 1.3 a full time onsite Senior Project Scheduler is required. Please confirm that the contractor is to maintain a full-time scheduler onsite that is dedicated to the project.
- A76. Per Attachment F Technicals Section 01 32 00 1.3 a full time onsite Senior Project Scheduler shall be included in the contract price.
- Q77. Per Attachment F Technicals Section 01 91 14 1.07 a Startup Manager and Project Integrator are required and the Contractor is instructed to allocate the monthly cost for these individuals from limited NTP until Final Completion. The spec states that these roles also may not be the

same person. Is the intent that these two individuals be full time employees of the contractor? How will this cost be paid in the contract?

A77. Yes, and these roles are included in the contract price. See revised Section 01 91 14.

Q78. Per Attachment F Technicals Section 01 91 14 3.13 Integration Period Testing under item C indicates that support costs are to be included in bid item 86 "Integration Period Support" which is a LS. Item F indicates that the contractor is to provide a minimum of 2 persons, 24 hours per day for 120 days. Item G indicates that the City has an allowance of 5760 hours allocated for the designated maintenance personnel during the Integration Period and that time paid will be verified and approved by the Construction Manager. Is this cost supposed to be carried in bid item 86 or does the City intend to pay force account for the 5760 hours?

A78. See revised Section 01 91 14.

Q79. Per callout on Package B1 Morena Conveyance plans on sheet C-163 for the Tecolote Creek Crossing the callout for backfill above the pipe zone references backfill per SPPWC 217-2.3. In the 2018 SPPWC this spec does not exist. Please clarify this spec reference.

A79. Reference should state SPPWC 217-2, Trench Backfill.

Q80. In reference to question 9 in addendum A, the anticipated NTP is May-June of 2022. This timeline will not allow for the procurement of pipe materials. Will the City work with the contractor on possibly extending the NTP date to allow enough time for pipe submittals, approvals, and procurement. Pipe procurement is estimated to be 4 to 6 months from the approved submittal.

A80. NTP is anticipated for May-June 2022; however, it depends on the actual duration of advertisement, bid evaluations, and award process and could be extended. NTP date is issued within the 30 days of LNTP.

Q81. Will recycled base be allowed for trench backfill?

A81. Yes, as long as backfill material meets project specifications.

- Q82. Per SSP 6-2.2 item 6 Night work on Morena can't be done at the same time as day work Chicago Street, Jellett Street and Denver Street and a minimum of 7 days is required to switch from night work to day work. This conflicts with SSP 1-2 where it states "The Contractor shall be required to have a minimum of one day crew and one-night crew. Please confirm that the day crew and night crew will be allowed to work continuously in the designated day and night work locations.
- A82. The Contractor shall be required to have a minimum of one day crew and one-night crew, the Contractor will have to stage crews to allow for a reprieve to residents/ businesses, so they do not have constant construction. For example. Day work can commence on Clairemont Drive while Night work occurs on Morena.
- Q83. Per bid item 11 there are 8 Phased Paving Locations. This bid item seems to be a carryover from the previous bid that was canceled and was associated with the Distribution Waterline on a Phasing Plan. Please confirm if Phased Paving will still be required with this project and if so, provide a Phasing Plan showing the areas that need to be complete within 90 calendar days per SSP 306-1.2.
- A83. Section 306-1.2, Part 1 to be revised to read "You shall provide and implement a phased paving plan when directed and approved by the Engineer.
- Q84. Per SSP 8-2.5 B Office Facilities the City is requesting an office trailer space that is 48' x 120' or 5,760 SF. Based on the furnishing requirements it appears that 15 people will work in the office. This seems to be at least double the size of what would be needed. Please confirm the size of the field office that the City will require for the job. Also, will the City provide property for the office trailers or will the contractor be required to find and lease the land?
- A84. The SSP requirements per SSP 8-2.5 Field Office Facilities square footage will be kept as is. The Contractor is responsible to find the property and with approval from the City, the contractor shall be responsible for a lease agreement of the property.

- Q85. Per Sections 7-3.2 of the Whitebook and Greenbook, will the City allow the Contractor to provide a bond in lieu of retention as an acceptable form of security?
- A85. The City does not allow the Contractor to provide a bond in lieu of retention as an acceptable form of security.
- Q86. The contract requires the Contractor to sign a Project Labor Agreement and to submit Skilled and Trained Workforce Certification Forms monthly (NIB Section 8). Will the City please modify the Contract to allow execution of the Project Labor Agreement to satisfy the Skilled and Trained Workforce requirement as the state statute allows? Therefore, upon execution of the PLA, the monthly certification forms would not be required. If the City will not align this program with the state statute, will the City please modify the Skilled and Trained Workforce Certification Form such that each entity (meaning Contractor or Subcontractor as appropriate) will certify compliance for its own employees, similar to how Certified Payroll is certified by each firm for its own employees?
- A86. The Skilled and Trained Workforce requirement is mandatory in all Pure Water Program, Phase I, projects per City Council Resolution R-31206. The Skilled and Trained Workforce Certification form will not be modified as it was prepared to meet the requirements of Public Utilities Code section 132354.7 and Public Contract Code sections 2600-2602.
- Q87. 40 CFR 33.202 (c) states to be disadvantaged the individual must have an initial and continued personal net worth of less than \$750,000. The Small Business Administration (SBA) states an individual whose personal net worth exceeds \$1.32 million shall not be deemed to be economically disadvantaged so the certification databases listed in 40 CFR 33.204 (a) certify with a personal net worth up to \$1.32 million. Does the City of San Diego accept firms that the SBA, DOT and other DBE certifications listed in 40 CFR 33.204 (a) count toward the project DBE goals?
- A87. The City will accept certifications from the following agencies for participation credit for this project: California Department of Transportation (Caltrans), California Public Utilities Commission (CPUC)

and Small Business Administration (SBA). Self-certification is not considered.

Q88. Please reference sheet 188 of 326 (C-179) of the South plans – Keyed Note 23 – “450 lb. Media Odor Control Valve w/Side Access Mist Eliminator & 4” Flange per specifications.” Please provide specifications.

A88. Unit shall be an ANUA AirCarb 1X1X1 Odor Control System or Equal with mist eliminator system.

Q89. Are any cathodic bonding jumpers required inside the Blow Off Vaults? If so, where?

A89. Cathodic bonding jumpers are not required inside the Blow Off Vaults.

Q90. Regarding the Concrete Pavement Removal and Replacement - Bid Item #46 on Custer and Denver Street. What type of access will be required to the existing businesses on Custer and the homeowners on Denver? Will the roads be permitted to be closed for 28 days in order to allow the new concrete paving to reach its designed strength? If not, will rapid strength concrete be required in order to open the roads in say 4 hours? If so, please revise the bid item description to Rapid Strength Concrete (8") and provide detailed specifications for this work.

A90. Per Greenbook 302-6.7, traffic can be permitted on new concrete pavement after 7 days. Concrete treated according to GB 201-1 to obtain an early increase in strength may be opened to traffic after 3 days. Rapid strength concrete will not be required. Contractor is responsible to coordinate the closure with the businesses.

Q91. Green Book section 302-6.5.4 states in part the "Weakened-plane joints shall be constructed at the locations shown on the Plans". Please provide a detailed joint layout plan for the concrete pavement locations showing the required construction, expansion, and weakened-plane joints.

A91. PCC Panel Replacement will occur on a replace-in-kind basis, with plane joints located as existing.

Q92. Will sealing of the weakened-plane joints be required? If so, please provide the required joint seal specifications.

- A92. Joint sealing is not required by the plans. Should conditions dictate a need for sealing, GB 303-1.8.7 is the controlling specification.
- Q93. Per SSP 306-8.8.3 thrust blocks are to be installed at all bends, tees, dead-ends and reducers. Will this requirement pertain to the 48" & 30" WSP lines?
- A93. Thrust blocks are not required for WSP.
- Q94. Per SSP 306-15.8 bid item 13 is to provide a list of materials that will potentially be needed during construction. The last paragraph of the spec calls for the labor to install the materials to be included in the item as well. Please confirm that the list of materials is to be provided at an installed price and not furnish only.
- A94. See revisions to Section 306-15.8 in this Addendum. Payment shall include but is not limited to labor related to furnishing, delivery and storage of these materials, Installation will be handled as a Field Ticket/Change Order.
- Q95. Per the Technical Specifications 1.11 B payment for materials on hand will at no time exceed 75% of the manufacturer's quoted price. This contradicts the Whitebook spec 7-3.3.1.1 which states the full value of the involved amount will be paid up to 60% of the total bid item value. Please confirm which specification will prevail. Also confirm if retention will be withheld for material on hand payments. Please consider revising the spec to pay 100% of quoted material for Material on Hand due to the high value of pipe and the long lead for procurement.
- A95. Whitebook Spec 7-3.3.1.1 shall govern.
- Q96. Please confirm that off-site locations 100% dedicated to the work will be considered on-site locations thus afforded coverage under the OCIP. Section 3 of the OCIP Manual refers back to the Supplementary Conditions which offer no further clarification on the matter. Additionally, Section 3 of the OCIP manual refers to requirements found on questionnaire that we are not able to locate.
- A96. Offsite locates dedicated 100% to the project work will be covered under the OCIP - Offsite locations must be identified and submitted for approval by City/OCIP insurance carrier(s).

- Q97. Reference Special Provision section 7-3.1(2) Please confirm this project is subject to California Public Contract Code 7105 and the contractor will be relieved of the cost associated with damage caused by an earthquake exceeding 3.5 on the Richter Scale and/or tidal wave in excess of 5% of the contractor's bid.
- A97. The project is not subject to CA Public Code 7105.
- Q98. Please provide striping plans for the South section." Since striping is associated with bike lane work, could you please provide the striping plans for the southern portion of the alignment?
- A98. Striping and Signing plans for the Southern alignment are added in this Addendum. Striping for areas outside the plans shall match existing conditions. Contractor to coordinate with Morena Pipeline project prior to paving/striping.
- Q99. We have some critical questions to ask (basically the pipeline cannot be built with a plate specification and field wax tape; see below)
1. Reference Project Amendment to Greenbook Table 209-2.2.1 "Material". The spec indicated Plate or Coil conforming to ASTM A36 material. This is a plate standard and cannot be used to roll spiral welded pipe.
- A99. Conform to AWWA C200 - A36 (rolled plates) or A1011 (.250" or less)/A1018 (great than .250") for coil steel.
- Q100. We ask for ASTM A1011 and ASTM A1018 Gr 36 modified to 40 ksi minimum yield as an acceptable coil standard as allowed by AWWA C200.
2. Reference Project Amendment to Greenbook Table 209-2.2.1 "Cold Applied Tape Exterior Coatings". The spec deletes the reference to AWWA C214 and puts in a reference to AWWA C217.
- Please amend this to reference Tape in accordance with AWWA C214.
- NOTE: AWWA C214 is also referenced in Project amendment to Greenbook Section 210-3.7, System 8 Buried Metal.

AWWA C214 has been used in all past City's projects.

AWW C217 is a wax coating, very sticky, manually applied in the field for flanges, harnesses assembly and the like. Any City field engineer or inspector can confirm that it is impossible to be used as a substitute to AWWA C214 for a steel pipe project.

A100. Shop applied, tape coating conforming to AWWA C-214 is acceptable in lieu of the specified AWWA C-217 wax coating.

Q101. 1A. Will the City provide construction and testing water to the contractor at no charge for this project or will the temporary construction water rate apply at \$7.173 per HCF plus meter fees?

A101. 1A. The Contractor shall follow the Fire Hydrant Meter Program in Appendix B. Cost for meter and water shall be part of the Contract Price.

Q102. Per SSP 306-8.8.3 thrust blocks are to be installed at all bends, tees, dead-ends and reducers. Will this requirement pertain to the 48" & 30" WSP lines?

A102. Thrust blocks are not required for restrained/welded steel pipe.

Q103. Per SSP 306-15.8 bid item 13 is to provide a list of materials that will potentially be needed during construction. The last paragraph of the spec calls for the labor to install the materials to be included in the item as well. Please confirm that the list of materials is to be provided at an installed price and not furnish only.

A103. See revisions to Section 306-15.8 in this Addendum. Payment shall include but is not limited to labor related to furnishing, delivery and storage of these materials, Installation will be handled as a Field Ticket/Change Order.

Q104. Per the Technical Specifications 1.11 B payment for materials on hand will at no time exceed 75% of the manufacturer's quoted price. This contradicts the Whitebook spec 7-3.3.1.1 which states the full value of the involved amount will be paid up to 60% of the total bid item value. Please confirm which specification will prevail. Also confirm if retention will be withheld for material on hand payments. Please consider

revising the spec to pay 100% of quoted material for Material on Hand due to the high value of pipe and the long lead for procurement.

A104. Whitebook Spec 7-3.3.1.1 shall govern.

Q105. Please confirm that off-site locations 100% dedicated to the work will be considered on-site locations thus afforded coverage under the OCIP. Section 3 of the OCIP Manual refers back to the Supplementary Conditions which offer no further clarification on the matter. Additionally, Section 3 of the OCIP manual refers to requirements found on questionnaire that we are not able to locate.

A105. Offsite locates dedicated 100% to the project work will be covered under the OCIP - Offsite locations must be identified and submitted for approval by City/OCIP insurance carrier(s).

Q106. Reference Special Provision section 7-3.1(2) Please confirm this project is subject to California Public Contract Code 7105 and the contractor will be relieved of the cost associated with damage caused by an earthquake exceeding 3.5 on the Richter Scale and/or tidal wave in excess of 5% of the contractor's bid.

A106. The project is not subject to CA Public Code 7105.

Q107. Bid items 82, 83 and 84 reference spec section 3-12.8.8. Can the City please elaborate on what's to be included in each bid of the 3 bid items? For example:

1. Plant manager that reports and documents discharge to PUD, bid item 82, 83 or 84?
2. Cleaning silt from wier tanks related from dewatering activities, bid item: 82, 83, 85 or 86?
3. Bag changes from bag filters when haz or non haz water is encountered, bid item 82 or 83?
4. Discharge fees, bid item 82, 83 or 84?

A107. 1. 83

2. 82 or 83 dependent upon Hazardous condition.

3. 82 or 83 dependent upon Hazardous condition.
4. BI 82: Dewatering Non-Hazardous Contaminated Water and BI 83: Dewatering Permit and Discharge Fees (EOC Type I)-Payment for this item shall be made for this item in accordance to Specification 3-12.8.8.

BI 84: Loading, Transportation, and Disposal of Soils Containing RCRA Hazardous Waste-Payment for this item shall be made for this item in accordance to Specification 5-15.17.

Q108. I represent Wager Odor Control Valves and I had a question about our product approval for the Morena Conveyance South Project. Can you confirm that Wager Odor filtration media and Odor Control Valves are acceptable for this portion of the project? Are you available for a quick call? Would you like me to send additional information on our products? Any assistance would be greatly appreciated.

A108. Product is to be submitted for review and approval during construction.

Q109. Per White Book specification sections 306-8.8.3 "Thrust Blocks and Anchor Blocks" states where pipe is not restrained, thrust blocks shall be constructed. Per project specification 306-8.8.3 it deletes White book and replaces with thrust blocks shall be installed at all bends, tee, dead-ends and reducers. Is it the City's intention that thrust blocks will be required on the 48" and 30" pipelines? If so please provide detail that contractor is to follow.

A109. Thrust blocks are not required for welded steel pipe.

Q110. Per Package B2, drawing C-240, note 6 states to "Relocate fire hydrant and ensure 48" clearance." There are a few ADA ramps that have the same call out in both drawing sets, Package B1 and B2. Please confirm how work will be paid, as there is no corresponding bid item.

A110. Utilities raised or relocated in the construction of a curb ramp are included in the curb ramp item per WB 303-5.10.2.

Q111. Per Package B2, there are no call outs that pertain to Bid item 133, Installation of Curb ramps at mid-block ADA Parking. Please confirm the location of the 6 EA curb ramps.

A111. Type B curb ramps can be found at locations 159, 163, 174 (C-240); 179, 182 (C-241) and 186 (C-242).

Q112. Per Whitebook Standard Spec 7-3.4.1 the mobilization bid item is limited to 3% of the total bid. Can this spec be revised to follow the California Public Contract Code - PCC 10264 which allows for 10% of the total bid for mobilization with reasonable payment terms? Due to the nature of this project 3% for mobilization costs is unreasonable.

A112. Use the percentage per WB Section 7-3.4.1.

Q113. Where the plans call for a roadway to receive Type II or III slurry seal will contractor be required to do a 1 1/2" mill and overlay on the trench patch per SDG-107 note 2? If so where will this work be paid?

A113. The 1 1/2" mill and overlay on the trench patch per Detail 5 on Sheet 192 is required and is included in bill items 'Force Main-48" WSP CML & TCMC (3/8" Thk)', 'Force Main-48" WSP CML & TCMC (1/4" Thk)', 'Brine/centrate-30" WSP CML & TCMC (3/8" Thk)', and 'Brine/centrate-30" WSP CML & TCMC (1/4" Thk)' per WB/SSP 306-15.1.

Q114. Per Attachment E Technical Spec Section 01 32 00 Part 3.1.A.1 the CPM schedule is to assume 13 working days for weather per calendar year. Since this project is measured by working days all weather days should be counted as non-working days. Is the intent of this spec to count working days for the first 13 weather days? Please clarify or revise the spec.

A114. As stated in Attachment E Technical Spec Section 01 32 00 Part 3.1.A.1, Inclement weather is a lost workday. The CPM schedule shall include an "Inclement Weather" activity with a duration of 13 working days per year.

Q115. We would like to request that our CEM-KOTE CW PLUS please be reviewed as an Capillary/Crystalline Waterproofing material here. Please see the attached data sheets to assist with review, if you can please let me know if it's acceptable it would be greatly appreciated.

A115. Product is to be submitted for review and approval during construction.

Q116. Reference Spec Section 01 29 00 1.14 C High Purity Oxygen Sensor and Connection: Part 2 e. states "All equipment shall be supplied power from new SDG&E service." Has the City identified this service? Have all SDG&E fees been paid? When will be the service be available to use by the Contractor?

A116. A new service request is in process. The City will pay the new service fees. A date of availability has not been established.

Q117. Reference Special Provisions Section 306-1.2 – Phase Paving – 8 EA. It appears that the bid items is only intended to include the mobilization and demobilization cost for the AC paving and striping work since there are other bid items for the AC Paving by the Ton and Striping by the LF. Please confirm. In addition, paragraph 4 under section 306.1.2 indicates that the contractor may pose to change the limits of the determined phasing. Please provide the description/layout of the "determined phasing."

A117. Phased paving locations will be determined by Contractor and submitted to Engineer for approval. In addition to mobilization and demobilization this bid item shall include temporary striping and all other items included in SSP 306-1.2.

Q118. Reference Detail A on drawing C-181 and the Gas Trap (P-Trap) for vault drains. This detail references standard plan SDS-102. The two drawings are very different. Please clarify how standard plan SDS-102 is to be applied to Detail A on drawing C-181.

A118. Surface access improvements for the cleanout plug, concrete pad, and cleanout box shall be installed per SDS-102 for areas subject to vehicle traffic.

Q119. Reference C-277 and notes 12 and 14. Both notes call for 2" air/vacuum valve assemblies per SDW-159. Yet there appears to be only one air/vac assembly shown on the plan. Please confirm the air/vac assembly called out in note 14 is not intended to call for an air/vac assembly. Further note that the quantity for bid item 63 is 2 EACH, yet the air/vac assembly in note 12 appears to be the only one. Please confirm there is only one 2-inch air/vac assembly.

- A119. The AV assembly at Sta 14+00 is shown on the profile and called out as note 14, see revised Sht C-277 (Rev 4), the quantity of two 2" Air/Vac Assemblies is confirmed.
- Q120. Reference C-277 and note 13 calling for installation of a thrust block at the existing 16" CI WTR line to be completed by City Forces. The note calls for the Contractor to connect to the 12" GV after the new main is accepted. The plan appears to show two (2) 16" gate valves (GV) and one (1) 12" GV at this location but does not identify who is providing these valves. Please confirm the furnishing and installing of the gate valves is to be completed by City Forces as part of isolating the existing 16" CI WTR line.
- A120. Butterfly and gate valves shown on revised note 13 of Sht C-277 (Rev 4) Bid items for Cut-in Tee Connections have been revised in this Addendum and include the valves as noted on plans.
- Q121. Reference drawing C-199 and the proposed 12-inch water line. Please confirm the water service lines at the following stations are paid in bid item 61: 10+80, 10+91, and 16+68. If not paid in bid item 61, please confirm which bid item(s) they are to be paid under.
- A121. Confirmed, water service lines at Sta 10+80, 10+91, and 16+68 are paid for under bid item 61.
- Q122. Reference bid items 36 and 37 for dewatering hazardous and non-hazardous water, respectively. Both items have bid quantity 1 Lump Sum and are paid in accordance with Section 3-12.8.8, which calls for both items to include the cost to set up, remove, and operate all equipment necessary to complete the respective work for each item. What portion of the dewatering required for the project is to be applied to each bid item?
- A122. Contractor shall determine the dewatering proportion based on all available data including but not limited to the Geotechnical Report Cut and Cover Pipeline Portion Morena Pump Station, WW Forcemain, and Brine/Centrates Conveyance Predesign (NC01) dated Jan 5th, 2018 as well as the State's Geotracker website, <https://geotracker.waterboards.ca.gov>.

Q123. Please confirm dewatering can be discharged into the following sewer manholes:

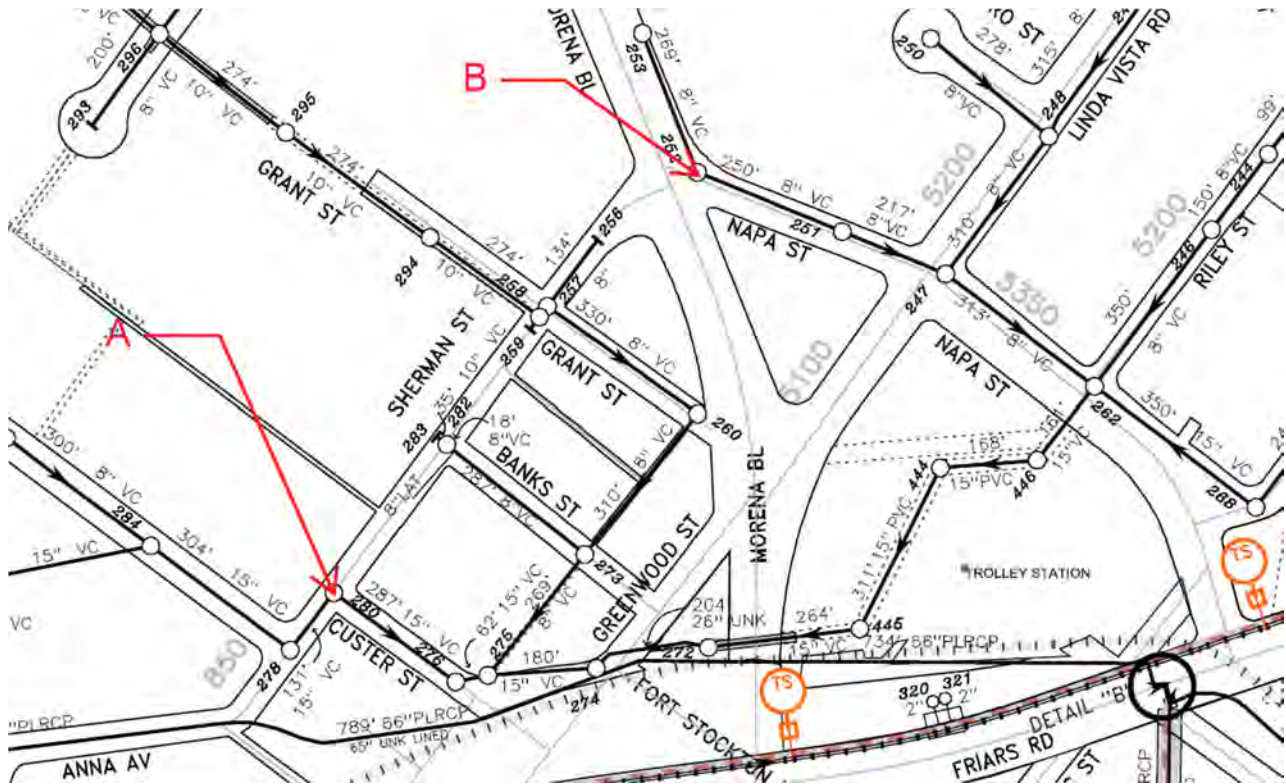
- a. in the center of Sherman St. at Custer St. (drawing C-01)
- b. in the center of Napa St. on the eastern edge of Morena Bl. (drawing C-02)
- c. behind the sidewalk on the eastern side of Morena Bl. south of the south bank of Tecolote Creek (drawing C-06).

A123. a. Yes.

b. Yes.

c. Dewatering can be discharged into the sewer manholes 56 and 58 near Tecolote Rd and Morena Blvd (item c. See maps below).





Q124. Reference plan sheets C-198, C-199 and C-277: On Sheet C-198, Note 1 says Existing 8" AC Water to be plugged and abandoned in place, however a note on Sheet C-277 says "Ex 8" AC Wtr to be removed & disposed." Please clarify whether the 8" AC waterline in Sherman is to be removed and disposed or abandoned in place."

A124. Sheet C-198, Notes 1 & 2 deleted. Reference layout plans as indicated for limits of removal or abandonment.

E. NOTICE INVITING BIDS

1. To Item 3, page 7, **DELETE** in its entirety and **SUBSTITUTE** with the following:
3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$116,465,000.**

F. SUPPLEMENTARY SPECIAL PROVISIONS

1. To Section 1, General, Terms, Definitions, Abbreviations, Units of Measure, and Symbols, Subsection 1-2, Terms and Definition, page 119, **DELETE** "Normal Working Hours" paragraphs and **SUBSTITUTE** with the following:

To the "WHITEBOOK", item 54, "Normal Working Hours", **ADD** the following:

Identified normal working hours described herein shall supersede what is identified on plans.

The Contractor shall be required to have a minimum of one day and one night crew. The **Normal Working Hours for the Day Crew** are **7:30 AM** to **4:30 PM** along the following Streets*Chicago Street*Jellett Street*Denver Street between Jellett Street and Ingulf Street* Clairemont Drive between Denver Street and Burgerner Street* Clairemont Drive between Iroquois Street and Dakota Drive*Clairemont Drive between Chippewa Court and Merrimac Avenue, excluding the crossing at Clairemont Mesa Blvd. Construction activities outside of the normal working hours may occur with prior approval by the Resident Engineer, at no additional cost to the City.

The Normal Working Hours for the Night Crew are **9:00 PM** to **5:00 AM** along the following Streets*Sherman Street*Morena Blvd.*Milton Street* Denver, between Ingulf Street and Clairemont Dive*Clairemont Drive, between Burgerner Street and Iroquois Street*Clairemont Drive, between Dakota Drive and Chippewa Court*Clairemont Drive, crossing Clairemont Mesa Blvd.* Clairemont Drive, between Merrimac Avenue and Clairemont Mesa Blvd.*Clairemont Mesa Blvd.*Genesse Avenue Construction activities outside of the normal working hours may occur with prior approval by the Resident Engineer, at no additional cost to the City.

2. To Section 5, Legal Relations and Responsibilities, Subsection 5-10.2, pages 170 through 172, **DELETE** in their entirety and **SUBSTITUTE** with the following:

5-10.2 Community Outreach Services.

1. To ensure consistency with the City's community outreach plan for the project, the City shall work with you to inform the public (which includes, but shall not be limited to, property owners, renters, homeowners, business owners, business patrons, recreational users, and other community members and stakeholders) of construction impacts, including when, where, and how long the impacts will last. Your efforts to mitigate construction impacts by communicating with the public require close coordination and cooperation with the City. Community outreach will be led by the Owner's Outreach team and supported by the Contractor.
2. You shall perform the community outreach activities required throughout the Contract Time. You shall assign a staff member from your construction team who shall perform the required community outreach services as a point of contact for the Owner's Outreach team and Construction Manager/Resident Engineer.
3. You shall closely coordinate with the Owner's Outreach team the Work with the businesses, institutions, residents, and property owners impacted by the Project.
4. Your example duties include working with the Owner's Outreach team to notify businesses, institutions, and residents of the commencement of construction activities not less than five (5) days in advance, coordinating access for vehicular and pedestrian traffic to businesses, institutions, and residences impacted by the Project, reporting activities at all Project progress meetings scheduled by the Engineer, attending the Project Pre-construction meeting, attending up to eight (8) community meetings, attending one-on-one

meetings with businesses and stakeholders as needed, and supporting responses to community questions and complaints related to your activities.

5. Members of your team shall participate in outreach meetings, including an initial orientation meeting (superintendent and foremen), led by the City and Owner's Outreach team to discuss expectations for and participation in outreach tasks throughout the Contract Time. The superintendent shall participate in the subsequent outreach meetings on a quarterly basis following the initial orientation.
6. The assigned staff member responsible for performing required community outreach services shall maintain an outreach materials kit provided and updated by the Owner's Outreach team.
7. You shall execute the Information Security Policy (ISP) Acknowledgement Form - For Non-City Employees within 15 Days of the award of the Contract if any of the following apply:
 - a. Your contact information is made available on any outreach materials.
 - b. You will be the primary point of contact to resolve project related inquiries and complaints.
8. Electronic Communication.
 - a. All inquiries and complaints shall be sent to the Owner's Outreach team to be logged in to the City's internal public contact tracking system within 24 hours of receipt of inquiries and complaints.
 - b. Any updates or a resolution of inquiries and complaints shall be sent to the Owner's Outreach team to be documented in the City's

internal public contact tracking system within 24 hours.

- c. Copies of email communications shall be saved individually on to the City's internal public contact tracking system in an Outlook Message Format (*.msg).
- d. All graphics, photos, and other electronic files associated with inquiries and/or complaints shall be provided to the Owner's Outreach team to be saved into the individual records, located within the City's internal public contact tracking system.

5-10.2.1 Quality Assurance.

- 1. During the course of community outreach, you shall ensure that the character of all persons that conduct community outreach (distributing door hangers, attending community meetings, interacting with the public, etc.) on your behalf shall:
 - a. Have the ability to speak and comprehend English and/or English and Spanish, as appropriate for the community or public they are informing.
 - b. Possess and display easily verifiable and readable personal identification that identifies the person as your employee.
 - c. Have the interpersonal skills to effectively, professionally, and tactfully represent you, the project, and the City to the public.

5-10.2.2 Submittals.

- 1. All public notifications and outreach materials will be prepared by the Owner's Outreach team and shall be delivered/distributed by the Contractor. After distributing, you shall submit verification of

delivery and any copies of returned notices to the Owner's Outreach team. Submit a PDF copy of the approved letters and notices to the Owner's Outreach team.

2. You shall provide the required information to the Owner's Outreach team for the creation and distribution of newsletters, e-newsletters, website updates, etc., for a project including: a written update on the progress of Work, 3 week look-ahead schedules, contact names and phone numbers, and any other information which may be of interest to the public for this purpose.
3. You shall identify and summarize communications (via phone, in person, and email) with the public within 24 hours of receipt, even if your response to the individual is still incomplete, to the Owner's Outreach team for inclusion in the City's internal public contact tracking system. You shall submit copies of all written, electronic, and verbal communications and conversations with the public to the Owner's Outreach team for reporting to the City's internal public contact tracking system.

5-10.2.3 Communication with the Public

1. Coordinate access for vehicular and pedestrian traffic to businesses, institutions, and residences impacted by the Project.
2. You shall provide updates on construction impacts to the Resident Engineer and the Owner's Outreach team. You shall notify the Resident Engineer in advance about time-sensitive construction impacts and may be required to distribute construction impact notices to the public on short notice.
3. You shall incorporate community outreach activities related to construction impacts in the baseline schedule and update the Resident Engineer and the

Owner's Outreach team with each week's submittal of the Three-Week Look Ahead Schedule.

4. At the request of the Resident Engineer or the Owner's outreach team, you shall attend and participate in project briefings at community meetings and one-on-one meetings with businesses and/or stakeholders.
5. You shall coordinate with the Resident Engineer and Owner's Outreach team on all responses and actions taken to address public inquiries and complaints within the 24 hours that they are received.

5-10.2.4 Communication with Media

1. The City may allow members of the media access to its construction site(s) on a case-by-case basis only.
2. Occasionally, uninvited members of the media may show up at construction Sites. Members of the media (including, but not limited to newspapers, magazines, radio, television, bloggers, and videographers) do not have the legal right to be in the construction Site without the City's permission.
3. In the event that media representatives arrive near or on the construction Site(s), you shall keep the media representative off the Site(s) in a courteous and professional manner until a Public Information Officer is available to meet them at an approved location.
4. You shall report all visits from members of the media to the Resident Engineer and the Owner's Outreach team as quickly as possible so that the City's Public Information Officer can be contacted and can meet with the members of the media at the construction Site(s).
5. If the City allows members of the media to access a construction Site, you shall allow the City to escort

the media representatives while they are on the construction Site and shall ensure their safety.

6. You shall require media representatives to sign in and out of the Site Visitor Log and to use personal protective equipment.
7. You have a right to speak to members of the media about your company and its role on the project. All other questions shall be referred to the City.

5-10.2.5 Payment

1. The payment for these community outreach services shall be included in the Contract Price.
3. To Section 6-2.2, Work Restrictions, ADD the following:
 15. Contractor shall coordinate the phased paving along W. Morena Blvd with the City to align with construction activities of Morena Pipelines to eliminate excavations in newly paved roadways.
 16. Contractor to locate existing CATV line identified on Package Morena Conveyance Southern, Sheet C-76. Upon positive location Contractor shall coordinate any re-location with Utility Owner, if necessary. Re-location shall be performed by Utility Owner. This identification shall be done as first order of work to prevent project delay. The existing FO is to be relocated by others per callout note 4 on drawing C-05.
4. To Section 7, Measurement and Payment, Sub-section 7-3.1, General, page 179, **ADD** the following:
 4. The Bid Item "Median Barrier Fence" shall include the construction of a median barrier fence on the reconstructed median in West

Morena Boulevard from Vega Street to Tecolote Creek. The Median Barrier Fence shall be constructed per the Mid Coast Corridor Transit Project, Sheet CD 119B provided in Appendix P. The Median Barrier Fence shall be measured and paid by linear foot installed.

5. The Bid Item "Concrete Barrier Type 60" shall include the construction of a Concrete Barrier Type 60 per Caltrans Standard Plan. The Concrete Barrier Type 60 shall be measured and paid per linear foot installed.

5. To Section 601 - Temporary Traffic Control for Construction and Maintenance Work Zones, Subsection 601-7, Payment, page 287, **DELETE** in their entirety and **SUBSTITUTE** with the following:

601-7

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

2. The payment for Engineered Traffic Control Plans, traffic control Work, and permits shall be included in the Bid item for "Traffic Control and Engineered Traffic Control Plans". Engineered Traffic Control Plans shall be developed and permitted for Contractor's proposed activities as well as City Forces proposed activities described in Bid Items; "Traffic Control During Construction Survey Stake-out" and "Traffic Control During Operational Valve Checks".

To item 5, **DELETE** subitem d) in its entirety and **SUBSTITUTE** with the following:

- d) The Contractor shall be required to provide additional no more than twelve (12) PCMS on-site at one time, as directed by the City, and shall be paid via the Bid item for "Portable Changeable Message Signs," for signs in use.

All other costs associated with placing, operating, programming, maintaining, repairing, replacing, transporting from location to location, and removing each PCMS shall be included in this bid item. The quantity, as provided in the bid list, accounts for twelve (12) PCMS multiplied by thirty-five (35) months for a total quantity of four hundred and twenty (420) PCMS. The Contractor shall be compensated each month by applying the unit cost to each PCMS used in that month.

To item 5, **ADD** the following:

- f) The payment for traffic control Work and permits related to the Contractor providing traffic control for the City to perform Construction Survey Staking shall be included in the Bid item for "Traffic Control During Construction Survey Stake-out".
- g) The payment for traffic control Work and permits related to the Contractor providing traffic control for the City to perform Operational Valve Checks shall be included in the Bid item for "Traffic Control During Operational Valve Checks".

6. To Technicals, Section 01 29 00, Payment Procedures, Part 1 General, Section 1.14, Bid Items, page 305, **ADD** the following:

- E. TECOLOTE CANYON MM BIO-3 – LUMP SUM
 - 1. No measurement shall be made for this item.
 - 2. Payment is made for this item is for construction of temporary barriers between the construction work and

the nesting bird restrictions, which would allow construction to continue during the breeding season in compliance with Mitigation Measure BIO-3 within the EIR and noted on Drawings. This work is limited to the area in and around Tecolote Creek as there has been identified a high likelihood for nesting birds.

3. Payment for this item shall be made as a Lump Sum amount named in the Bid Schedule.
7. To Technicals SECTION 01 91 14, TESTING, INTEGRATION, AND STARTUP, Part 1, General, Section 1.02, Definition, Subsection L, page 365, **DELETE** in its entirety and **SUBSTITUTE** with the following:
 - L. Intermediate Substantial Completion: The time at which the Project's operating facilities or systems are sufficiently complete to send screened and oxygenated wastewater flows to the NCWRP. All functional tests that can be performed with potable water shall be complete, and facilities shall be fully operable to allow for a flow increase to the NCWRP for 120 days and Brine return to Sewer in Custer Street. Refer to Attachment 1 for commissioning model planned. The Contractor shall support all activities within the Integration period as described in Section 01 91 14, Testing, Integration, and Startup. Refer to Contract requirements and Supplementary Provisions.
8. To Technicals SECTION 01 91 14, TESTING, INTEGRATION, AND STARTUP, Part 3, Execution, Section 3.01, General Startup and Testing Requirements, Items A and C, page 378,

DELETE in their entirety and **SUBSTITUTE** with the following:

- A. Contractor is responsible for the complete testing, check out, startup, and commissioning of all elements of the pipelines. Verify these activities through daily inspection reports, test records/reports, onsite vendor certifications, specified testing, and by other appropriate means. Startup and Testing Plans and Test Reports shall include specific language to demonstrate that the requirements stated herein are planned, executed, and accomplished. The requirements below are complementary to those indicated elsewhere in the Contract Documents.

- C. Facility Startup Meetings:
 - 1. Schedule and attend a minimum of five facility startup meetings. The first of such meetings shall be held prior to submitting Facility Startup Plan and shall include preliminary discussions regarding such plan.
 - 2. Agenda items shall include, but not limited to, content of Facility Startup Plan, coordination needed between various parties in attendance, and potential problems associated with startup.
 - 3. Attendees will include:
 - a. Contractor.
 - b. Contractor's designated quality control representative.
 - c. Subcontractors and equipment manufacturer's representatives whom Contractor deems to be

directly involved in facility startup.

- d. Construction Manager.
- e. Engineer's Representative.
- f. Owner's operational personnel.
- g. Others as required by Contract Documents or as deemed necessary by Contractor or City.

9. To Technicals SECTION 01 91 14, TESTING, INTEGRATION, AND STARTUP, Part 3, Execution, Section 3.04, Manufacturer's Installation Inspection, Subsection B, Preparation, Item 4, Cleaning and Checking, page 380, **DELETE** in its entirety and **SUBSTITUTE** with the following:

- 4. Cleaning and Checking:
 - a. Prior to beginning functional testing:
 - 1) Test piping for leaks.

10. To Technicals SECTION 01 91 14, TESTING, INTEGRATION, AND STARTUP, Part 3, Execution, Section 3.05, Mechanical/Electrical Functional Testing, Subsection A, page 381, **DELETE** in their entirety and **SUBSTITUTE** with the following:

- A. After each mechanical system is completely installed, the Contractor shall confirm proper installation according to these Contract Documents. Mechanical system testing shall include, but not be limited to the following system types:
 - 1. Piping (buried and exposed).

DELETE Subsection B in its entirety.

11. To Technicals SECTION 01 91 14, TESTING, INTEGRATION, AND STARTUP, Part 3, Execution, Section 3.13, Integration Period Testing, Subsections F and G, page 385, **DELETE** in their entirety and **SUBSTITUTE** with the following:

- F. The Contractor shall provide personnel on an on-call basis to maintain the Work as directed by the Construction Manager during the Integration Period. The Contractor shall provide a minimum of 2 persons (actual distribution to be as directed by the Construction Manager). Personnel shall be properly trained, experienced, and qualified to maintain the Work. The Contractor shall submit credentials of said personnel demonstrating proper training and qualifications. The Construction Manager shall be the sole judge as to the suitability of the personnel to be provided.

- G. An estimated quantity of 400 hours has been allocated for the designated maintenance personnel during the Integration Period at the hourly rate of the Contractor's support staff. Time paid for these maintenance personnel will be verified and approved by the Construction Manager.

DELETE Subsection K in its entirety.

- 12. To Section 306-15.8, Pipeline Appurtenances, page 281, **DELETE** in its entirety and **SUBSTITUTE** with the following:

306-15.8 Pipeline Appurtenances. To the "WHITEBOOK", item 3, **DELETE** in its entirety and **SUBSTITUTE** with the following:

- 3. Payment for water meter boxes and meter box lids shall be included in the Bid item for "Water Services" unless a Bid item for each "Meter Box" has been provided. Payment shall include any additional adjustment to place the box around the meter to ensure the valve is accessible and operating properly (including adjusting the water service pipe beyond the meter box).

To the "WHITEBOOK", **ADD** the following:

9. The Contractor shall have additional fittings readily available to mitigate unforeseen conflicts discovered while trenching. Upon discovering a conflict that can be mitigated with the use of additional fittings that are not originally identified in the Contractor's approved pipe lay sheets, or as shown on the plans, the Contractor shall immediately notify the Resident Engineer and obtain their approval for use. Upon completion of the contract, additional fittings that are not used, shall be delivered to a location as directed by the Owner.

Fittings	Quantity	Unit
48" Steel Pipe (3/8" thick) & 1/4 inch thick – interior lined, with mortar coating	40	LF
48" Steel High Deflection Coupling – Female x Female	2	EA
48" Butt Straps	4	EA
48" 45 Degree Bend 3/8" thick	2	EA
48" 22.5 Degree Bend 3/8" thick	2	EA
30" Steel Pipe (3/8" thick) & 1/4 inch thick – interior lined, with mortar coating	40	LF
30" Steel High Deflection Coupling – Female x Female	2	EA
30" Butt Straps	4	EA
30" 45 Degree Bend 3/8" thick	2	EA
30" 22.5 Degree Bend 3/8" thick	2	EA

The payment for these additional fittings shall be covered by the bid item, "Additional Pipeline Appurtenances (Diameter)". Payment shall include but is not limited to labor related to furnishing, delivery and storage of these materials. Installation of additional fittings will be handles as Extra Work.

G. ADDITIONAL CHANGES

- The following are additional changes to the Line Items in the PlanetBids Tab:

For clarity where applicable, **ADDITIONS**, if any, have been **Underlined** and **DELETIONS**, if any, have been **Stricken out**.

Section	Item Code	Description	UoM	Quantity	Payment Reference
Main Bid (COMMON ITEMS FOR MORENA CONVEYANCE SOUTH AND MIDDLE)	<u>541620</u>	Tecolote Canyon MM BIO-3	<u>LS</u>	<u>1</u>	<u>01 29 00</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237110</u>	<u>3-inch SCH 80 PVC SD FM</u>	<u>LF</u>	<u>270</u>	<u>306-15.1</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237110</u>	<u>6' Diameter SMH per Detail, Sheet 204</u>	<u>EA</u>	<u>1</u>	<u>306-16.6</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Painted Traffic Striping: Detail 39A/40 (Paint)</u>	<u>LF</u>	<u>2980</u>	<u>314-4.3.7</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Painted Traffic Striping/Green Pavement Treatment</u>	<u>SF</u>	<u>2580</u>	<u>314-4.3.7</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Thermoplastic Traffic Striping/Green Pavement Treatment</u>	<u>SF</u>	<u>3882</u>	<u>314-4.3.6</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Thermoplastic Traffic Striping: Stop Bar / Limit Line</u>	<u>LF</u>	<u>190</u>	<u>314-4.3.6</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Thermoplastic Traffic Striping/Diagonal Buffer Stripe</u>	<u>LF</u>	<u>255</u>	<u>314-4.3.6</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Thermoplastic Pavement Marking / Legend - Bike w/ Arrow Symbol</u>	<u>EA</u>	<u>23</u>	<u>314-4.3.6</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Install Traffic Sign on New Post</u>	<u>EA</u>	<u>19</u>	<u>701-2</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Install Traffic Sign on existing post</u>	<u>EA</u>	<u>15</u>	<u>701-2</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Removal: sign only</u>	<u>EA</u>	<u>20</u>	<u>701-2</u>
Main Bid (MORENA CONVEYANCE SOUTH)	<u>237310</u>	<u>Removal: Sign and Post</u>	<u>EA</u>	<u>9</u>	<u>701-2</u>

Section	Item Code	Description	UoM	Quantity	Payment Reference
<u>Main Bid (MORENA CONVEYANCE SOUTH)</u>	<u>237310</u>	<u>Traffic Signal Loop and Appurtenance (Type Q)</u>	<u>EA</u>	<u>8</u>	<u>404-12</u>
<u>Main Bid (MORENA CONVEYANCE SOUTH)</u>	<u>237310</u>	<u>Traffic Signal Loop and Appurtenance (Type E)</u>	<u>EA</u>	<u>48</u>	<u>404-12</u>
<u>Main Bid (MORENA CONVEYANCE SOUTH)</u>	<u>237310</u>	<u>Shur Flex curb w/ 28' Uflex Shur-tite Flex curb w/ 28-inch Uflex</u>	<u>EA</u>	<u>314</u>	<u>601-6</u>
<u>Main Bid (MORENA CONVEYANCE SOUTH)</u>	<u>237310</u>	<u>Median Barrier Fence</u>	<u>LF</u>	<u>670</u>	<u>7-3.1</u>
<u>Main Bid (MORENA CONVEYANCE SOUTH)</u>	<u>237310</u>	<u>Concrete Barrier Type 60</u>	<u>LF</u>	<u>40</u>	<u>7-3.1</u>
Main Bid (MORENA CONVEYANCE SOUTH)	237110	Cut-in Tee by Contractor (8 Inch) Cut-in Tee by Contractor (12 Inch)	EA	± 4	901-2.5
Main Bid (MORENA CONVEYANCE SOUTH)	237110	Cut-in Tee by Contractor (12 Inch) Cut-in Tee by Contractor (16 Inch)	EA	± 1	901-2.5
Main Bid (MORENA CONVEYANCE MIDDLE)	237310	Shur Uflex post and Base Shur-tite Uflex 28-inch post and Base	EA	521	601-3.6.7
Main Bid (MORENA CONVEYANCE MIDDLE)	237310	Shur Uflex curb and post Shur-tite Uflex curb and 28-inch post	EA	113	601-3.6.7

Rania Amen, Director
Engineering & Capital Projects Department

Dated: *March 1, 2022*
San Diego, California

RA/AJ/rd

10. DAVIS-BACON WAGE RATES AND PROVISIONS:

10.1. WAGE RATES This contract shall be subject to the following Davis-Bacon Wage Decisions:

"General Decision Number: CA20220001 02/25/2022

Superseded General Decision Number: CA20210001

State: California

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

County: San Diego County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	01/14/2022
2	01/21/2022
3	02/11/2022
4	02/25/2022

ASBE0005-002 09/01/2021

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems).....	\$ 47.25	24.45
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls).....	\$ 32.09	19.66

ASBE0005-004 07/05/2021

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)....	\$ 22.40	13.07

BOIL0092-003 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 46.03	38.81

BRCA0004-008 05/01/2021

	Rates	Fringes
BRICKLAYER; MARBLE SETTER.....	\$ 40.94	18.71

BRCA0018-004 06/01/2021

	Rates	Fringes
MARBLE FINISHER.....	\$ 35.90	14.11
TILE FINISHER.....	\$ 30.47	12.52
TILE LAYER.....	\$ 43.09	18.31

BRCA0018-010 09/01/2020

	Rates	Fringes
TERRAZZO FINISHER.....	\$ 33.66	14.20
TERRAZZO WORKER/SETTER.....	\$ 41.60	14.73

CARP0213-003 07/01/2021

	Rates	Fringes
Drywall		
(1) Work on wood framed construction of single family residences, apartments or condominiums under four stories		
Drywall Installer/Lather....	\$ 32.14	16.28
Drywall Stocker/Scrapper....	\$ 22.16	8.62

CARP0619-002 07/01/2021

	Rates	Fringes
Drywall		
(2) All other work		
Drywall Installer/Lather....	\$ 42.80	16.28
Drywall Stocker/Scrapper....	\$ 23.07	8.62

CARP0619-003 07/01/2021

	Rates	Fringes
CARPENTER		
(1) Bridge.....	\$ 51.53	16.28
(2) Commercial Building....	\$ 46.30	16.28
(3) Heavy & Highway.....	\$ 51.40	16.28
(4) Residential Carpenter..	\$ 38.47	16.28
(5) Residential		
Insulation Installer.....	\$ 24.16	15.76
PILEDRIVERMAN.....	\$ 51.53	16.28

CARP0619-004 07/01/2021

	Rates	Fringes
Diver		
(1) Wet.....	\$ 831.20	16.28
(2) Standby.....	\$ 444.24	16.28
(3) Tender.....	\$ 436.24	16.28
(4) Assistant Tender.....	\$ 412.24	16.28

Amounts in "'Rates' column are per day

CARP0721-001 07/01/2021

	Rates	Fringes
Modular Furniture Installer.....	\$ 21.85	7.15

CARP1607-004 07/01/2021

	Rates	Fringes
MILLWRIGHT.....	\$ 51.90	16.48

ELEC0569-001 06/01/2021

	Rates	Fringes
Electricians (Tunnel Work)		
Cable Splicer.....	\$ 54.36	3%+14.88
Electrician.....	\$ 53.61	3%+14.88
Electricians: (All Other Work, Including 4 Stories Residential)		
Cable Splicer.....	\$ 48.40	3%+14.88
Electrician.....	\$ 47.65	3%+14.88

ELEC0569-004 06/01/2021

	Rates	Fringes
ELECTRICIAN (Sound & Communications Sound Technician).....	\$ 35.20	13.84

SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, frequency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.

ELEC0569-005 06/01/2021

	Rates	Fringes
Sound & Communications Sound Technician.....	\$ 35.20	13.84

SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and

public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, frequency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.
 SOUND TECHNICIAN: Terminating, operating and performing final check-out

 ELEC0569-006 02/22/2021

Work on street lighting; traffic signals; and underground systems and/or established easements outside of buildings

	Rates	Fringes
Traffic signal, street light and underground work		
Utility Technician #1.....	\$ 35.17	9.01
Utility Technician #2.....	\$ 28.60	8.80

STREET LIGHT & TRAFFIC SIGNAL WORK:

UTILITY TECHNICIAN #1: Installation of street lights and traffic signals, including electrical circuitry, programmable controller, pedestal-mounted electrical meter enclosures and laying of pre-assembled cable in ducts. The layout of electrical systems and communication installation including proper position of trench depths, and radius at duct banks, location for manholes, street lights and traffic signals.

UTILITY TECHNICIAN #2: Distribution of material at jobsite, installation of underground ducts for electrical, telephone, cable TV land communication systems. The setting, leveling, grounding and racking of precast manholes, handholes and transformer pads.

 ELEC0569-008 08/30/2021

	Rates	Fringes
ELECTRICIAN (Residential, 1-3 Stories).....	\$ 37.28	7.98

 ELEC1245-001 01/01/2022

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer..	\$ 60.19	22.07
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment).....	\$ 48.08	20.86
(3) Groundman.....	\$ 36.76	20.46
(4) Powderman.....	\$ 51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day,
Independence Day, Labor Day, Veterans Day, Thanksgiving Day
and day after Thanksgiving, Christmas Day

ELEV0018-001 01/01/2022

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 61.34	36.885+a+b

FOOTNOTE:

- a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.
- b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0012-003 07/01/2020

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1.....	\$ 48.25	27.20
GROUP 2.....	\$ 49.03	27.20
GROUP 3.....	\$ 49.32	27.20
GROUP 4.....	\$ 50.81	27.20
GROUP 5.....	\$ 48.96	25.25
GROUP 6.....	\$ 51.03	27.20
GROUP 8.....	\$ 51.14	27.20
GROUP 9.....	\$ 49.29	25.25
GROUP 10.....	\$ 51.26	27.20
GROUP 11.....	\$ 49.41	25.25
GROUP 12.....	\$ 51.43	27.20
GROUP 13.....	\$ 51.53	27.20

	Rates	Fringes
GROUP 14.....	\$ 51.56	27.20
GROUP 15.....	\$ 51.64	27.20
GROUP 16.....	\$ 51.76	27.20
GROUP 17.....	\$ 51.93	27.20
GROUP 18.....	\$ 52.03	27.20
GROUP 19.....	\$ 52.14	27.20
GROUP 20.....	\$ 52.26	27.20
GROUP 21.....	\$ 52.43	27.20
GROUP 22.....	\$ 52.53	27.20
GROUP 23.....	\$ 52.64	27.20
GROUP 24.....	\$ 52.76	27.20
GROUP 25.....	\$ 52.93	27.20

	Rates	Fringes
OPERATOR: Power Equipment (Cranes, Piledriving & Hoisting)		
GROUP 1.....	\$ 49.60	27.20
GROUP 2.....	\$ 50.38	27.20
GROUP 3.....	\$ 50.67	27.20
GROUP 4.....	\$ 50.81	27.20
GROUP 5.....	\$ 51.03	27.20
GROUP 6.....	\$ 51.14	27.20
GROUP 7.....	\$ 51.26	27.20
GROUP 8.....	\$ 51.43	27.20
GROUP 9.....	\$ 51.60	27.20
GROUP 10.....	\$ 52.60	27.20
GROUP 11.....	\$ 53.60	27.20
GROUP 12.....	\$ 54.60	27.20
GROUP 13.....	\$ 55.60	27.20

OPERATOR: Power Equipment (Tunnel Work)		
GROUP 1.....	\$ 50.10	27.20
GROUP 2.....	\$ 50.88	27.20
GROUP 3.....	\$ 51.17	27.20
GROUP 4.....	\$ 51.31	27.20
GROUP 5.....	\$ 51.53	27.20
GROUP 6.....	\$ 51.64	27.20
GROUP 7.....	\$ 51.76	27.20

PREMIUM PAY:

\$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics

Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton

Workers required to suit up and work in a hazardous material environment: \$2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel

Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter (concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator;

Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bending machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving

equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less than 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote-control earth-moving equipment operator (operating a second piece of equipment: \$1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired

earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge

operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

\$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S,

R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1s, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

\$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point which is the SW corner of Section 34. T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of

T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

\$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

 ENGI0012-004 08/01/2020

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman.....	\$ 56.40	30.00
(2) Dredge dozer.....	\$ 50.43	30.00

	Rates	Fringes
(3) Deckmate.....	\$ 50.32	30.00
(4) Winch operator (stern winch on dredge).....	\$ 49.77	30.00
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.....	\$ 49.23	30.00
(6) Barge Mate.....	\$ 49.84	30.00

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	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 38.08	24.91
Ornamental, Reinforcing and Structural.....	\$ 43.00	33.55

PREMIUM PAY:

\$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland, Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

\$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

\$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

	Rates	Fringes
LABORER (BUILDING and all other Residential Construction)		
Group 1.....	\$ 34.18	20.48
Group 2.....	\$ 34.86	20.48
Group 3.....	\$ 35.57	20.48
Group 4.....	\$ 36.37	20.48
Group 5.....	\$ 38.30	20.48
LABORER (RESIDENTIAL CONSTRUCTION - See definition below)		
(1) Laborer.....	\$ 30.82	18.80
(2) Cleanup, Landscape, Fencing (Chain Link & Wood).....	\$ 29.53	18.80

RESIDENTIAL DEFINITION: Wood or metal frame construction of single family residences, apartments and condominiums - excluding (a) projects that exceed three stories over a garage level, (b) any utility work such as telephone, gas, water, sewer and other utilities and (c) any fine grading work, utility work or paving work in the future street and public right-of-way; but including all rough grading work at the job site behind the existing right of way

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete Screeding for Rought Strike-off; Concrete, water curing; Demolition laborer; Flagman; Gas, oil and/or water pipeline laborer; General Laborer; General clean-up laborer; Landscape laborer; Jetting laborer; Temporary water and air lines laborer; Material hoseman (walls, slabs, floors and decks); Plugging, filling of Shee-bolt holes; Dry packing of concrete; Railroad maintenance, Repair Trackman and road beds, Streetcar and railroad construction trac laborers; Slip form raisers; Slurry seal crews (mixer operator, applicator operator, squeegee man, Shuttle man, top man), filling of cracks by any method on any surface; Tarman and mortar man; Tool crib or tool house laborer; Window cleaner; Wire Mesh puling-all concrete pouring operations

GROUP 2: Asphalt Shoveler; Cement Dumper (on 1 yard or larger mixer and handling bulk cement); Cesspool digger and

installer; Chucktender; Chute man, pouring concrete, the handling of the concrete from ready mix trucks, such as walls, slabs, decks, floors, foundations, footings, curbs, gutters and sidewalks; Concrete curer-impervious membrane and form oiler; Cutting torch operator (demolition); Guinea chaser; Headboard man-asphalt; Laborer, packing rod steel and pans; membrane vapor barrier installer; Power broom sweepers (small); Rippap, stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Tank sealer and cleaner; Tree climber, faller, chain saw operator, Pittsburgh Chipper and similar type brush shredders; Underground laborers, including caisson bellower

GROUP 3: Buggymobile; Concrete cutting torch; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2 1/2 feet drill steel or longer; Dri Pak-it machine; High sealer (including drilling of same); Hydro seeder and similar type; Impact wrench, multi-plate; Kettlemen, potmen and men applying asphalt, lay-kold, creosote, line caustic and similar type materials (applying means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operators of pneumatic, gas, electric tools, vibrating machines, pavement breakers, air blasting, come-along, and similar mechanical tools not separately classified herein; Pipelayers back up man coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services; Rotary Scarifier or multiple head concrete chipping scarifier; Steel header board man and guideline setter; Tampers, Barko, Wacker and similar type; Trenching machine, handpropelled

GROUP 4: Asphalt raker, luterman, ironer, asphalt dumpman and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), Grinder or sander; Concrete saw man; cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Laser beam in connection with laborer's work; Oversize concrete vibrator operator 70 pounds and over; Pipelayer performing all services in the laying, installation and all forms of connection of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit, and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid, gas, air or other

product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzleman), Porta shot-blast, water blasting

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Driller-all power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power.

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	Rates	Fringes
LABORER (MASON TENDER).....	\$ 33.00	19.23

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HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
Laborers:		
Group 1.....	\$ 35.30	20.48
Group 2.....	\$ 35.76	20.48
Group 3.....	\$ 36.17	20.48
Group 4.....	\$ 37.01	20.48
Group 5.....	\$ 40.28	20.48

LABORER CLASSIFICATIONS

GROUP 1: Laborer: General or Construction Laborer, Landscape Laborer. Asphalt Rubber Material Loader. Boring Machine Tender (outside), Carpenter Laborer (cleaning, handling, oiling & blowing of panel forms and lumber), Concrete Laborer, Concrete Screeding for rough strike-off, Concrete water curing. Concrete Curb & Gutter laborer, Certified Confined Space Laborer, Demolition laborer & Cleaning of Brick and lumber, Expansion Joint Caulking; Environmental Remediation, Monitoring Well, Toxic waste and Geotechnical Drill tender, Fine Grader, Fire Watcher, Limbers, Brush Loader, Pilers and Debris Handlers. flagman. Gas Oil and Water Pipeline Laborer. Material Hoseman (slabs, walls, floors, decks); Plugging, filling of shee bolt holes; Dry packing of concrete and patching; Post Holer Digger (manual); Railroad maintenance, repair trackman, road beds; Rigging & signaling; Scaler, Slip-Form Raisers, Filling cracks on any surface, tool Crib or Tool House Laborer, Traffic control (signs, barriers, barricades, delineator, cones etc.), Window Cleaner

GROUP 2: Asphalt abatement; Buggymobile; Cement dumper (on 1 yd. or larger mixers and handling bulk cement); Concrete curer, impervious membrane and form oiler; Chute man, pouring concrete; Concrete cutting torch; Concrete pile cutter; driller/Jackhammer, with drill steel 2 1/2 feet or longer; Dry pak-it machine; Fence erector; Pipeline wrapper, gas, oil, water, pot tender & form man; Grout man; Installation of all asphalt overlay fabric and materials used for reinforcing asphalt; Irrigation laborer; Kettleman-Potman hot mop, includes applying asphalt, lay-klold, creosote, lime caustic and similar tyhpes of materials (dipping, brushing, handling) and waterproofing; Membrane vapor barrier installer; Pipelayer backup man (coating, grouting, making of joints, sealing caulkiing, diapering including rubber basket joints, pointing); Rotary scarifier, multiple head concrete chipper; Rock slinger; Roto scraper & tiller; Sandblaster pot tender; Septic tank digger/installer; Tamper/wacker operator; Tank scaler & cleaner; Tar man & mortar man; Tree climber/faller, chainb saw operator, Pittsburgh chipper & similar type brush shredders.

GROUP 3: Asphalt, installation of all frabrics; Buggy Mobile Man, Bushing hammer; Compactor (all types), Concrete Curer - Impervious membrane, Form Oiler, Concrete Cutting Torch, Concrete Pile Cutter, Driller/Jackhammer with drill steel 2 1/2 ft or longer, Dry Pak-it machine, Fence erector including manual post hole digging, Gas oil or water Pipeline Wrapper - 6 ft pipe and over, Guradrail erector, Hydro seeder, Impact Wrench man (multi plate), kettleman-Potman Hot Mop includes applying Asphalt, Lay-Kold, Creosote, lime caustic and similar types of materials (dipping, brushing or handling) and waterproofing. Laser Beam in connection with Laborer work. High Scaler, Operators of Pneumatic Gas or Electric Tools, Vibrating Machines, Pavement Breakers, Air Blasting, Come-Alongs and similar mechanical tools, Remote-Controlled Robotic Tools in connection with Laborers work. Pipelayer Backup Man (Coating, grouting, m makeing of joints, sealing, caulking, diapering including rubber gasket joints, pointing and other services). Power Post Hole Digger, Rotary Scarifier (multiple head concrete chipper scarifier), Rock Slinger, Shot Blast equipment (8 to 48 inches), Steel Headerboard Man and Guideline Setter, Tamper/Wacker operator and similar types, Trenching Machine hand propelled.

GROUP 4: Any worker exposed to raw sewage. Asphalt Raker, Luteman, Asphalt Dumpman, Asphalt Spreader Boxes, Concrete Core Cutter, Concrete Saw Man, Cribber, Shorer, Head Rock Slinger. Installation of subsurface instrumentation, monitoring wells or points, remediation system installer; Laborer, asphalt-rubber distributor bootman; Oversize concrete vibrator operators, 70 pounds or over. Pipelayer, Prfefabricated Manhole Installer, Sandblast Nozzleman (Water Balsting-Porta Shot Blast), Traffic Lane Closure.

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Horizontal directional driller, Boring system, Electronic tracking, Driller: all power drills excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and all other types of mechanical drills without regard to form of motive power. Environmental remediation, Monitoring well, Toxic waste and Geotechnical driller, Toxic waste removal. Welding in connection with Laborer's work.

LABO0300-005 03/01/2021

	Rates	Fringes
Asbestos Removal Laborer.....	\$ 37.49	21.88

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO0345-001 07/01/2021

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	\$ 46.50	20.42
GROUP 2.....	\$ 45.55	20.42
GROUP 3.....	\$ 42.01	20.42

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	\$ 38.89	17.10
(2) Vehicle Operator/Hauler.	\$ 39.06	17.10
(3) Horizontal Directional Drill Operator.....	\$ 40.91	17.10
(4) Electronic Tracking Locator.....	\$ 42.91	17.10
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	\$ 40.10	20.12
GROUP 2.....	\$ 41.40	20.12
GROUP 3.....	\$ 43.41	20.12
GROUP 4.....	\$ 45.15	20.12

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

LABO1414-003 08/05/2020

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER.....	\$ 36.03	21.01
PLASTER TENDER.....	\$ 38.58	21.01

Work on a swing stage scaffold: \$1.00 per hour additional.

Work at Military Bases - \$3.00 additional per hour:
Coronado Naval Amphibious Base, Fort Irwin, Marine Corps Air Station-29 Palms, Imperial Beach Naval Air Station, Marine Corps Logistics Supply Base, Marine Corps Pickle Meadows, Mountain Warfare Training Center, Naval Air Facility-Seeley, North Island Naval Air Station, Vandenberg AFB.

PAIN0036-001 07/01/2020

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County).....	\$ 29.59	17.12
(2) All Other Work.....	\$ 33.12	17.24

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-010 10/01/2021

	Rates	Fringes
DRYWALL FINISHER/TAPER		
(1) Building & Heavy Construction.....	\$ 37.14	20.90
(2) Residential Construction (Wood frame apartments, single family homes and multi-duplexes up to and including four stories).....	\$ 32.27	14.70

PAIN0036-012 10/01/2020

	Rates	Fringes
GLAZIER.....	\$ 45.55	18.06

PAIN0036-019 01/01/2021

	Rates	Fringes
SOFT FLOOR LAYER.....	\$ 33.52	17.59

PLAS0200-005 08/04/2021

	Rates	Fringes
PLASTERER.....	\$ 45.77	18.39

NORTH ISLAND NAVAL AIR STATION, COLORADO NAVAL AMPHIBIOUS
 BASE, IMPERIAL BEACH NAVAL AIR STATION: \$3.00 additional
 per hour.

 PLAS0500-001 07/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
GROUP 1.....	\$ 26.34	19.77
GROUP 2.....	\$ 27.99	19.77
GROUP 3.....	\$ 30.07	21.12

CEMENT MASONS - work inside the building line, meeting the
 following criteria:

GROUP 1: Residential wood frame project of any size; work
 classified as Type III, IV or Type V construction;
 interior tenant improvement work regardless the size of the
 project; any wood frame project of four stories or less.

GROUP 2: Work classified as type I and II construction

GROUP 3: All other work

 PLUM0016-006 09/01/2021

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER		
Camp Pendleton; Vandenberg Air Force Base.....	\$ 58.33	25.36
Work ONLY on new additions and remodeling of commercial buildings, bars, restaurants, and stores not to exceed 5,000 sq. ft. of floor space.....	\$ 52.20	24.38
Work ONLY on strip malls, light commercial, tenant improvement and remodel work.....	\$ 39.91	22.71
All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not		
	Rates	Fringes
to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel work.....	\$ 53.83	25.36

PLUM0016-011 09/01/2021

	Rates	Fringes
PLUMBER/PIPEFITTER		
Residential.....	\$ 42.74	21.28

PLUM0345-001 09/01/2021

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter..	\$ 36.85	24.75
Sewer & Storm Drain Work....	\$ 40.94	22.13

ROOF0045-001 07/01/2021

	Rates	Fringes
ROOFER.....	\$ 37.75	10.24

SFCA0669-001 01/01/2022

	Rates	Fringes
SPRINKLER FITTER.....	\$ 43.01	25.16

SHEE0206-001 07/01/2020

	Rates	Fringes
SHEET METAL WORKER		
Camp Pendleton.....	\$ 42.62	29.55
Except Camp Pendleton.....	\$ 40.62	29.55
Sheet Metal Technician.....	\$ 30.51	9.49

SHEET METAL TECHNICIAN - SCOPE:
a. Existing residential buildings, both single and multi-family, where each unit is heated and/or cooled by a separate system b. New single family residential buildings including tracts. c. New multi-family residential buildings, not exceeding five stories of living space in height, provided each unit is heated or cooled by a separate system. Hotels and motels are excluded. d. LIGHT COMMERCIAL WORK: Any sheet metal, heating and air conditioning work performed on a project where the total construction cost, excluding land, is under \$1,000,000 e. TENANT IMPROVEMENT WORK: Any work necessary to finish interior spaces to conform to the occupants of commercial buildings, after completion of the building shell

TEAM0166-001 09/01/2019

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 18.90	34.69
GROUP 2.....	\$ 26.49	34.69
GROUP 3.....	\$ 26.69	34.69
GROUP 4.....	\$ 26.89	34.69
GROUP 5.....	\$ 27.09	34.69
GROUP 6.....	\$ 27.59	34.69
GROUP 7.....	\$ 29.09	34.69

FOOTNOTE: HAZMAT PAY: Work on a hazmat job, where hazmat certification is required, shall be paid, in addition to the classification working in, as follows: Levels A, B and C - +\$1.00 per hour. Workers shall be paid hazmat pay in increments of four (4) and eight (8) hours.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Fuel Man, Swamper

GROUP 2: 2-axle Dump Truck, 2-axle Flat Bed, Concrete Pumping Truck, Industrial Lift Truck, Motorized Traffic Control, Pickup Truck on Jobsite

GROUP 3: 2-axle Water Truck, 3-axle Dump Truck, 3-axle Flat Bed, Erosion Control Nozzleman, Dump Crete Truck under 6.5 yd, Forklift 15,000 lbs and over, Prell Truck, Pipeline Work Truck Driver, Road Oil Spreader, Cement Distributor or Slurry Driver, Bootman, Ross Carrier

GROUP 4: Off-road Dump Truck under 35 tons 4-axles but less than 7-axles, Low-Bed Truck & Trailer, Transit Mix Trucks under 8 yd, 3-axle Water Truck, Erosion Control Driver, Grout Mixer Truck, Dump Crete 6.5yd and over, Dumpster Trucks, DW 10, DW 20 and over, Fuel Truck and Dynamite, Truck Greaser, Truck Mounted Mobile Sweeper 2-axle Winch Truck

GROUP 5: Off-road Dump Truck 35 tons and over, 7-axles or more, Transit Mix Trucks 8 yd and over, A-Frame Truck, Swedish Cranes

GROUP 6: Off-Road Special Equipment (including but not limited to Water Pull Tankers, Athey Wagons, DJB, B70 Wuclids or like Equipment)

GROUP 7: Repairman

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information

on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

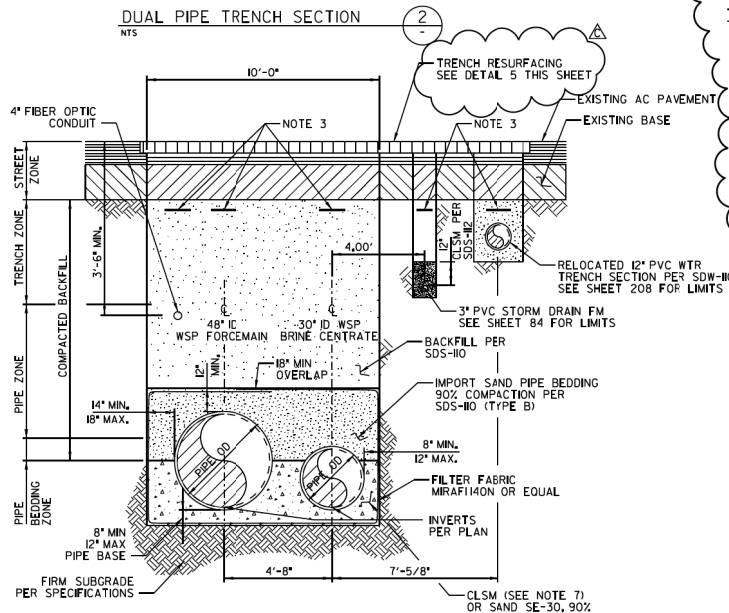
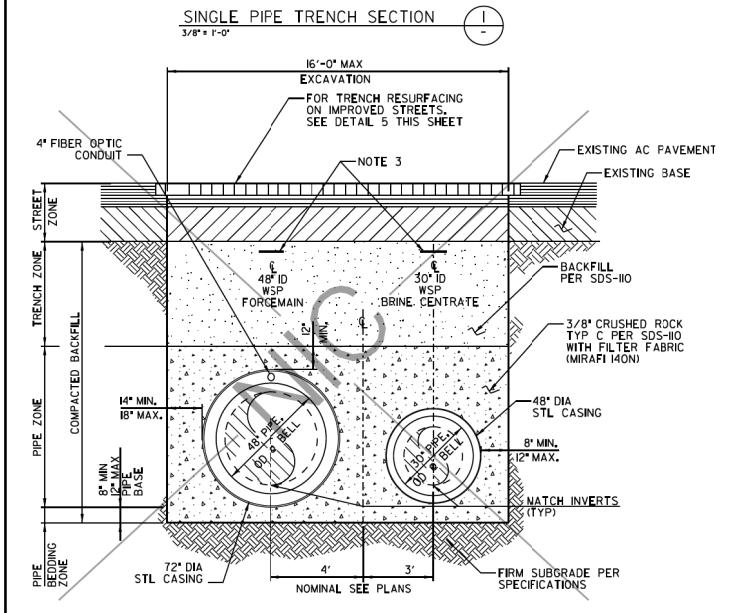
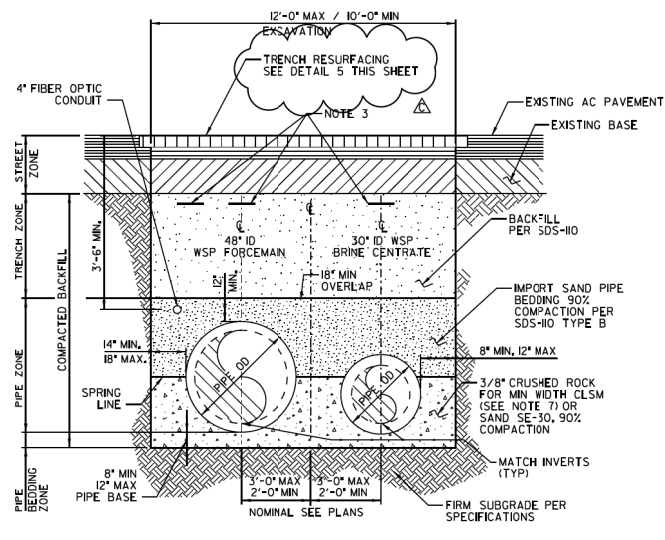
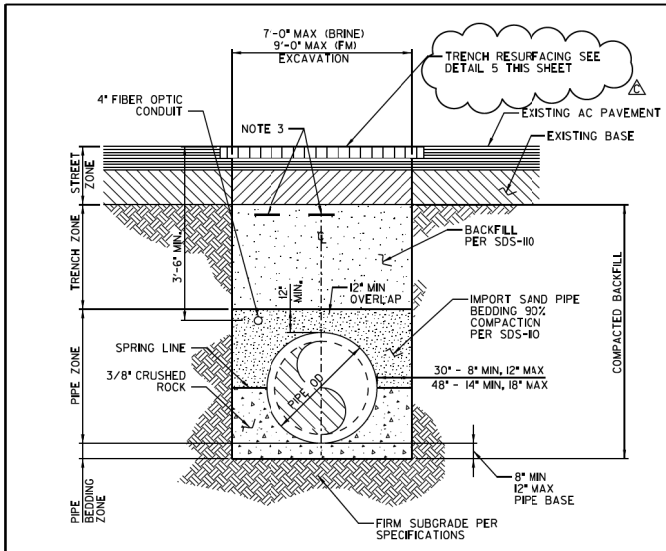
3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

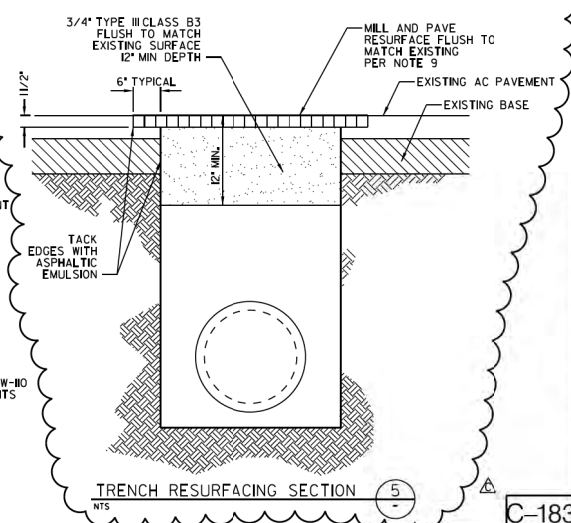
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END OF GENERAL DECISION"



TRENCH NOTES

- SAW-CUT AND REMOVE EXISTING PAVEMENT ZONE PER WHITE BOOK SECTION 300-1.3.2
- STREET RESURFACING PER PLANS.
- FURNISH AND INSTALL PLASTIC WARNING AND DETECTABLE METALLIC PIPE WARNING TAPE PER SPECIFICATION AND NOTE 6 OF SDS0 SDS-10.
- EXISTING SOILS FILL BEYOND LIMITS OF TRENCH EXCAVATION SHALL NOT BE DISTURBED.
- FOR BACKFILL AND COMPACTION REQUIREMENTS SEE SPECIFICATIONS.
- DO NOT OPERATE AXLE-DRIVEN OR TRACTOR-DRAWN CONSTRUCTION EQUIPMENT OVER PIPELINE UNTIL HEIGHT OF BACK FILL IS 2'-0" OR GREATER OVER PIPE.
- CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS AND PROPOSED CLSM LIFT DETAILS FOR APPROVAL PRIOR TO PLACEMENT
- ANY STREET TRENCH GREATER THAN 12 FEET WIDE AND LONGER THAN 100 FEET IN OVERALL LENGTH SHALL BE RECONSTRUCTED WITH THE PAVEMENT SECTION FOR THE STREET CLASSIFICATION PER SCHEDULE "J" (SDG-13)
- ASPHALT TRENCH CAPS SHALL BE MILLED AS SHOWN AND RESURFACED WITH 1/2" TYPE III CLASS C2 ASPHALT NO LESS THAN 30 CALENDAR DAYS AFTER INITIAL ASPHALT PLACEMENT
- IF THE STREET IS NOT PLANNING TO DO CURB TO CURB SLURRY SEAL OR RESURFACING IT MUST COMPLETE FINAL STREET RESTORATION WITHIN 60 DAYS AFTER THE INITIAL EXCAVATION
- WHEN DIRECTED BY CITY ENGINEER OR SHOWN ON THE PLANS, CONCRETE PER SDG-108 (NOTE #5) MAY BE PLACED: A 1/8" - 1/4" WEARING SURFACING OF TYPE III CLASS F ASPHALT CONCRETE WILL BE REQUIRED



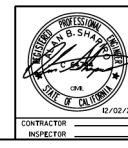
C-183

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
CIVIL PIPE PROFILE
TYPICAL PIPE TRENCH SECTIONS

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 192 OF 339 SHEETS

<p>FOR CITY ENGINEER:</p> <p>DESIGNED BY: <i>[Signature]</i></p> <p>DATE: 02-23-22</p> <p>APPROVED BY: <i>[Signature]</i></p> <p>DATE: 02-23-22</p>	<p>SEWER MBS: B-15141</p> <p>PROJECT NO: 1900000000</p> <p>DESIGNER: A. ABUTIN</p> <p>DATE: 02-23-22</p> <p>CONTRACTOR: 40067-192-D</p>
---	---

DATE STARTED: 02/23/22
DATE COMPLETED: 02/23/22



ADDED TRENCH RESURFACING SECTION AND NOTES

ADDENDUM C

WORK BY CITY FORCES

LEGEND

- EXISTING WATER MAIN
- PRESSURE ZONE BOUNDARY
- PROPOSED WATER MAIN
- PROPOSED HIGHLINE ALIGNMENT
- ☐ FIRE HYDRANT TO REMAIN IN SERVICE DURING CONSTRUCTION
- ☐ FIRE HYDRANT TO BE REMOVED AND RELOCATED
- ☐ FIRE HYDRANT TO BE REPLACED

- ③ CITY FORCES NOTE NUMBER (THIS SHEET)
- 24/6 CITY FORCES NOTE NUMBER (PLAN & PROFILE SHEET)
- ③ PLAN & PROFILE 'D' SHEET NUMBER

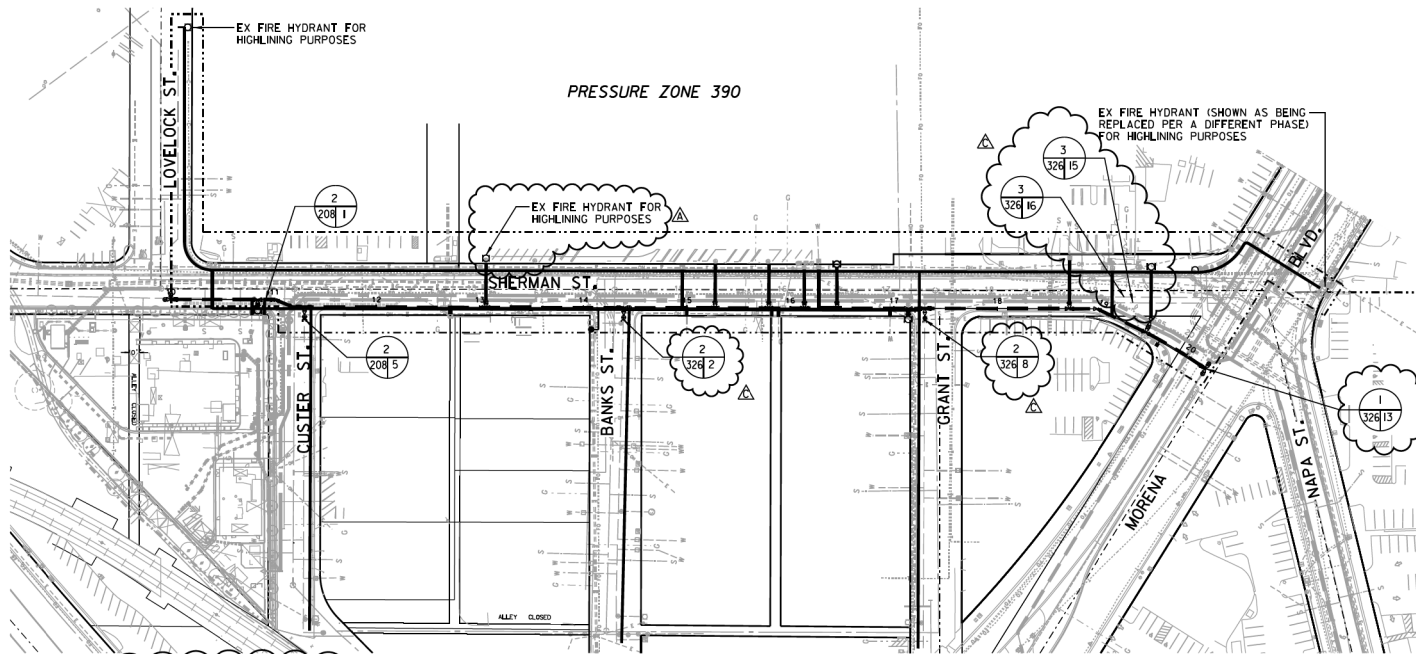
- BC --- BEFORE CONTRACTOR
- AC --- AFTER CONTRACTOR

WORK BY CITY FORCES

- ① BC - TEE/CROSS CUT-IN, OPEN/CLOSE VALVE(S)
AC - RECONNECT, OPEN VALVE(S)
- ② BC - CUT & PLUG
AC - RECONNECT
- ③ BC - CUT AND ABANDON
- ④ AC - WET TAP
- ⑤ BC - CLOSE EX. VALVE (REPLACE IF NEEDED)
AC - OPEN EX. VALVE

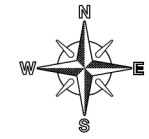
AREA TO BE HIGHLINED IN PHASES

- PHASE I



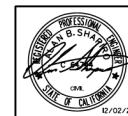
NOTES:

1. THE CONTRACTOR SHALL INSTALL A 2-INCH HIGHLINE, CONNECT TEMPORARY SERVICES, INSTALL NEW PIPELINE AS SHOWN ON PLANS, DISINFECT (PER AWWA C651 AND AMENDMENTS THERETO), TEST AND REINSTALL SERVICES BEFORE PROCEEDING TO THE NEXT PHASE.
2. NO STRUCTURE SHALL BE MORE THAN 1000 FEET FROM A 'LIVE' FIRE HYDRANT AT ANY TIME DURING CONSTRUCTION THE DISTANCES SHALL BE MEASURED USING STREETS, PRIVATE ROADS, OR OTHER ROUTES DRIVEN BY EMERGENCY VEHICLES.
3. CONTRACTOR SHALL COORDINATE HIGHLINE PHASING WITH CONTRACT 40380-D.



C-198

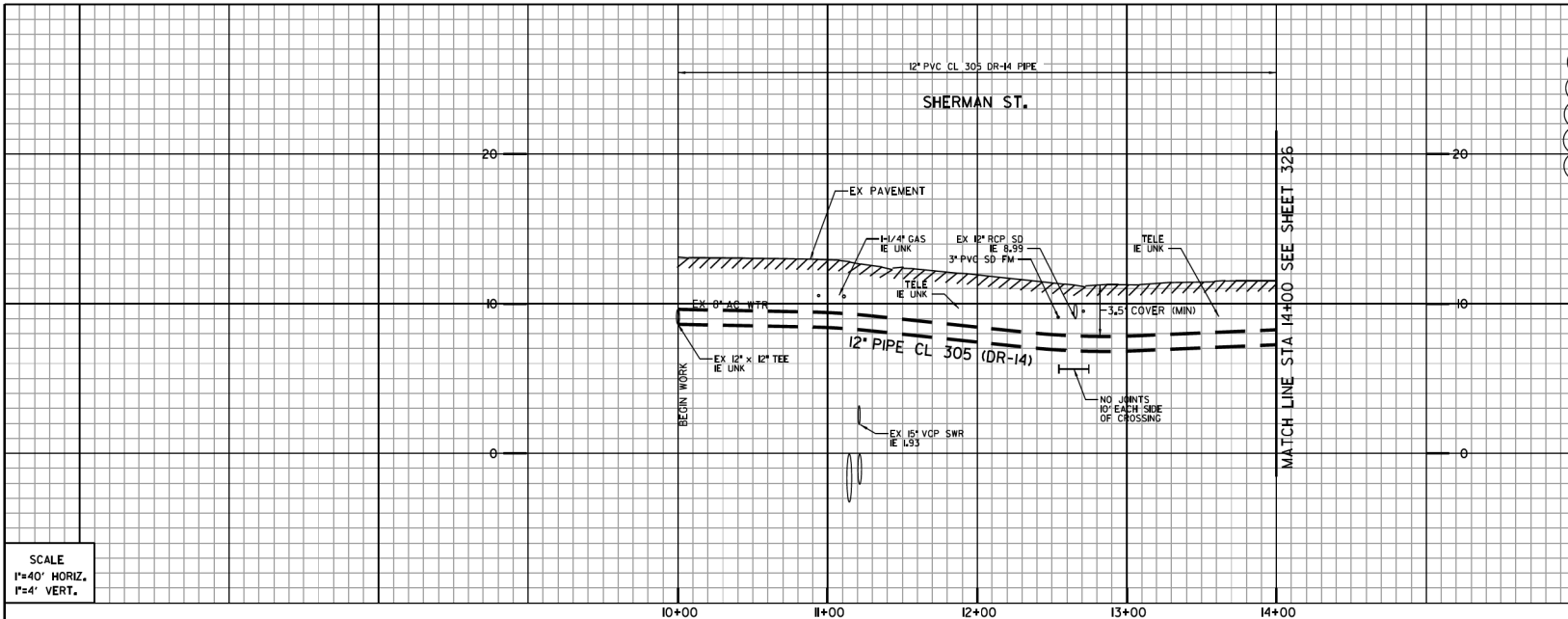
PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE SOUTH WORK BY CITY FORCES WATER RELOCATION IN SHERMAN ST.		WATER MBS 5-16027
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 207 OF 339 SHEETS		DRAWN BY J. BERMUDO DATE CHECKED BY A. ABUTIN DATE SEE SHEETS DATE COORDINATED SEE SHEETS DATE COORDINATED
PROJECT NO. DESIGNED BY PROJECT NO.	BY DATE DATE	DATE COMPLETED 40067-207-D



▲ ADDED FIRE HYDRANT TO REMAIN IN SERVICE
 ▲ CORRECTED DETAIL CALLOUTS; REMOVED CONFLICTING NOTES

ADDENDUM C

WORK BY CITY FORCES



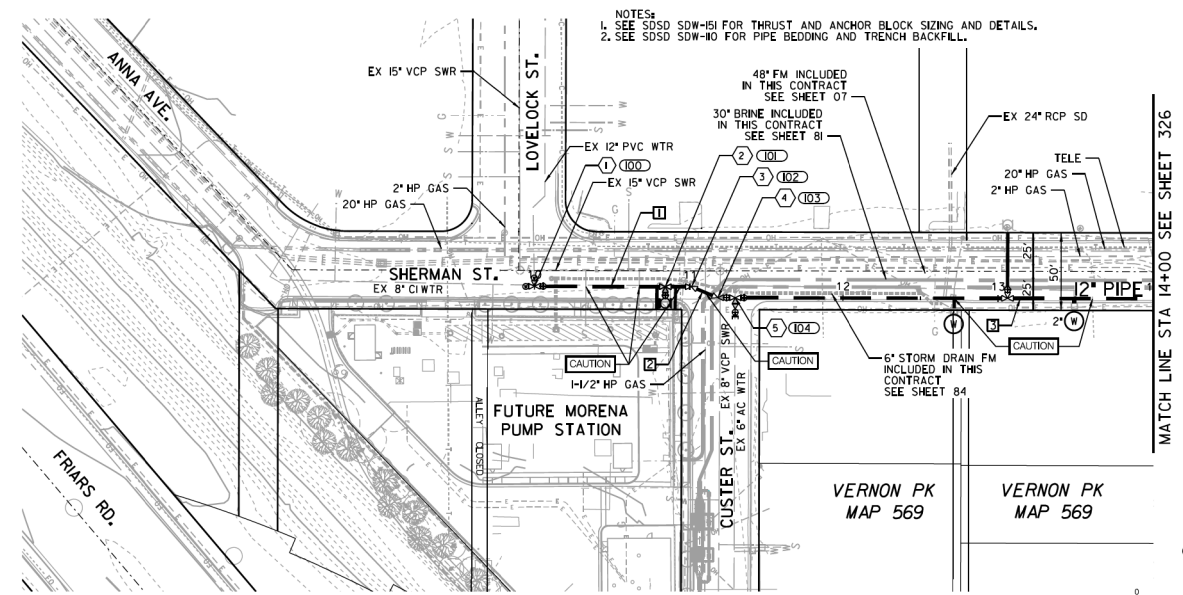
- ① (100) BY CITY FORCES AHD OF CONTRACTOR
STA 10+00.00
CL EX 12" x 12" TEE
ISOLATE EX 8" AC PIPE, RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED
BY CONTRACTOR
FURNISH AND INSTALL
REMOVE EX 8" GV AND 12" x 8" REDUCER
CONNECT TO EX 12" x 12" TEE
1- 12" GV, AHD (F, MJ)
- ② (101) BY CONTRACTOR FURNISH AND INSTALL
STA 10+84.7
1- 12" x 6" TEE (M, J, F)
1- 6" FH ASSY AND MARKER (3-PORT)
- ③ (102) BY CONTRACTOR FURNISH AND INSTALL
STA 11+01.7
1- 22.5" BEND (F, M, J)
- ④ (103) BY CONTRACTOR FURNISH AND INSTALL
STA 11+19.52
1- 22.5" BEND (M, J, F)
- ⑤ (104) BY CITY FORCES AHD OF CONTRACTOR
STA 11+30.76
ISOLATE EX 6" AC PIPE, RT
TEMPORARY CUT & PLUG
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED
BY CONTRACTOR
FURNISH AND INSTALL
1- 12" x 8" TEE (F)
2- 12" GV, BK, AHD (F, M, J)
1- 8" x 6" REDUCER
1- 8" GV, RT (F, M, J)
1- 8" PIPE SPOOL, RT (FE)
1- TRANSITION COUPLING, RT
- ⑥ (105) BY CONTRACTOR FURNISH AND INSTALL
STA 13+06.05
1- 12" x 6" TEE (M, J, F)
1- 6" GV LT (F, M, J)
CONNECT TO EX 6" FIRE HYDRANT LATERAL (PRIVATE FH)

SCALE
1"=40' HORIZ.
1"=4' VERT.

REFERENCE:
WATER: 10616-L, 10620-L
SEWER: 9698-L, 10619-D
STORM DRAIN: 10617-6
GAS: 15787-18930, 15787-18935
ELECTRIC: 15787-18930, 15787-18935
CABLE TV:
ATT&TELEPHONE:
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.:
HGL: 390

RETIREMENTS:
8"-ACP-398"-1948
1" SERVICES-3-1948
2" SERVICES-1-1948
FH-(3-PORT)-1-1948

NOTES:
1. SEE SDDSD SDW-151 FOR THRUST AND ANCHOR BLOCK SIZING AND DETAILS.
2. SEE SDDSD SDW-10 FOR PIPE BEDDING AND TRENCH BACKFILL.



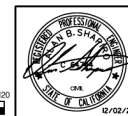
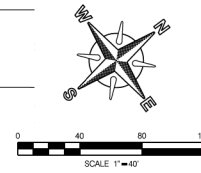
COORDINATE TABLE			
NO.	NORTHING	EASTING	DESCRIPTION
(100)	1858902.27	6269471.71	TEE/CONNECTION
(101)	1859249.28	6269738.34	TEE
(102)	1858983.40	6269831.99	BEND
(103)	1858992.87	6269547.82	BEND
(104)	1859001.89	6269554.53	TEE
(105)	1859142.60	6269659.07	TEE

PROPOSED PIPE DATA TABLE				
NO.	Δ/BEARING	RADIUS	LENGTH	REMARKS
1	N36° 36' 47"E	101.07'	12" PVC CL 305 (DR 14)	
2	N59° 06' 47"E	18.45'	12" PVC CL 305 (DR 14)	
3	N36° 36' 47"E	280.48'	12" PVC CL 305 (DR 14)	

PIPE LENGTHS ARE MEASURED FROM CL OF BENDS

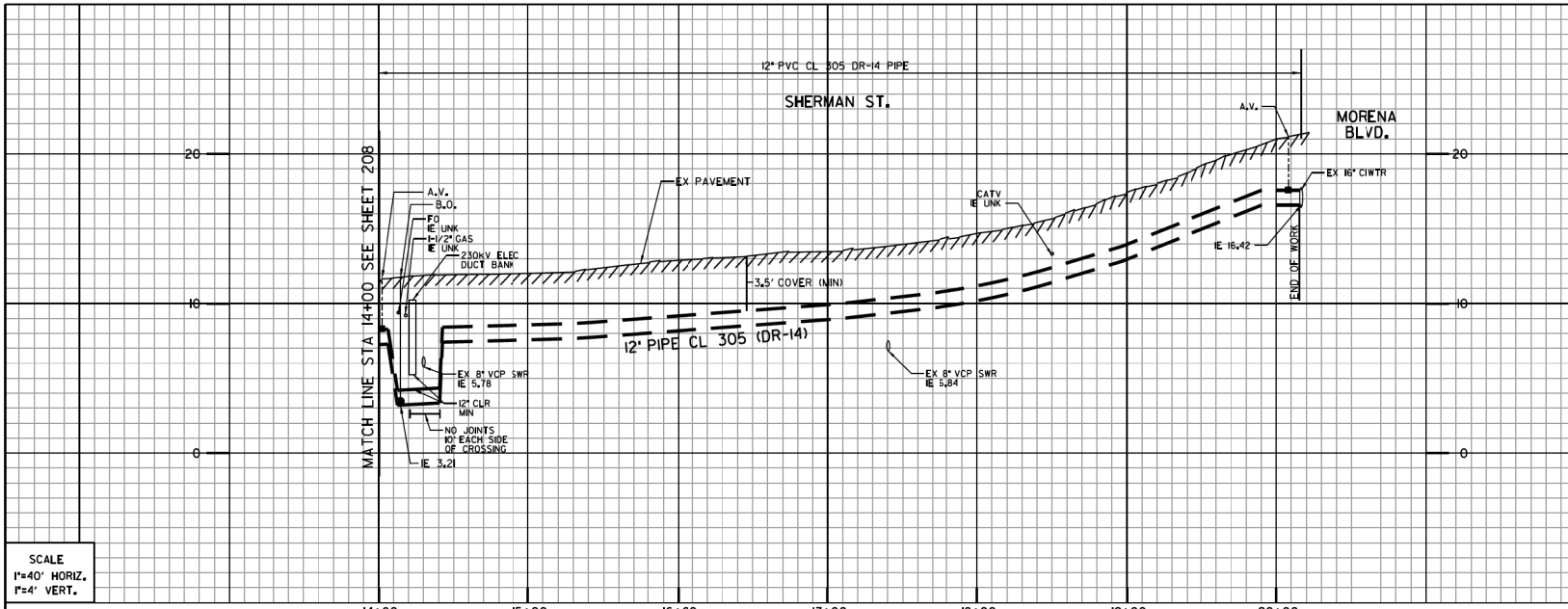
CAUTION
20" HP GAS CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION
SDG&E STANDBY REQUIRED

C-199
PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
WATER RELOCATION PLAN
STA. 10+00 TO STA. 14+00 SHERMAN ST.



CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 208 OF 339 SHEETS		WATER MBS 5-16027
DATE: 02/22/22	DATE: 02/22/22	DATE: 02/22/22
DESCRIPTION: ORIGINAL	BY: AECOM	APPROVED: J. BERMUDO
ADDENDUM C	DATE: 02-24-22	DATE: 02-24-22
PROJECT NO: 6268407-1858444		PROJECT NO: 6268407-1858444
CONTRACTOR: [Signature]		CONTRACTOR: [Signature]
INSPECTOR: [Signature]		INSPECTOR: [Signature]
DATE STARTED: 02/22/22		DATE COMPLETED: 02/22/22
DATE COMPLETED: 02/22/22		DATE COMPLETED: 02/22/22

CHANGED NOTE 1 & 5 TO CLARIFY PIPE RECONNECT RESPONSIBILITY ADDENDUM C

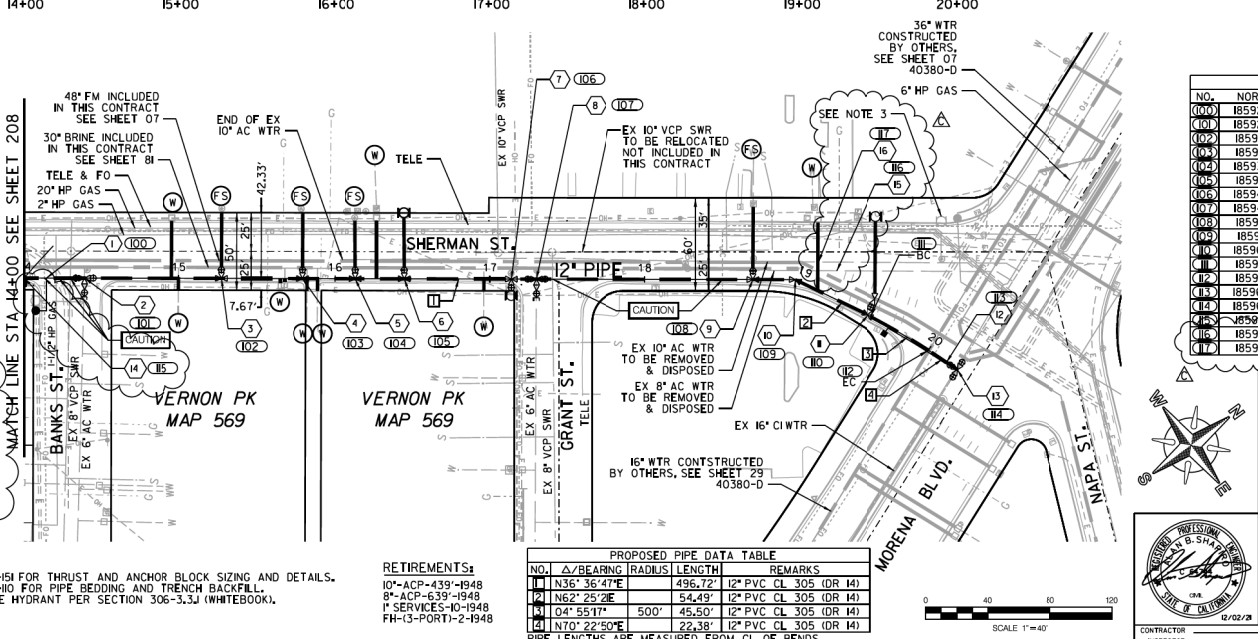


- 1 100 BY CONTRACTOR FURNISH AND INSTALL STA 14+46.8 1- 2" BLOW OFF ASSY PER SDW-143
- 2 101 BY CITY FORCES AND OF CONTRACTOR STA 14+38.96 ISOLATE EX 6" AC PIPE, RT TEMPORARY CUT & PLUG RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED BY CONTRACTOR FURNISH AND INSTALL 1- 12" x 8" TEE (F, M, J) 1- 12" CV, BK, AND (F, M, J) 1- 8" x 6" REDUCER 1- 6" CV, RT (F, M, J) 1- 6" PIPE SPOOL, RT (PE) 1- TRANSITION COUPLING, RT
- 3 102 BY CONTRACTOR FURNISH AND INSTALL STA 15+27.20 1- 12" x 4" TEE (M, M, J, F) 1- 4" CV (F, M, J) CONNECT TO EX FIRE SERVICE PER SDW-18
- 4 103 BY CONTRACTOR FURNISH AND INSTALL STA 15+79.30 1- 12" x 6" TEE (M, M, J, F) 1- 6" CV, LT (F, M, J) CONNECT TO EX FIRE SERVICE PER SDW-18
- 5 104 BY CONTRACTOR FURNISH AND INSTALL STA 16+13.63 1- 12" x 8" TEE (M, M, J, F) 1- 8" CV, LT (F, M, J) CONNECT TO EX FIRE SERVICE PER SDW-18
- 6 105 BY CONTRACTOR FURNISH AND INSTALL STA 16+45.08 1- 12" x 6" TEE (M, M, J, F) 1- 6" FH ASSY AND MARKER (3-PORT)
- 7 106 BY CONTRACTOR FURNISH AND INSTALL STA 17+13.87 1- 12" x 6" TEE (M, M, J, F) 1- 6" FH ASSY AND MARKER (3-PORT)
- 8 107 BY CITY FORCES AND OF CONTRACTOR STA 17+29.93 ISOLATE EX 6" AC PIPE, RT TEMPORARY CUT & PLUG RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED BY CONTRACTOR FURNISH AND INSTALL 1- 12" x 8" TEE (F, M, J) 2- 12" CV, BK, AND (F, M, J) 1- 8" x 6" REDUCER 1- 8" CV, RT (F, M, J) 1- 8" PIPE SPOOL, RT (PE) 1- TRANSITION COUPLING, RT

CAUTION
 20" HP GAS CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SDG&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION SDG&E STANDBY REQUIRED

NOTES:
 1. SEE S0SD SDW-151 FOR THRUST AND ANCHOR BLOCK SIZING AND DETAILS.
 2. SEE S0SD SDW-110 FOR PIPE BEDDING AND TRENCH BACKFILL.
 3. REMOVE EX FIRE HYDRANT PER SECTION 306-3.34 (WHITEBOOK).

RETIREMENTS:
 10" ACP-439-1948
 8" ACP-639-1948
 1" SERVICES-10-1948
 FH-13-PORT-2-1948



PROPOSED PIPE DATA TABLE

NO.	Δ / BEARING	IRADIUS	LENGTH	REMARKS
11	N36°36'47"E	496.72'	12" PVC CL 305 (DR 14)	
12	N62°25'2"E	54.49'	12" PVC CL 305 (DR 14)	
13	O4°55'17"	500'	12" PVC CL 305 (DR 14)	
14	N70°22'50"E	22.38'	12" PVC CL 305 (DR 14)	

PIPE LENGTHS ARE MEASURED FROM CL OF BENDS

- 9 108 BY CONTRACTOR FURNISH AND INSTALL STA 18+69.55 1- 2" x 8" TEE (M, M, J, F) 1- 3" CV, LT (F, M, J) CONNECT TO EX FIRE SERVICE PER SDW-18
- 10 109 BY CONTRACTOR FURNISH AND INSTALL STA 18+96.71 1- 22.5' BEND (F, M, J)
- 11 110 BY CONTRACTOR FURNISH AND INSTALL STA 19+48.65 1- 2" x 6" TEE (M, M, J, F) 1- 3" FH ASSY AND MARKER (3-PORT)
- 12 113 BY CONTRACTOR FURNISH AND INSTALL STA 20+13.94 1- 2" AIR/VACUUM VALVE ASSY PER SDW-153
- 13 114 BY CITY FORCES AND OF CONTRACTOR STA 20+16.53 ISOLATE 16" WTR PER PHASING CONNECT TO 12" CV AFTER NEW MAIN HAS BEEN ACCEPTED
- 14 115 BY CONTRACTOR FURNISH AND INSTALL 1- 16" x 12" TEE (F, M, J) 2- 16" BFV, BK, AND (F, M, J) 1- 12" CV, RT (F, M, J) SEE NOTE 1
- 15 116 BY CONTRACTOR FURNISH AND INSTALL STA 14+00.00 1- 2" AIR/VACUUM VALVE ASSY PER SDW-153
- 16 117 BY CONTRACTOR FURNISH AND INSTALL STA 19+05.09 - 16.72' LT CUT AND SLURRY FILL EXISTING 10" AC WTR. PLUS ENDS AND ABANDON IN PLACE PER WHITEBOOK SECTION 306-3.34. REMOVE SECTIONS IN CONFLICT WITH JOINT TRENCH CONSTRUCTION

COORDINATE TABLE

NO.	NORTHING	EASTING	DESCRIPTION
100	1859229.79	6269723.86	BO
101	1859249.28	6269738.34	TEE
102	1859320.40	6269790.96	TEE
103	1859369.94	6269822.05	TEE
104	1859389.49	6269842.52	TEE
105	1859414.73	6269862.27	TEE
106	1859469.95	6269902.30	TEE
107	1859482.84	6269918.88	TEE
108	1859594.91	6269995.15	TEE
109	1859616.71	6270011.35	BEND
110	1859640.75	6270057.38	TEE
111	1859649.94	6270059.65	BC
112	1859658.91	6270099.08	EC
113	1859663.60	6270121.21	AV
114	1859666.43	6270120.16	TEE/CONNECTION
115	1859678.09	6270176.11	AV
116	1859648.44	6270022.59	CUT & PLUG 8" WTR
117	1859635.41	6270010.03	CUT & PLUG 10" WTR

PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE SOUTH WATER RELOCATION PLAN
 STA. 14+00 TO STA. 19+94.55 SHERMAN ST

CITY OF SAN DIEGO, CALIFORNIA
 ENGINEERING & CAPITAL PROJECTS DEPARTMENT
 SHEET 326 OF 339 SHEETS

CONTRACTOR: [Signature]
 DATE: 2-24-22

DATE STARTED: [Blank]
 DATE COMPLETED: [Blank]

40067-326-D

CHANGED NOTE 2, 8, & 13 TO CLARIFY PIPE RECONNECT RESPONSIBILITY
 Δ ADDED CALLOUTS AND NOTES TO LOCATE LIMITS OF 8" AND 10" ABANDONMENT MOVED NOTE 14 CALLOUT

PWP MORENA CONVEYANCE MIDDLE (40067-D)

CONTRACTOR'S RESPONSIBILITIES

- PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
- NOTIFY SDG&E AT LEAST 30 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES, (I.E., 69 KV & HIGHER)
- LOCATE AND RECONNECT ALL SEWER LATERALS. LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. LATERAL RECORDS ARE AVAILABLE TO THE CONTRACTOR AT THE WATER DEPARTMENT, 2797 CANNITO CHOLLAS. LOCATE THE IMPROVEMENTS THAT WILL BE AFFECTED BY LATERAL REPLACEMENTS.
- EXCAVATE AROUND WATER METER BOX (CITY PROPERTY SIDE) TO DETERMINE IN ADVANCE, THE SIZE OF EACH SERVICE BEFORE TAPPING MAIN.
- CITY FORCES, WHEN SPECIFIED OR SHOWN ON THE PLANS, WILL MAKE PERMANENT CUTS & PLUGS AND CONNECTIONS.
- KEEP EXISTING MAINS IN SERVICE IN LIEU OF HIGH-LINING, UNLESS OTHERWISE SPECIFIED AND OR SHOWN ON PLANS.
- THE LOCATIONS OF EXISTING BUILDINGS AS SHOWN ON THE PLAN ARE APPROXIMATE.
- STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
- UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE GREENBOOK STANDARD SPECIFICATIONS SECTION 402-UTILITIES.
- EXISTING UTILITY CROSSING AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAN VIEW.
- ALL ADVANCE METERING INFRASTRUCTURE (AMI) DEVICES ATTACHED TO THE WATER METER OR LOCATED IN OR NEAR WATER METER BOXES, COFFINS, OR VAULTS SHALL BE PROTECTED AT ALL TIMES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE COATED AND HOLIDAY FREE AS SPECIFIED IN THE WHITEBOOK, IF USING WAX TAPE, OVERLAP EXISTING METALLIC PIPING BY 12 INCHES ON EACH SIDE. IF ANY BURIED PIPE MATERIALS ARE TO BE CHANGED FROM NONMETALLIC TO METALLIC DURING THE CONSTRUCTION PHASE, THIS CHANGE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY'S CORROSION ENGINEER.

CONSTRUCTION STORM WATER PROTECTION NOTES

- TOTAL SITE DISTURBANCE AREA (ACRES) 6.4 AC
HYDROLOGIC UNIT / WATERSHED Penasquitos HU/Mission Bay Watershed
San Diego HU/SD River Watershed
HYDROLOGIC SUBAREA NAME & NO. Miramor HA (906.40), Tecolote HA (906.50)
Mission San Diego HSA (907.01)
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
 SWPPP
THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001AS AMENDED BY R9-2015-0001 AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT (CGP) ORDER 2009-0005-DW0 AS AMENDED BY ORDER 2010-0014-DW0 AND 2012-0006-DW0
TRADITIONAL RISK LEVEL 2 3 3
LUP RISK TYPE 2 3 3
- CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW
PERMANENT STORM WATER BMP CATEGORY:
 PRIORITY DEVELOPMENT PROJECT
 STANDARD DEVELOPMENT PROJECT
 PDP EXEMPT
 NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS

EXISTING STRUCTURES

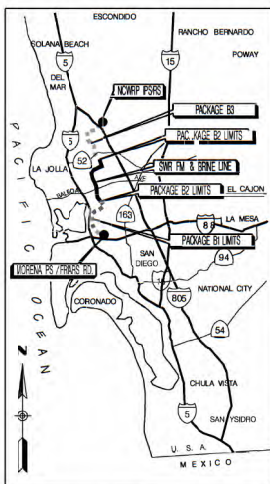
EX WATER MAIN & VALVES	---	EX TRAFFIC SIGNAL	OR TS
EX WATER METER	---	EX STREET LIGHT	+ SL
EX FIRE HYDRANT	○	GAS MAIN	---
EX SEWER MAIN & MANHOLES	---	ELEC. COND., TEL. COND., CATV	---
EX DRAINS	====	RAILROAD, TROLLEY TRACKS	---
EX PAVEMENT (PROFILE)	////	EX CONCRETE ENCASUREMENT OF UTILITY	---
EX GROUND LINE (PROFILE)	////	EX RIGHT OF WAY	---
EX STREET CENTERLINE	----		

WORK TO BE DONE

THE PROJECT CONSISTS OF THE CONSTRUCTION FOR APPROX 16,400 LF OF NEW 48-INCH WASTEWATER FORCEMAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE, BEGINNING AT FORCEMAIN STATION 184+00 AND BRINE CENTRATE STATION 85+00 AT CLAREMONT DR NORTH OF RODRIGUS AVE TO FORCEMAIN STATION 368+00 AND BRINE CENTRATE STATION 1034+32 AT GENESEE AVE NORTH OF LEHRER DR.

MAJOR STREETS:

CLAREMONT DR, CLAREMONT MESA BLVD, GENESEE AVE



VICINITY MAP
NO SCALE

PROJECT TEAM

AECOM ENGINEERING - (619) 610.7700
AIR-X UTILITY SURVEYORS - (760) 480.2347
KATZ & ASSOCIATES - (858) 452.0031
MICHAEL BAKER INTERNATIONAL - (858) 614.5000
RFEAGER ENGINEERING - (619) 647.6265

MAJOR STREETS:

CLAREMONT DR, CLAREMONT MESA BLVD, AND GENESEE AVE.

FIELD DATA

BENCHMARK: NBP GAINES STREET AND NAPA STREET
ELEV = 21.742
THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER CITY OF SAN DIEGO VERTICAL CONTROL
BASIS OF BEARINGS / COORDINATES:
THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983 CCS: 83 ZONE 6 (EPOCH 1991.35)
BASED LOCALLY UPON FIELD OBSERVED TIES TO THE FOLLOWING CONTROL POINTS:

POINT*	NORTHING (GRID)	EASTING (GRID)
133	1899568.65	6270015.50
1037	1855580.54	6271247.23
1040	1854289.08	6276169.63

REFERENCES: ROS 14492
TOPOGRAPHY SOURCE: MBI

DATE OF SURVEY: JANUARY 25, 2017 - FEBRUARY 10, 2017
SURVEY NOTE: THIS SURVEY TIES IN HORIZONTALLY AND VERTICALLY TO CAD AERIAL MAPPING PROJECT 'LAKE MIRAMAR ALIGNMENT'. SAID MAPPING DATA WAS PROVIDED TO MBIFOR INTERNAL USE.
AERIAL MAPPING WAS PERFORMED BY GPSI ON OCTOBER 24, 2015 (GPSI PROJECT NO. 15-843)

OWNER

SAN DIEGO PUBLIC UTILITIES DEPARTMENT
9192 TOPAZ WAY
SAN DIEGO, CA 92123
PHONE NUMBER (858) 292-6300

MONUMENTATION / SURVEY NOTES

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS, WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 871 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION. IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION, THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED WITH COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.

LEGEND

IMPROVEMENTS	STANDARD DRAWINGS	SYMBOL
SEWER FORCEMAIN & BRINE CENTRATE MAIN	SDS-101, SDS-10 (TYPE C)	
SEWER VAULT		
SEWER MANHOLE/PVC LINED	SDS-106, SDS-107, SDS-108, SDW-113, SDS-120, M-03A, SM-07	
SEWER VAULT WITH VENT		
VALVES WITH CAPS AND WELLS	SDW-109, SDW-152, SDW-153, WV-05	
BLOW-OFF ASSEMBLY	SDW-105, SDW-106, SDW-143, SDW-144, SDW-145, SDW-146, WB-05	
AIR & VACUUM VALVE	SDW-105, SDW-117, SDW-158, SDW-159, SDW-160	
SURVEY MONUMENT	M-101, M-108, M-10C	
FIBER OPTIC PULL BOX		
TRENCH RESURFACING	SDG-107, SDG-108	

FOR ADDITIONAL SYMBOLS SEE RESURFACING, CURB RAMP, AND TRAFFIC CONTROL SHEETS.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ALAN SHAPIRO 12/02/2021
DATE

G-01

PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE MIDDLE

COVER SHEET

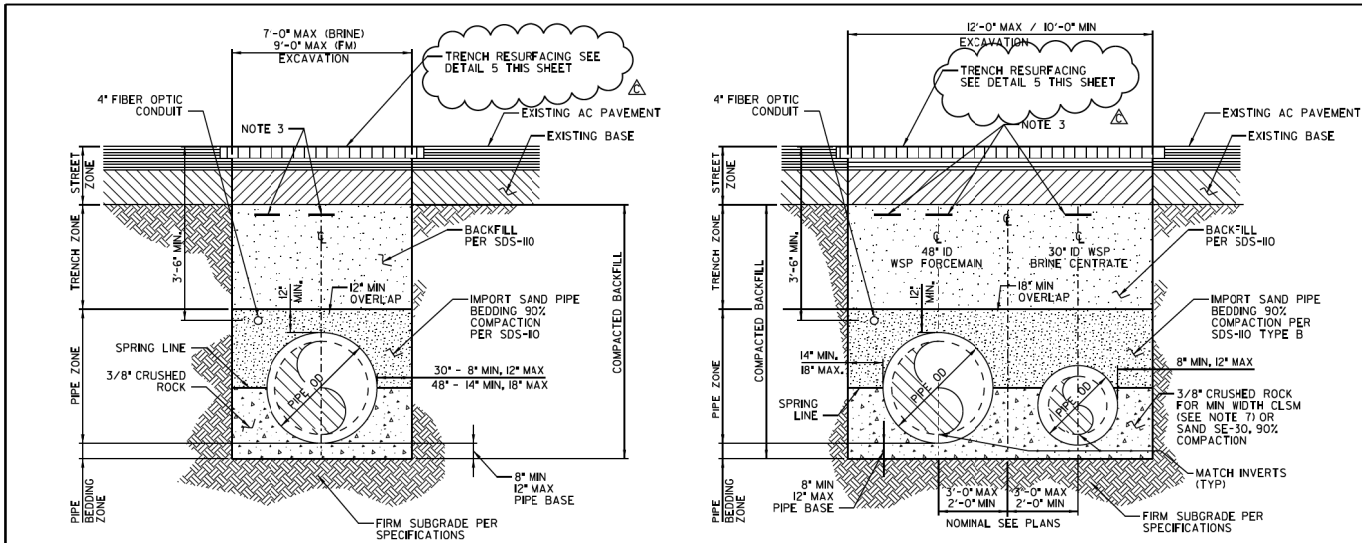
CONSTRUCTION CHANGE / ADDENDUM			WARNING
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	0 1
	01/13/22	40067-192-D	
	12/27/22	40067-192-D	

The City of **SAN DIEGO** Public Utilities

AS-BUILT INFORMATION	
MATERIALS	MANUFACTURER
PIPE CL 235 (WATER)	-
PIPE SDR 35 (SEWER)	-
GATE VALVES	-
FIRE HYDRANTS	-
SEWER MANHOLES	-
REHABILITATE SEWER MANHOLES	-
REHABILITATE SEWER MAIN	-

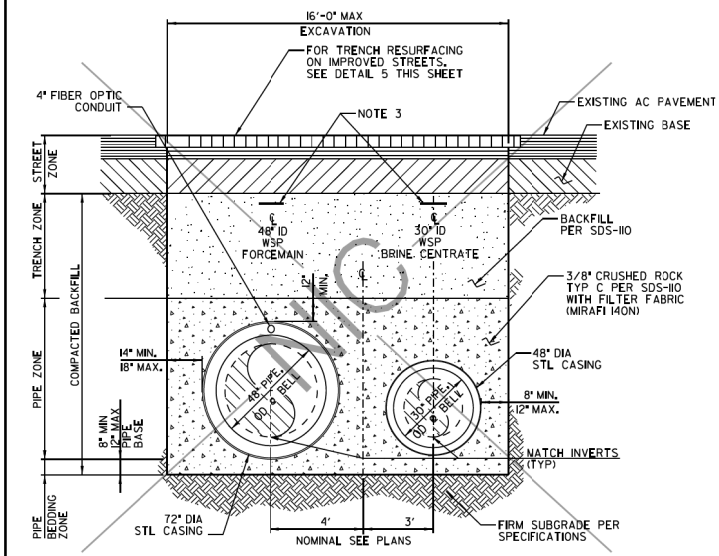
SPEC. NO. 1797A	CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 01 OF 310 SHEETS	SEWER WB5 B-15411
	DATE: 12/02/21 PROJECT MANAGER: J. BERLUDO PROJECT ENGINEER: A. ABUTIN	SEE SHEETS COORDINATE
CONTRACTOR: 02/02/21	DATE STARTED: 01/25/21 DATE COMPLETED: 02/02/21	SEE SHEETS COORDINATE
INSPECTOR:	40067-01 - D	

CHANGED TOTAL NUMBER OF SHEETS **ADDENDUM C**



SINGLE PIPE TRENCH SECTION 1
3/8" = 1'-0"

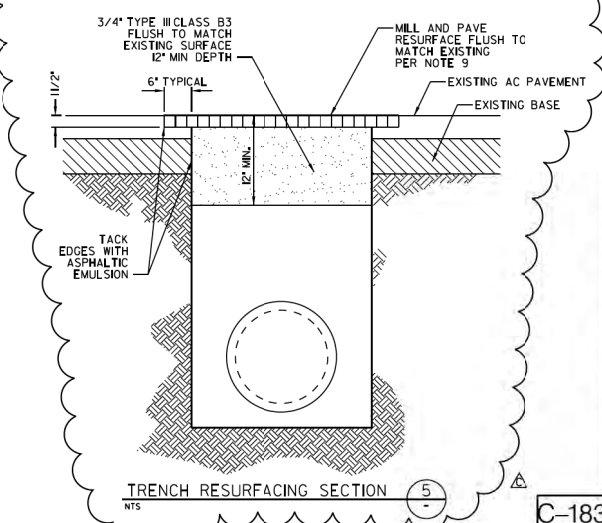
DUAL PIPE TRENCH SECTION 2
NTS



DUAL PIPE ENCASED TRENCH SECTION 3
3/8" = 1'-0"

TRENCH NOTES

1. SAW-CUT AND REMOVE EXISTING PAVEMENT ZONE PER WHITE BOOK SECTION 300-1.3.2
2. STREET RESURFACING PER PLANS.
3. FURNISH AND INSTALL PLASTIC WARNING AND DETECTABLE METALLIC PIPE WARNING TAPE PER SPECIFICATION AND NOTE 6 OF SDS0 SDS-10.
4. EXISTING SOILS FILL BEYOND LIMITS OF TRENCH EXCAVATION SHALL NOT BE DISTURBED.
5. FOR BACKFILL AND COMPACTION REQUIREMENTS SEE SPECIFICATIONS.
6. DO NOT OPERATE AXLE-DRIVEN OR TRACTOR-DRAWN CONSTRUCTION EQUIPMENT OVER PIPELINE UNTIL HEIGHT OF BACK FILL IS 2'-0" OR GREATER OVER PIPE.
7. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS AND PROPOSED CLSM LIFT DEPTHS FOR APPROVAL PRIOR TO PLACEMENT.
8. ANY STREET TRENCH GREATER THAN 12 FEET WIDE AND LONGER THAN 100 FEET IN OVERALL LENGTH SHALL BE RECONSTRUCTED WITH THE PAVEMENT SECTION FOR THE STREET CLASSIFICATION PER SCHEDULE "J" (SDG-13).
9. ASPHALT TRENCH CAPS SHALL BE MILLED AS SHOWN AND RESURFACED WITH 1/2" TYPE III CLASS C2 ASPHALT NO LESS THAN 30 CALENDAR DAYS AFTER INITIAL ASPHALT PLACEMENT.
10. IF THE STREET IS NOT PLANNING TO DO CURB TO CURB SLURRY SEAL OR RESURFACING, IT MUST COMPLETE FINAL STREET RESTORATION WITHIN 60 DAYS AFTER THE INITIAL EXCAVATION.
11. WHEN DIRECTED BY CITY ENGINEER OR SHOWN ON THE PLANS, CONCRETE PER SDG-108 (NOTE #5) MAY BE PLACED; A 1/8" - 1/4" WEARING SURFACING OF TYPE III CLASS F ASPHALT CONCRETE WILL BE REQUIRED.



TRENCH RESURFACING SECTION 5
NTS

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE
CIVIL PIPE DETAILS
TYPICAL PIPE TRENCH SECTIONS

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 192 OF 339 SHEETS		SEWER MBS B-15141
FOR THE PROJECT: PROJECT NO. 15141 DATE: 02/22/22 PROJECT NAME: MORENA CONVEYANCE MIDDLE		J. BERMUDO PROJECT MANAGER A. ABUTIN COUNTY ENGINEER
DESCRIPTION ORIGINAL ADDENDUM C	BY JAV/LW AECOM	APPROVED DATE 2-22-22
DATE STARTED 12/22/21		DATE COMPLETED 40067-192-D

ADDED TRENCH RESURFACING SECTION

ADDENDUM C

City of San Diego

CITY CONTACT: Stephen Samara, Principal Contract Specialist, Email: SSamara@sandiego.gov
Phone No. (619) 533-3619

ADDENDUM D



FOR

PURE WATER PROGRAM (PWP) MORENA CONVEYANCE SOUTH & MIDDLE AND MORENA CONVEYANCE BIKE LANES (BL)

BID NO.:	<u>K-22-1797-DBB-3-A</u>
SAP NO. (WBS/IO/CC):	<u>B-15141</u>
CLIENT DEPARTMENT:	<u>2000</u>
COUNCIL DISTRICT:	<u>2, 6, 7</u>
PROJECT TYPE:	<u>JA, KA</u>

BID DUE DATE:

**2:00 PM
MARCH 17, 2022**

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.

B. BIDDER'S QUESTIONS

- Q1. Reference Bid Item 52 - Colored Stamped Concrete Raised Median. Standard Drawing SDG-112, note #2 states that color and pattern "shall be shown on the plans". Please provide the required color and pattern as we do not find that information on the plans.
- A1. Medians are to be replaced in place with color and pattern as existing, Contractor to field verify existing median pattern and color.
- Q2. On Sheet C-198, City Forces Note Number 2 indicates City will cut and plug the existing waterline on Custer, Banks and Grant (Before Contractor) and that the City will "Reconnect (After Contractor)". However, the construction notes on C-199 and C-277 say Contractor shall "Reconnect after new main has been accepted." Please clarify if the City is reconnecting or the Contractor is reconnecting.
- A2. Notes 1 & 5 on Sheets C-199 and Note 8 on C-277 corrected to state City forces to reconnect.
- Q3. On Sheet C-198, the Construction Notes refer to "City Forces Note Number (Plan & Profile Sheet)." The numbers do not correspond with anything on the Plan and Profile Sheet. Please clarify what these "City Forces Note Numbers" refer to.
- A3. Detail Callouts on Sheet C-198 corrected to reference Sheet 326.
- Q4. On Sheet C-198, there is a symbol for "Fire Hydrant to Remain in Service During Construction." The only fire hydrant on the plan sheet with this designation is the one located on Lovelock Street, 250' north of Sherman. Please confirm this is the only Fire Hydrant that needs to remain active during construction.
- A4. There are two hydrants to remain in service as indicated on Sheet C-198, in Addendum A.

- Q5. Reference Bid Item 67 South – Sewer Manhole (SDS-107) 1 Each. There are two (2) new Sewer Manholes shown on the South plans. One is located on the 30" Brine Centrate Main Station 674+00 and one is on an existing sewer line in Lister Street at Chicago Street. Are both of these sewer manholes paid for in Bid Item 67?
- A5. SMH at Sta 674+00 is to be constructed per plan, bid item "6' Diameter SMH Per Detail 3, Sheet 204" was added to Addendum C.
- Q6. Reference plan sheets C-198, C-199 and C-277: The removal of 8" and 10" AC waterlines on Sherman Street is paid for in which bid item?
- A6. The removal of the 8" and 10" waterlines on Sherman St. are paid for by Bid Line Item 'Brine/centrate-30" WSP CML & TCMC (3/8" Thk)' and Bid Line Item 'Force Main-48" WSP CML & TCMC (3/8" Thk)', respectively.
- Q7. Reference plan sheets C-198, C-199 and C-277: According to the plan sheets, the City is cutting all existing waterlines. However, Bid Items 78 and 79 are "Cut-in Tees by Contractor (8") and (12"). Where are these "Cut-in Tees by Contractor" located?
- A7. "Cut-in Tees by Contractor" covers the contractor's responsibilities of C-199 Notes 1 and 5, described in WB 901-2.5.
- Q8. Reference Spec Section 01 29 00 1.14 C High Purity Oxygen Sensor and Connection: Part 2 e. states "All equipment shall be supplied power from a new SDG&E service." Has the City identified this service? Have all SDG&E fees been paid? When will this service be available to use by the Contractor?
- A8. A new service request is in process. The City will pay the new service fees. A date of availability has not been established.
- Q9. Per Package B2, drawing C-232, curb ramps at locations 43, 44, and 54 have an existing concrete apron next to or between the ramps. Please confirm that these concrete aprons are to be protected in place during the removal and replacement of the new curb ramps.
- A9. Protect in place; however, non-ADA compliant aprons shall be replaced as directed by RE and paid for in accordance with the WB, Section 2-8, Extra Work.

- Q10. Per plan sheet C-74 of the Morena Conveyance South, note 1 states contractor to furnish and install Mod SMH per SDSD SDS-106 & SDRSD SM-07. There is no corresponding bid item for this work. Please clarify how this work will be paid.
- A10. Bid item "6' Diameter SMH Per Detail 3, Sheet 204" was added to Addendum C.
- Q11. Please clarify the coating system required for the 48" and 30" WSP on this project. Joint Detail 3 on plan sheet C-185 indicates tape undercoating with a cement overcoating which would correspond to the industry standard AWWA C209/C214 undercoating with a C205 overcoating as per the standard Green Book. Page 195 of the Supplementary Special Provisions appears to modify the Green Book and replace the standard tape coating system with AWWA C217, which is a field applied system that cannot be used on WSP and cannot have a cement coating applied over it.
- A11. The SSP reference to the field applied, AWWA C217 coating is deleted in this addendum. The coating shall conform to the industry standard per Greenbook.
- Q12. Please clarify the Flanged Joint table requirement at the top of page 196 of the Supplementary Special Provisions. Does this apply only to outlets coming off the 30" and 48" mainline pipe, or does this also apply to flanges that are on the ends of straight pipe that connect to valves as well? If this applies to mainline pipe, then all the sections of 1/4" thick pipe on the "Middle" portion of the project that connects to valves would have to have 3/8" thick pieces of pipe welded onto the ends.
- A12. Flanged Joint table requirement shown in SSP 209-2.2.1 only applies to the outlets coming off the 30" and 48" mainline pipe.
- Q13. Why is CML & TCMC pipe being used for sewer lateral connections as shown on plan sheet C-173? This type of pipe is not meant for sewer applications. Why not use PVC like on page C-175?
- A13. Design considers pressure and pipe restraint, build per plan.
- Q14. Per plan sheet C-211 on Addendum A in the Legend the bottom item with the stop sign symbol refers the cold milled asphalt concrete pavement to SDG-106. This standard detail has various tapered edge

paving and full width mill and overlay details. Please confirm the intent of referencing SDG-106 in the slurry seal locations and if tapered paving will be required, how will the work be paid?

- A14. The work to be done is indicated by the hatched areas and the quantities presented in the tables on the plan sheets. Any cold milling will be done according to SDG-106.
- Q15. Please verify the quantities for bid item 46 Asphalt Concrete Overlay (3 inches) and 72 Cold Mill AC Pavement (3 Inch) are correct. These two bid items should correlate. Also, verify the quantities for bid item 91 Asphalt Concrete Overlay (3 inches) and 107 Cold Mill AC Pavement (3 Inch) are correct. The quantity for item 107 is about half of what it should be.
- A15. Asphalt Concrete Overlay (3 Inches) quantities are correct. Quantities for Cold Mill AC Pavement (3 Inch) are corrected to 521,666 SF and 506,170 SF, for South and Middle, respectively in this Addendum.
- Q16. Please clarify why the description along the top of the profile dimension line on sheet 15 includes the words, "ROCK SHIELD".
- A16. The Term "ROCK SHIELD" refers to mortar coating (MC) as specified on the contract drawings.
- Q17. The call-out on the profile on sheet 16 pointing to the 6" drain coming off Blow-off Vault #2 at station 60+19.66 indicates PVC pipe while the profile on sheet 182 shows CML & TCMC WSP.
- A17. Drain lines are CML & TCMC WSP as shown on sheet 182. The profile call-out on sheet 16 (C-07) pointing to the 6" drain connection at station 60+19.66 should read "top of 6" CML & TCMC WSP drain, see sheet 182".
- Q18. Per SSP section 5-4 several references to a Limited Notice to Proceed are made. The Project Milestones do not make reference to a Limited Notice to Proceed but due to the fact that pipe material procurement will take 4 to 6 months from the time submittals are approved will the City allow for a Limited Notice to Proceed to procure pipe prior to issuing Final Notice to Proceed to begin Milestone 1?
- A18. The Contractor may proceed with procurements after Limited Notice to Proceed as long as all contractual and submittal requirements are met.

City cannot guarantee the submittal review by the Engineer prior to the issuance of Notice to Proceed. Payment shall be per the specifications.

Q19. The Manway Cover in Detail 6 on sheet 198 is called out as a Class "F" flange when everything else on the job is Class "E".

A19. Detail 6 Sheet 198 should state "Class E" blind flange in lieu of "Class F".

Q20. This email is questioning if the 6" drain lines are CML & TCMC WSP were shown on sheet 182, or PVC as called out on all the Sewer Forcemain and Brine Centrate Main profile sheets?

A20. Drain lines are CML & TCMC WSP as shown on sheet 182. The profile call-out on sheet 16 (C-07) pointing to the 6" drain connection at station 60+19.66 should read "top of 6" CML & TCMC WSP drain, see sheet 182".

Q21. We are in receipt of Addendum C. with the amount of clarifications issued we request the bid date be extended at minimum 2 additional weeks from the date of March 17 to allow time for the minority subs to understand and provide clear pricing on the project.

A21. No, the bid date will not be extended.

Q22. A.V. Vault #3 at station 78+94 on sheet 18 is called out as a Type A vault, but in the table on sheet 190 it's listed as a Type B vault. Which one is correct?

A22. A.V. Vault #3 at station 78+94 is to be constructed as a Type A combination vault as called out on sheet 18.

Q23. The time allotted for Milestone 1 does not allow sufficient time to procure pipe materials for the 48" & 30" WSP. Please add 80 working days to Milestone 1 for pipe procurement.

A23. Milestone 1 will not be adjusted.

Q24. Bid item 83 Phased Paving has a quantity of 8 EA. Per spec 306-1.2 each of these locations need to be complete within 90 days with mains in service, trench restoration (paving), concrete flatwork and utility adjustments complete. Will the contractor be expected to complete the entire project within these 8 paving phases? Will the City allow for additional paving phases to reduce the amount of work required in the

90-day period? Will the 90-day period be measured in working days or calendar days?

- A24. See Item 4 of 306-1.2. Additional phases may be allowed at no cost to the City.
- Q25. Sheet G-09 of the plans you have a testing schedule showing maximum working pressure of 240psi that would require E flanges which are 275 psi rated. Unfortunately, under 212-5.3 sheet 271 of the specs you are requiring and minimum plug valve pressure rating of 300psi which the valves provided will be F flanges.
- A25. Section 212-5.3 is revised in this addendum to state 275 psi instead of 300 psi.
- Q26. B/O drawing Sheet C-178 187 of 326 on note 3 of the general note calling out all flanges shall be E Flanges but have plug valves that will have F-flanges. A/V Draddawing C-180 89 of 326 note 3 of the general note calling out all flanges shall be E Flange but have plug valves that will have F-flanges. This will determine different pricing of Air vacs if they need to be F-Flanges since they are bolting to the plug valves in certain instances.
- A26. AWWA Type E flanges are acceptable, see response to question Q25.
- Q27. Can you please clarify as soon as possible so the Steel Manufacturer can be notified to quote F-Flanges and we have time to get new hardware quotes for bolting this together and new air vac pricing if they are needing to meet F-flanges.
- A27. See response above.
- Q28. Per Addendum C a detail is provided for trench patching on sheet 192. Per note 9 contractor is to perform a 1.5" mill and overlay of trench patch. Previously contractor was referred to standard drawing SDG-107, which note 2 stated a 1.5" mill and overlay is required for streets not receiving a full width overlay prior to acceptance but this reference was removed. Is the City requiring a 1.5" mill and overlay on trench patch even if final restoration is a full width 3" mill and overlay?
- A28. The City is not requiring a 1.5" mill and overlay on a trench patch if final restoration is a full width 3" mill and overlay

- Q29. Per Addendum C Detail 5 on Sheet 192, it requires contractor to perform the 1.5" Mill and Overlay within 30 calendar days after initial asphalt placement. Due to the duration of the project this would require a substantial amount of move-ins for paving. Will the City consider removing the 30-day requirement or providing a more reasonable duration like 90 days?
- A29. 90 Days is acceptable.
- Q30. Per Addendum C, the answer to question Q111 stated that the 6 EA curb ramps in bid item 133 "Installation of Curb ramps at mid-block ADA Parking" refer to Locations 159, 163, 174, 179, 182 and 186. These six curb ramps are already accounted for in bid item 93 "Curb Ramp (Type B) with Stainless Steel Detectable Warning Tiles." In addition, on the PWP Morena Conveyance Bike Lanes Striping Plan Drawings T-48 thru T-50, there is a call out 10 that states to install pedestrian curb ramps per SDG-133 along with new striping. There are 6 EA total of these curb ramps. Please clarify in what bid items curb ramp Locations 159, 163, 174, 179, 182 and 186 are to be paid and in what bid item the curb ramps in the Morena Conveyance Bike Lanes are to be paid.
- A30. Locations 159, 163, 174, 179, 182 and 186 are to be paid for by bid item "Curb Ramp (Type B) with Stainless Steel Detectable Warning Tiles" as shown in PWP Conveyance Middle package
- Q31. Per Addendum C a new bid item 97 was added for Traffic Signal Loop and Appurtenance (Type E Modified) has a quantity of 48 in the Addendum but on Planet Bids the quantity is 54. Please confirm which quantity will prevail.
- A31. Bid Item for Traffic Signal Loop and Appurtenance (Type E Modified) is deleted in this Addendum.

C. ADDENDUM

1. To Addendum A, Section E, Certifications and Forms, Sub-section 1, page 11, DELETE Covid-19 Vaccination Ordinance – Certification of Compliance Form on page 42 and SUBSTITUTE with Covid-19 Vaccination Ordinance – Certification of Compliance Form on page 13 of this Addendum.

2. To Addendum A, Section D, Attachments, Sub Section 2, page 10, **DELETE** Drawings 40067-327-D, 40067-328-D and 40067-330-D in their entirety and **REPLACE** with Drawings 40067-327-D, 40067-328-D and 40067-330-D in pages 14 through 16 of this Addendum.
3. To Addendum C, Section D, Bidder's Questions, pages 19 and 20, **DELETE** Q43 and A43 and **SUBSTITUTE** with the following:
 - Q43. It appears that the intent of Bid items 113 & 114 is to pay for the replacement of loops that are broken/damaged during construction by EA. However, Answers A-5 and A-18 in the Bidder's questions state that Bid items 75 & 110 (LS) "generally includes restoration of existing LOOPS." Are all loops paid by the EA through Bid Items 113 & 114 or are loops paid throughout all four items 75, 110, 113, & 114? If loops are paid throughout all four items, then please clarify what loops are paid by the EA and what loops get covered by the LS items.
 - A43. Loops identified in the Bike Lane package outside of the conveyance trenching are to be paid for by the bid items "Traffic Signal Loop and Appurtenance" per EA. The cost for replacing traffic loops damaged as a result of pipeline trenching shall be included in the pipeline unit cost per SSP 306-15.1 Item p). Bid item "Traffic Signal Light Restoration" for both southern & middle alignments is deleted in this addendum; all conduits and/or other appurtenances damaged by pipeline construction shall be repaired by the Contractor at no additional cost to the City.
4. To Addendum C, Section F, Supplementary Special Provisions, Sub-section 5-10.2.5, Payment, Item 3, page 47, **DELETE** in its entirety and **SUBSTITUTE** with the following:
 3. To Section 6-2.2, Work Restrictions, ADD the following:
 15. Contractor shall coordinate the phased paving along W. Morena Blvd with the City to align with construction activities of Morena Pipelines to eliminate excavations in newly paved roadways.

16. Contractor to locate existing CATV line identified on Package Morena Conveyance Southern, Sheet C-76 and FO identified on Package Morena Conveyance Southern, Sheet C-76. Upon positive location Contractor shall coordinate any re-location with Utility Owner, if necessary. Re-location shall be performed by Utility Owner. This identification shall be done as first order of work to prevent project delay.

D. NOTICE INVITING BIDS

1. To Addendum C, Item 1, page 40, **DELETE** in its entirety and **SUBSTITUTE** with the following:
 3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$116,170,000**.

E. ATTACHMENTS

1. To Attachment A, Scope of Work, Section 1. Scope of Work, Item 1.1, Subitem 1.1.1, page 27, **DELETE** Drawing numbers **40067-01-D, 40067-16-D, 40067-190-D and 40067-198-D** in their entirety and **REPLACE** with Drawing numbers **40067-01-D, 40067-16-D, 40067-190-D and 40067-198-D**, pages 17 through 20 of this Addendum.
2. To Attachment A, Scope of Work, Section 1, Scope of Work, Item 1.1, Subitem 1.1.2, page 27, **DELETE** Drawing numbers **40067-01-D, and 40067-198-D** in their entirety and **REPLACE** with Drawing numbers **40067-01-D and 40067-198-D**, pages 21 through 22 of this Addendum.

F. SUPPLEMENTARY SPECIAL PROVISIONS

1. To Section 212-5.3, Plug valves, page 271, **DELETE** in its entirety and **SUBSTITUTE** with the following:

212-5.3 Plug Valves. To the GREENBOOK ADD the following:

- a) Minimum valve pressure rating shall be 275 psi.
- b) Line and coat valves with fusion bonded epoxy per SSP.

G. ADDITIONAL CHANGES

- The following are additional changes to the Line Items in the PlanetBids Tab:

For clarity where applicable, **ADDITIONS**, if any, have been **Underlined** and **DELETIONS**, if any, have been **~~Stricken out.~~**

Section	Item Code	Description	Uo M	Quantity	Payment Reference
Main Bid (MORENA CONVEYANCE SOUTH)	238210	Traffic Signal Light System Restoration	LS	1	701-2
Main Bid (MORENA CONVEYANCE SOUTH)	237310	Cold Mill AC Pavement (3 Inch)	SF	647,960 521,666	404-12
Main Bid (MORENA CONVEYANCE SOUTH)	237310	Traffic Signal Loop and Appurtenance (Type E modified)	EA	54	404-12
Main Bid (MORENA CONVEYANCE MIDDLE)	237310	Cold Mill AC Pavement (3 Inch)	SF	242,287 506,170	404-12
Main Bid (MORENA CONVEYANCE MIDDLE)	238210	Traffic Signal Light System Restoration	LS	1	701-2
Main Bid (MORENA CONVEYANCE MIDDLE)	238210 237310	Traffic Signal Loop and Appurtenance (Type Q)	EA	26	404-12 701-2
Main Bid (MORENA CONVEYANCE MIDDLE)	238210 237310	Traffic Signal Loop and Appurtenance (Type E)	EA	325 75	404-12

Rania Amen, Director
Engineering & Capital Projects Department

Dated: *March 7, 2022*
San Diego, California

RA/AJ/rd

CONTRACTOR CERTIFICATION

COVID-19 VACCINATION ORDINANCE

CERTIFICATION OF COMPLIANCE

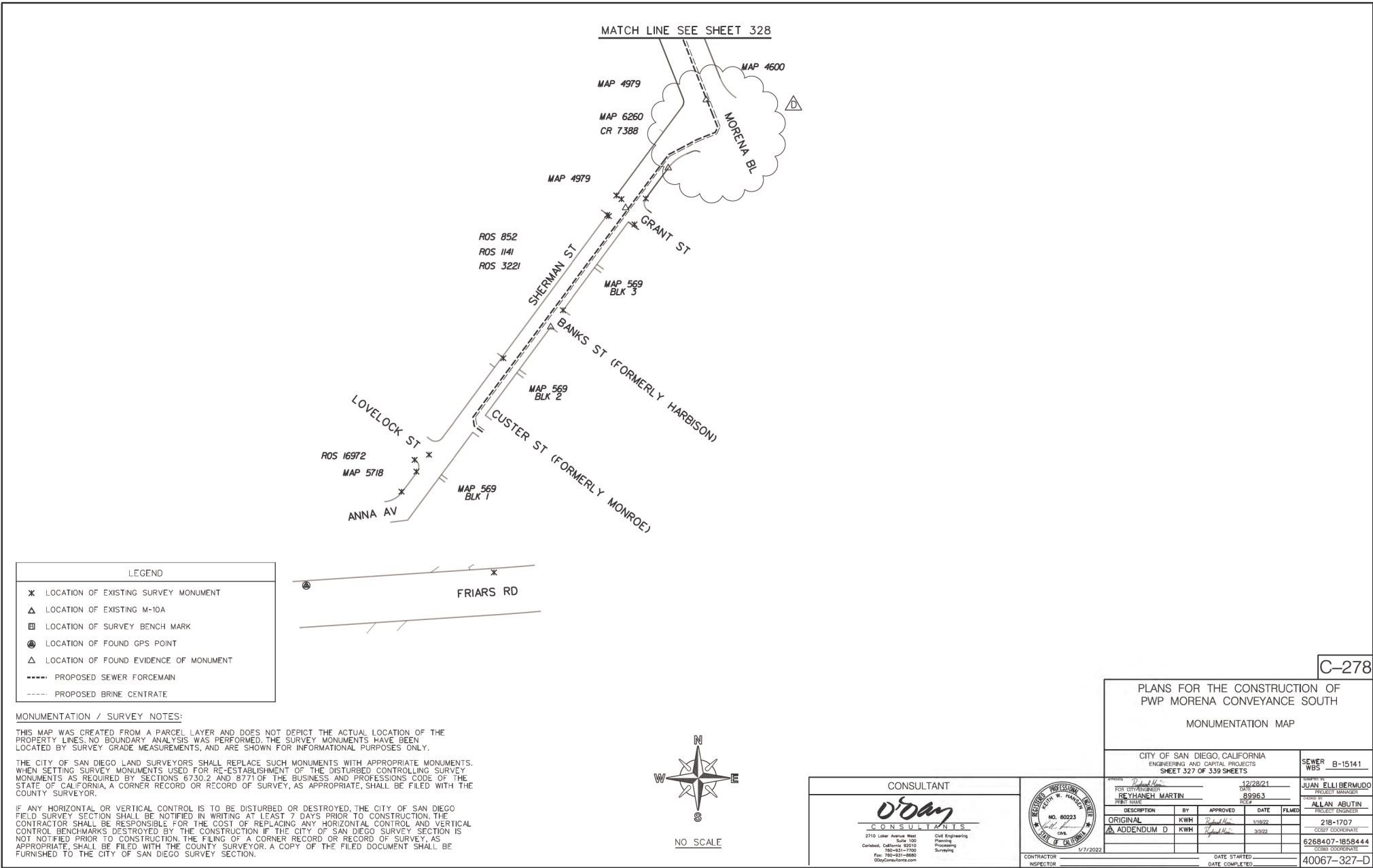
I hereby certify that I am familiar with the requirements of San Diego Ordinance No. O-21398 implementing the City's Mandatory COVID-19 Vaccination Policy.

TERMS OF COMPLIANCE

The City's Mandatory COVID-19 Vaccination Policy, outlined in San Diego Ordinance O-21398 (Nov. 29, 2021), requires ALL City contractors, who interact in close contact with City employees while providing contracted services indoors in City facilities or while performing bargaining unit work while indoors, to be fully vaccinated against COVID-19, effective January 3, 2022, as a condition for provision or continued provision of contracted services.

1. "City contractor" means a person who has contracted with the City of San Diego to provide public works, goods, services, franchise, or consultant services for or on behalf of the City, and includes a subcontractor, vendor, franchisee, consultant, or any of their respective officers, directors, shareholders, partners, managers, employees, or other individuals associated with the contractor, subcontractor, consultant, or vendor. "Person" means any natural person, firm, joint venture, joint stock company, partnership, association, club, company, corporation business trust or organization.
2. "Fully vaccinated" means a person has received, at least 14 days prior, either the second dose in a two-dose COVID-19 vaccine series or a single-dose COVID-19 vaccine, or otherwise meets the criteria for full vaccination against COVID-19 as stated in applicable public health guidance, orders, or law. Acceptable COVID-19 vaccines must be approved by the U.S. Food and Drug Administration (FDA) or authorized for emergency use by the FDA or the World Health Organization.
3. "Close contact" means a City contractor is **within 6 feet** of a City employee for a **cumulative total of 15 minutes or more over a 24-hour period** (for example, three individual 5-minute exposures for a total of 15 minutes).
4. City contractors who interact in close contact with City employees must fully comply with the City's Mandatory COVID-19 Vaccination Policy, which may include a reporting program that tracks employee vaccination status.
5. City contractors with employees or subcontractors who interact in close contact with City employees must certify that those members of their workforce, and subcontractors regardless of tier, who work indoors at a City facility, are fully vaccinated and that the City contractor has a program to track employee compliance.
6. City contractors that have an Occupational Safety and Health Administration compliant testing program for members of their workforce, as a reasonable accommodation, may be considered for compliance.

Non-compliance with the City's Mandatory COVID-19 Vaccination Policy may result in termination of a contract for cause, pursuant to the City's General Terms and Provisions, Reference Standards, and the San Diego Municipal Code.



LEGEND	
✕	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
⊠	LOCATION OF SURVEY BENCH MARK
⊙	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
----	PROPOSED SEWER FORCEMAIN
----	PROPOSED BRINE CENTRATE



MONUMENTATION / SURVEY NOTES:

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

IF ANY HORIZONTAL OR VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION SHALL BE NOTIFIED IN WRITING AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACING ANY HORIZONTAL CONTROL AND VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION IF THE CITY OF SAN DIEGO SURVEY SECTION IS NOT NOTIFIED PRIOR TO CONSTRUCTION. THE FILING OF A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR. A COPY OF THE FILED DOCUMENT SHALL BE FURNISHED TO THE CITY OF SAN DIEGO SURVEY SECTION.



C-278

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 327 OF 339 SHEETS				SEWER - B-15141
PROJECT NO. 89963	DATE 12/28/21	DRAWN BY JUAN ELLIBERMUDO		
DESIGNED BY REYHANEH MARTIN	CHECKED BY ALLAN ABUTIN	PROJECT ENGINEER		
DESCRIPTION	BY	APPROVED	DATE	
ORIGINAL	KWH	Reyhanh	1/18/22	
ADDENDUM D	KWH	Reyhanh	3/5/22	
PROJECT NO. 6268407-1858444			PROJECT ENGINEER	
DATE STARTED			DATE COMPLETED	
CONTRACTOR			INSPECTOR	

CONSULTANT

O'Day

CONSULTANTS

2710 Loker Avenue West Suite 100
Carlsbad, California 92010
Tel: 760-431-7700
Fax: 760-431-1600
0DayConsultants.com

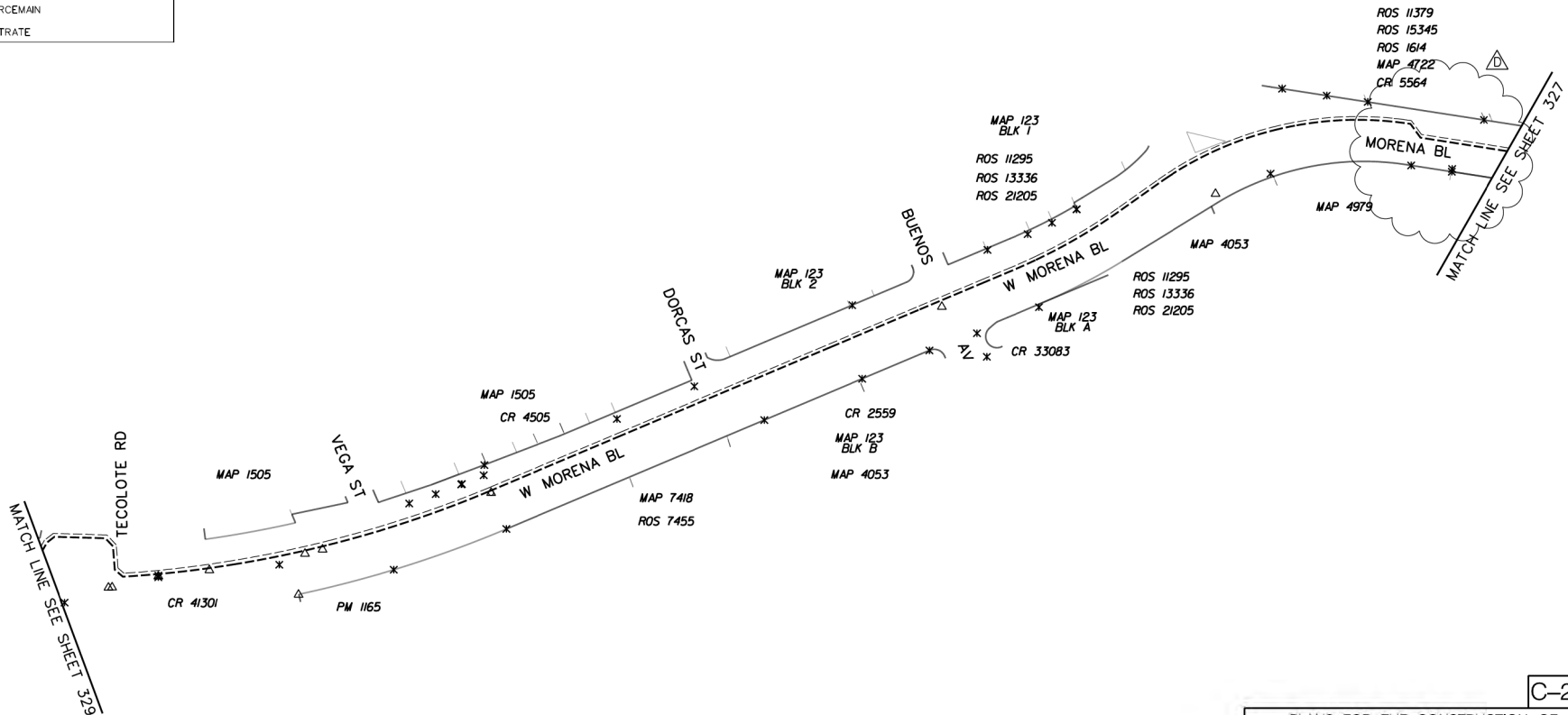
Civil Engineering
Planning
Processing
Surveying



△ CHANGES TO PIPE ALIGNMENTS

ADDENDUM D

LEGEND	
✕	LOCATION OF EXISTING SURVEY MONUMENT
△	LOCATION OF EXISTING M-10A
⊠	LOCATION OF SURVEY BENCH MARK
⊙	LOCATION OF FOUND GPS POINT
⊕	LOCATION OF FOUND EVIDENCE OF MONUMENT
-----	PROPOSED SEWER FORCEMAIN
-----	PROPOSED BRINE CENTRATE



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NO SCALE

C-279

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 328 OF 339 SHEETS		SEWER - B-15141
DATE: 12/28/21	PROJECT NUMBER: JUAN ELLIBERMUDO	PROJECT ENGINEER: ALLAN ABUTIN
FOR CITY ENGINEER: REYHANEH MARTIN	DATE: 8/9/23	DATE: 218-1707
DESCRIPTION: ORIGINAL	BY: KWH	DATE: 1/16/22
ADDENDUM D	BY: KWH	DATE: 3/5/22
PROJECT COORDINATOR: 6268407-1858444		PROJECT COORDINATOR: 40067-328-D
CONTRACTOR: DATE STARTED: 1/7/2022		INSPECTOR: DATE COMPLETED:

CONSULTANT

o2oam

CONSULTANTS

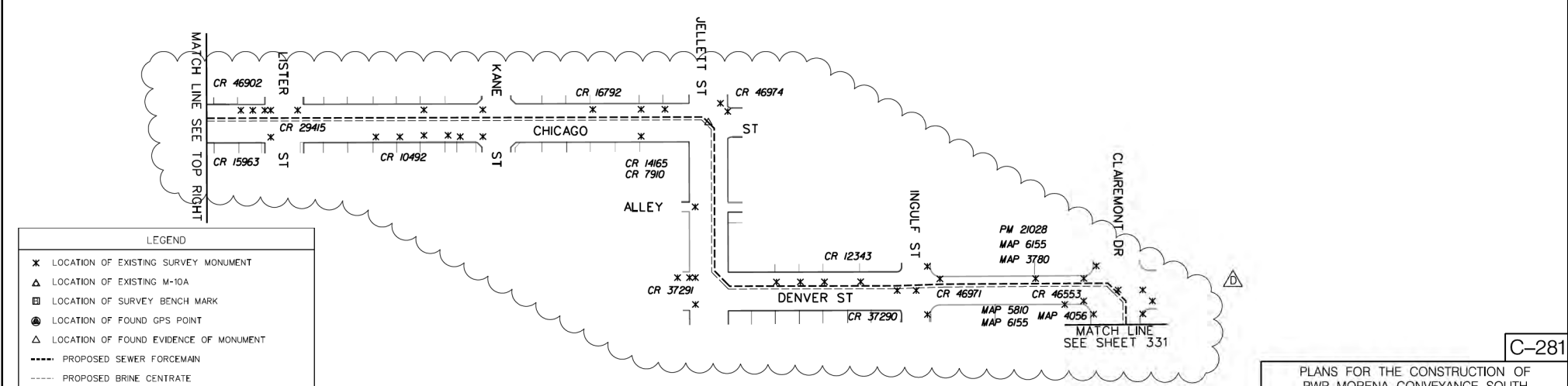
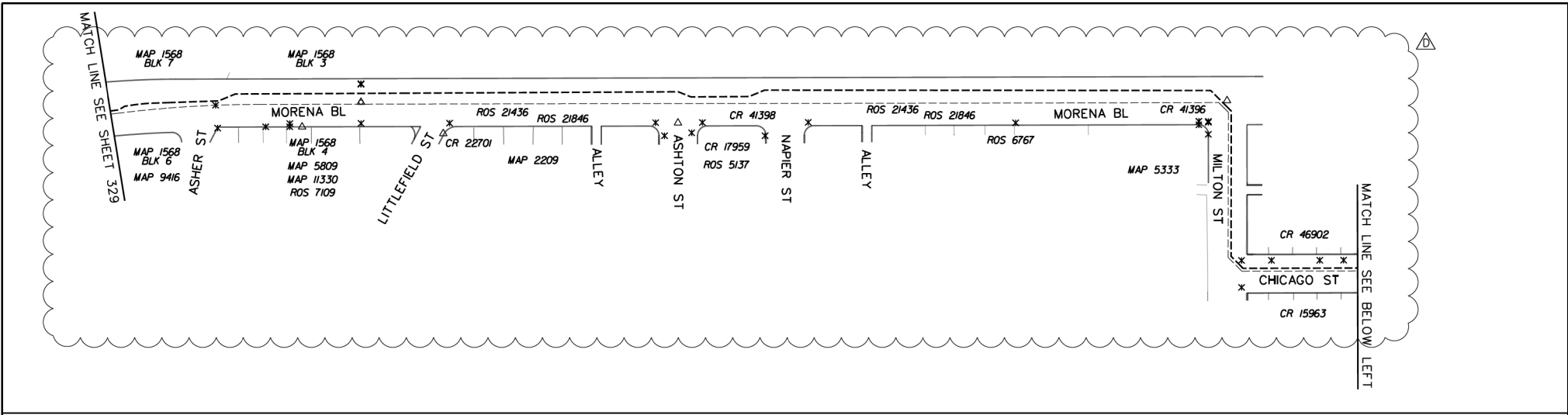
2710 Loner Avenue West Suite 100
Carlsbad, California 92015
Tel: 760-431-7700
Fax: 760-431-1460
www.o2oam.com

Civil Engineering
Planning
Processing
Surveying



△ CHANGES TO PIPE ALIGNMENTS

ADDENDUM D



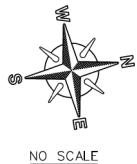
LEGEND	
X	LOCATION OF EXISTING SURVEY MONUMENT
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⊠	LOCATION OF SURVEY BENCH MARK
⊙	LOCATION OF FOUND GPS POINT
△	LOCATION OF FOUND EVIDENCE OF MONUMENT
----	PROPOSED SEWER FORCEMAIN
----	PROPOSED BRINE CENTRATE

MONUMENTATION / SURVEY NOTES:

THIS MAP WAS CREATED FROM A PARCEL LAYER AND DOES NOT DEPICT THE ACTUAL LOCATION OF THE PROPERTY LINES. NO BOUNDARY ANALYSIS WAS PERFORMED. THE SURVEY MONUMENTS HAVE BEEN LOCATED BY SURVEY GRADE MEASUREMENTS, AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE CITY OF SAN DIEGO LAND SURVEYORS SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. WHEN SETTING SURVEY MONUMENTS USED FOR RE-ESTABLISHMENT OF THE DISTURBED CONTROLLING SURVEY MONUMENTS AS REQUIRED BY SECTIONS 6730.2 AND 8771 OF THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED WITH THE COUNTY SURVEYOR.

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C-281

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
MONUMENTATION MAP**

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING AND CAPITAL PROJECTS SHEET 330 OF 339 SHEETS		SEWER WBS B-15141
DATE: 12/28/21	PROJECT NUMBER: 89963	DESIGNED BY: JUAN ELLI BERMUDO
FOR CITY ENGINEER: REYHANEH MARTIN	DATE: 1/11/2022	PROJECT ENGINEER: ALLAN ABUTIN
DESCRIPTION	BY	APPROVED
ORIGINAL	KWH	1/18/22
ADDENDUM D	KWH	3/5/22
DATE STARTED: 1/7/2022		DATE COMPLETED: 40067-330-D

CONSULTANT

O'Day

E. CONSULTANTS

2710 Loker Avenue West, Suite 100
Carlsbad, California 92015
Tel: 760-431-7700
Fax: 760-431-1600
www.OdayConsultants.com

Civil Engineering
Planning
Processing
Surveying



△ CHANGES TO PIPE ALIGNMENTS

ADDENDUM D

PWP MORENA CONVEYANCE SOUTH (40067-D)

CONTRACTOR'S RESPONSIBILITIES

1. PURSUANT TO SECTION 4216 OF THE GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (E.G. UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INDUSTRY IDENTIFICATION NUMBER.
2. NOTIFY SDG&E AT LEAST 30 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES, (I.E., 69 KV & HIGHER)
3. LOCATE AND RECONNECT ALL SEWER LATERALS, LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. LATERAL RECORDS ARE AVAILABLE TO THE CONTRACTOR AT THE WATER DEPARTMENT, 2797 CAMINITO CHOLLAS. LOCATE THE IMPROVEMENTS THAT WILL BE AFFECTED BY LATERAL REPLACEMENTS.
4. EXCAVATE AROUND WATER METER BOX (CITY PROPERTY SIDE) TO DETERMINE IN ADVANCE, THE SIZE OF EACH SERVICE BEFORE TAPPING MAIN.
5. CITY FORCES, WHEN SPECIFIED OR SHOWN ON THE PLANS, WILL MAKE PERMANENT CUTS & PLUGS AND CONNECTIONS.
6. KEEP EXISTING MAINS IN SERVICE IN LIEU OF HIGH-LINING, UNLESS OTHERWISE SPECIFIED AND/OR SHOWN ON PLANS.
7. THE LOCATIONS OF EXISTING BUILDINGS AS SHOWN ON THE PLAN ARE APPROXIMATE.
8. STORM DRAIN INLETS SHALL REMAIN FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
9. UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORD INFORMATION ONLY AND ARE SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE GREENBOOK STANDARD SPECIFICATIONS SECTION 402-UTILITIES.
10. EXISTING UTILITY CROSSING AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAY VIEW.
11. ALL ADVANCE METERING INFRASTRUCTURE (AMB DEVICES ATTACHED TO THE WATER METER OR LOCATED IN OR NEAR WATER METER BOXES, COFFINS, OR VAULTS) SHALL BE PROTECTED AT ALL TIMES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
12. ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL BE COATED AND HOLIDAY FREE AS SPECIFIED IN THE WHITEBOOK. IF USING WAX TAPE, OVERLAP EXISTING METALLIC PIPING BY 12 INCHES ON EACH SIDE. IF ANY BURIED PIPE MATERIALS ARE TO BE CHANGED FROM NONMETALLIC TO METALLIC DURING THE CONSTRUCTION PHASE, THIS CHANGE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY'S CORROSION ENGINEER.
13. FOR COORDINATION OF THE SHUTDOWN OF MAINS, PLEASE CONTACT THE FOLLOWING: TRANSMISSION MAINS (16 INCHES AND LARGER) - JESUS RAMOS (619-527-7438) DISTRIBUTION MAINS (LESS THAN 16 INCHES) - TISA AGUIERO (619-527-3143) WATER FACILITIES - TATYANA FRKMAN (619-527-7465) AND JESUS RAMOS (619-527-7438)

CONSTRUCTION STORM WATER PROTECTION NOTES

1. TOTAL SITE DISTURBANCE AREA (ACRES) = 6.3 AC
HYDROLOGIC UNIT / WATERSHED = Penasquitos HU/Mission Bay Watershed
San Diego HU / SD River Watershed
- HYDROLOGIC SUBAREA NAME & NO. = Miramar HSA (906.40), Tecolote HSA (906.50)
Mission San Diego HSA (907.11)
2. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE
SWPPP
THE PROJECT IS SUBJECT TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT NO. R9-2013-0001AS AMENDED BY R9-2015-0001AND R9-2015-0100 AND CONSTRUCTION GENERAL PERMIT (CGP) ORDER 2009-0009-DWO AS AMENDED BY ORDER 2010-0014-DWO AND 2012-0006-DWO
TRADITIONAL RISK LEVEL 1 2 3
LUP RISK TYPE 1 2 3
3. CONSTRUCTION SITE PRIORITY
 ASBS HIGH MEDIUM LOW

PERMANENT STORM WATER EMP CATEGORY:

- PRIORITY DEVELOPMENT PROJECT
- STANDARD DEVELOPMENT PROJECT
- POP EXEMPT
- NOT SUBJECT TO PERMANENT STORM WATER REQUIREMENTS

EXISTING STRUCTURES

- EX WATER MAIN & VALVES
- EX WATER METER
- EX FIRE HYDRANT
- EX SEWER MAIN & MANHOLES
- EX DRAINS
- EX PAVEMENT (PROFILE)
- EX GROUND LINE (PROFILE)
- EX TRAFFIC SIGNAL
- EX STREET LIGHT
- GAS MAIN
- ELEC. COND., TEL. COND., CATV
- RAILROAD, TROLLEY TRACKS

WORK TO BE DONE

THE PROJECT CONSISTS OF THE CONSTRUCTION FOR APPROX 17,400 LF OF NEW 48-INCH WASTEWATER FORCEMAIN AND 30-INCH BRINE CENTRATE CONVEYANCE PIPELINE, BEGINNING FROM THE MORENA PUMP STATION FACILITY TO FORCEMAIN STATION 184+00 AND BRINE CENTRATE STATION 85+00 AT CLAREMONT OR NORTH OF IRGOLOUIS AVE. THE BRINE CENTRATE MAIN INCLUDES A PRESSURE REDUCING VAULT.

PROJECT TEAM

AECOM ENGINEERING - (619) 610,7700
AIR-X UTILITY SURVEYORS - (760) 480,2347
KATZ & ASSOCIATES - (858) 452,0031
MICHAEL BAKER INTERNATIONAL - (858) 614,5000
RFYEAGER ENGINEERING - (619) 647,6265

MAJOR STREETS:

MORENA BLVD, CHICAGO ST, AND CLAREMONT DR.

FIELD DATA

BENCHMARK: NBP GAINES STREET AND NAPA STREET
ELEV = 27.42

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 PER CITY OF SAN DIEGO VERTICAL CONTROL

BASIS OF BEARINGS / COORDINATES:

THE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983 CCS 83 ZONE 6 (EPOCH 1993.5)

BASED LOCALLY UPON FIELD OBSERVED TIES TO THE FOLLOWING CONTROL POINTS:

POINT#	NORTHING (GRID)	EASTING (GRID)
133	1899568.65	6270015.0
1037	1855580.54	6271247.23
1040	1854289.08	6276169.63

REFERENCES: ROS 14492

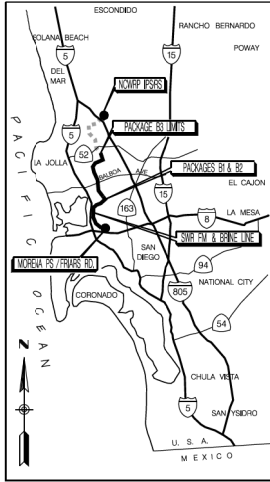
TOPOGRAPHY SOURCE: MBI

DATE OF SURVEY: JANUARY 25, 2017 - FEBRUARY 10, 2017

DATE OF SURVEY: THIS SURVEY TIES IN HORIZONTALLY AND VERTICALLY TO CAD AERIAL MAPPING PROJECT "LAKE MIRAMAR ALIGNMENT". S&D MAPPING DATA WAS PROVIDED TO MBIFOR INTERNAL USE. AERIAL MAPPING WAS PERFORMED BY GPSTON OCTOBER 24, 2015 (GPS) PROJECT NO. 15-843)

OWNER

SAN DIEGO PUBLIC UTILITIES DEPARTMENT
9192 TOPAZ WAY
SAN DIEGO, CA 92123
PHONE NUMBER (858) 292-6300



VICINITY MAP
NO SCALE

MONUMENTATION / SURVEY NOTES

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LEGEND

IMPROVEMENTS	STANDARD DRAWINGS	SYMBOL
SEWER FORCEMAIN & BRINE CENTRATE MAIN	SDS-100, SDS-110 (TYPE C)	
SEWER VAULT		
SEWER MANHOLE/LINED	SDS-106, SDS-107, SDS-108, SDS-113, SDS-120, M-03A, SM-07	
SEWER VAULT WITH VENT		
WATER MAIN & APPURTENANCES	SDW-105, SDW-110, SDW-151, SDW-161	
VALVES WITH CAPS AND WELLS	SDW-109, SDW-152, SDW-153, WV-05	
FIRE SERVICE CONNECTION ASSEMBLY & BACKFLOW PREVENTER (WHERE APPLICABLE)	SDW-105, SDW-109, SDW-118, SDW-152, SDW-153	
6" FIRE HYDRANT ASSEMBLY & MARKER 2-PORT UNLESS SPECIFIED AS 3-PORT	SDW-105, SDW-104, SDW-109, SDW-152, SDW-153	
1" WATER SERVICE UNLESS OTHERWISE SPECIFIED	SDM-105, SDW-107, SDW-134, SDW-135, SDW-136, SDW-137, SDW-138, SDW-149, SDW-150, WS-03	
BLOW-OFF ASSEMBLY	SDW-105, SDW-106, SDW-143, SDW-144, SDW-145, SDW-146, WB-05	
AIR & VACUUM VALVE	SDW-105, SDW-117, SDW-158, SDW-159, SDW-160	
CORROSION TEST STATION		
IMPRESSED CURRENT CATHODIC PROTECTION RECTIFIER ASSEMBLY		
CUTTING AND PLUGGING ABANDONED WATER MAIN	WP-03	
TRANSITION / REPAIR COUPLING	SEE APPROVED MATERIALS LIST	
ABANDON OR REMOVE INTERFERING MAIN		
EX CONCRETE ENCASMENT OF UTILITY		
EX RIGHT OF WAY		
EX STREET CENTERLINE		
SURVEY MONUMENT	M-10A, M-10B, M-10C	
FIBER OPTIC PULL BOX		
TRENCH RESURFACING	SDG-107, SDG-108, SDG-113	
FOR ADDITIONAL SYMBOLS SEE RESURFACING, CURB RAMP, AND TRAFFIC CONTROL SHEETS.		

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ALAN SHAPIRO
DATE: 12/02/2021

G-01

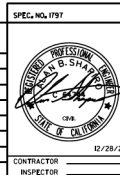
PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
COVER SHEET

CONSTRUCTION CHANGE / ADDENDUM			WARNING
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.
	1/13/2022	40067-13, 40067-14, 40067-15, 40067-16, 40067-17, 40067-18, 40067-19, 40067-20, 40067-21, 40067-22, 40067-23, 40067-24, 40067-25, 40067-26, 40067-27, 40067-28, 40067-29, 40067-30, 40067-31, 40067-32, 40067-33, 40067-34, 40067-35, 40067-36, 40067-37, 40067-38, 40067-39, 40067-40, 40067-41, 40067-42, 40067-43, 40067-44, 40067-45, 40067-46, 40067-47, 40067-48, 40067-49, 40067-50, 40067-51, 40067-52, 40067-53, 40067-54, 40067-55, 40067-56, 40067-57, 40067-58, 40067-59, 40067-60, 40067-61, 40067-62, 40067-63, 40067-64, 40067-65, 40067-66, 40067-67, 40067-68, 40067-69, 40067-70, 40067-71, 40067-72, 40067-73, 40067-74, 40067-75, 40067-76, 40067-77, 40067-78, 40067-79, 40067-80, 40067-81, 40067-82, 40067-83, 40067-84, 40067-85, 40067-86, 40067-87, 40067-88, 40067-89, 40067-90, 40067-91, 40067-92, 40067-93, 40067-94, 40067-95, 40067-96, 40067-97, 40067-98, 40067-99, 40067-100	
	2/22/2022	40067-85-D, 40067-182-D, 40067-201-D, 40067-208-D, 40067-328-D	
	3/03/2022	40067-182-D, 40067-189-D, 40067-199-D, 40067-201-D, 40067-208-D, 40067-328-D, 40067-330-D	

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

The City of
SAN DIEGO Public Utilities

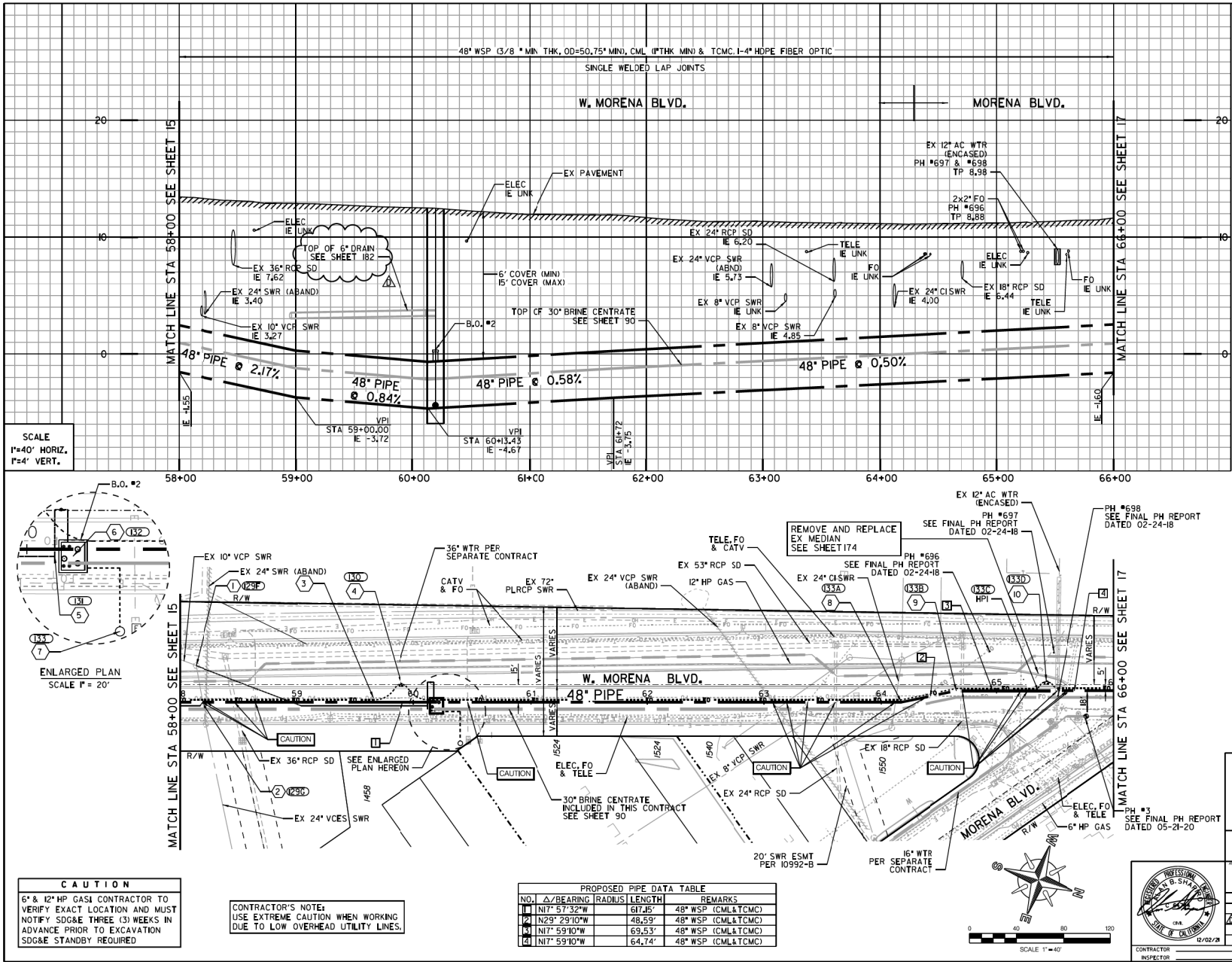
AS-BUILT INFORMATION	
MATERIALS	MANUFACTURER
PIPE CL 235 (WATER)	-
PIPE SDR 35 (SEWER)	-
GATE VALVES	-
FIRE HYDRANTS	-
SEWER MANHOLES	-
REHABILITATE SEWER MANHOLES	-
REHABILITATE SEWER MAIN	-



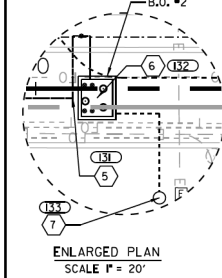
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 01 OF 319 SHEETS			
PROJECT NO. 197	DATE: 12/02/2021	PROJECT NO. B-15141	PROJECT NO. 40067-D
FOR THE ENGINEER'S SIGNATURE AND SEAL:	DATE: 12/02/2021	PROJECT NO. 40067-D	PROJECT NO. 40067-D
DESCRIPTION	BY	APPROVED	DATE FILMED
ORIGINAL	ALC/W	APPROVED	11/13/22
ADDENDUM A	ALC/W	APPROVED	11/13/22
CONTRACTOR	INSPECTOR	DATE STARTED	DATE COMPLETED
			40067-01-D

△ CHANGED THE TOTAL NUMBER OF SHEETS

ADDENDUM D



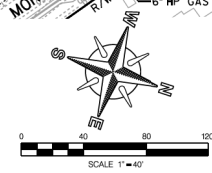
SCALE
1"=40' HORIZ.
1"=4' VERT.



CAUTION
6" & 12" HP GAS CONTRACTOR TO VERIFY EXACT LOCATION AND MUST NOTIFY SD&E THREE (3) WEEKS IN ADVANCE PRIOR TO EXCAVATION SD&E STANDBY REQUIRED

CONTRACTOR'S NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES.

PROPOSED PIPE DATA TABLE				
NO.	Δ/BEARING	RADIUS	LENGTH	REMARKS
11	N17° 57' 32" W		617.15'	48" WSP (CML&TCMC)
12	N29° 29' 10" W		48.59'	48" WSP (CML&TCMC)
13	N17° 59' 10" W		69.53'	48" WSP (CML&TCMC)
14	N17° 59' 10" W		64.74'	48" WSP (CML&TCMC)



- 1 (23P) BY CONTRACTOR FURNISH AND INSTALL 1-6" DRAIN CONNECTION FOR B.O. VAULT #2 LATERAL SEE PROFILE SHEET 182
- 2 (23C) BY CONTRACTOR FURNISH AND INSTALL STA. 58+93.14 1- 4" DRAIN CONNECTION FOR VAULT #2 LATERAL SEE PROFILE SHEET 184
- 3 BY OTHERS AND OF CONTRACTOR RELOCATE EX FO LINE STA. 58+31.70 TO 61+31.70
- 4 (13C) BY CONTRACTOR FURNISH AND INSTALL STA. 59+89.27 - 15.00' LT 1- FO PULL BOX SEE DETAIL 1 SHEET 193
- 5 (13I) BY CONTRACTOR FURNISH AND INSTALL STA. 60+11.90 - 3.00' RT 1- 6" DRAIN TEE FOR B.O. VAULT #2 LATERAL SEE PROFILE SHEET 182
- 6 (13Z) BY CONTRACTOR FURNISH AND INSTALL STA. 60+9.66 - 3.00' RT 1- 6" COMBINATION BLOW OFF VAULT #2 SEE SHEET 187
- 7 (13S) BY CONTRACTOR FURNISH AND INSTALL STA. 60+39.75 - 35.15' RT 1- 8" VENT ASSEMBLY SEE DETAIL 3 SHEET 217
- 8 (133A) BY CONTRACTOR FURNISH AND INSTALL STA. 64+17.14 1- 11.5' HPI BEND
- 9 (133B) BY CONTRACTOR FURNISH AND INSTALL STA. 64+65.69 1- 11.5' HPI BEND
- 10 (133D) BY CONTRACTOR FURNISH AND INSTALL STA. 65+42.17 - 7.19' LT 1- FO PULL BOX SEE DETAIL 1 SHEET 193

REFERENCE:

WATERS:	11835-D, 7104-D, 7660-D
SEWERS:	25M9-D, 1543-D, 6066-D, 1226-D
STORM DRAIN:	25M9-D, 3475-D, 9510-D
GAS:	15765-88965, 15765-88970, 15765-88975
ELECTRIC:	15765-88955, 15765-88970, 15765-88975
CABLE TV:	222-1740, 104-212, UTR-0411-183
TELEPHONE:	BLP1967
100' SCALE/FIELD BOOK:	1268 E2
THOMAS BROS.:	484-485
HGLs:	

SEE SHEETS 322 & 323 FOR ALIGNMENT REPORT

COORDINATE TABLE			
NO.	NORTHING	EASTING	DESCRIPTION
(23P)	1862377.29	626779L22	DRAIN CONNECTION
(23C)	1862392.45	626789S.24	DRAIN CONNECTION
(130)	1862549.37	6267752.52	PULL BOX
(131)	1862576.45	6267762.66	DRAIN TEE
(132)	1862583.83	6267760.28	CL B.O. VAULT
(133)	1862612.85	6267784.66	VEN'
(133A)	1862961.02	6267634.86	HPI BEND
(133B)	1863003.31	6267610.94	HPI BEND
(133D)	1863069.44	6267589.47	HPI
(134)	1863073.79	6267580.50	PULL BOX

C-07

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
SEWER FORCEMAIN**

STA. 58+00 W. MORENA BLVD. TO STA. 66+00 MORENA BLVD.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 16 OF 339 SHEETS

FOR CONTRACTOR'S USE	DATE	BY	REVISION
REVISIONS	DATE	BY	REVISION
DESCRIPTION	BY	APPROVED	DATE
ORIGINAL	MA/RR		
ADDENDUM D	AB/CW		3-3-22

CONTRACTOR: 18/02/28
INSPECTOR: 18/02/28

DATE STARTED: _____
DATE COMPLETED: _____

REMOVED INCORRECT MATERIAL FROM PROFILE CALLOUT

W. MORENA BLVD.

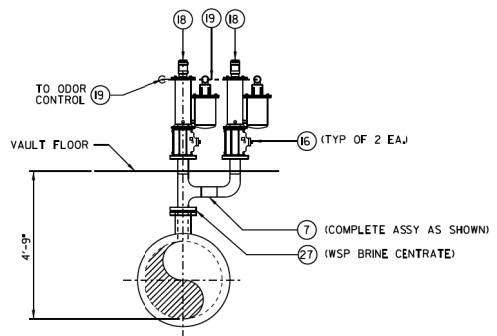
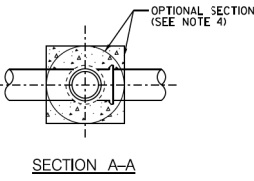
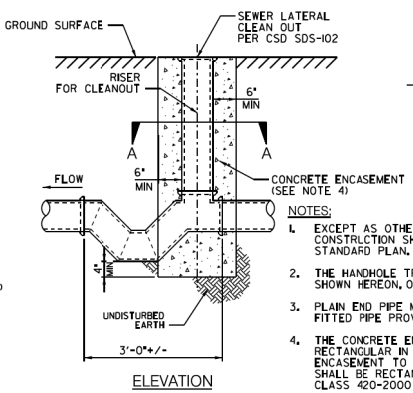
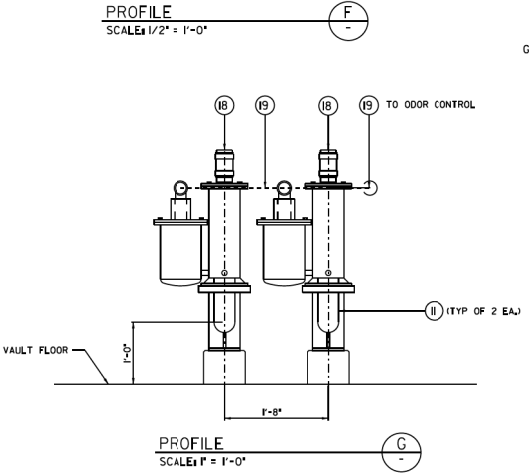


TABLE 1

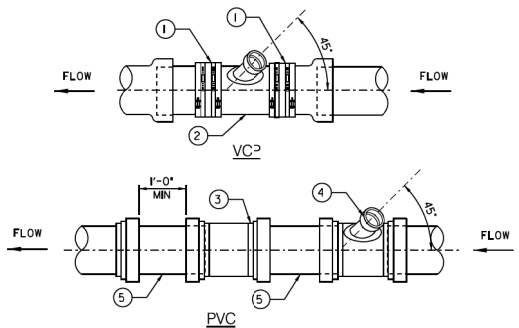
VAULT NO.	A.V. CONNECT		VAULT TYPE	APPROX. DEPTH 'D'	NO. OF CHAMBERS		2" VACUUM INLET		ANTI-SURGE OPT.		APPROX. ELEV. A	APPROX. SUMP INV	MAX INV POC (FM)	APPROX. EX SEWER CONNL. INV	
	FORCEMAIN STATION	BRINE STATION			FM	BRINE	FM	BRINE	FM	BRINE					
1	33+24.54	698+68.71	B	4.25	2	I	0	0	N	N	24.75	24.00	24.26	22.46	
2	55+44.99	720+78.93	A	4.25	2	I	0	0	N	N	9.06	8.31	N/A	3.06	
3	78+94.75	744+30.00	A	4.25	2	I	0	0	N	N	15.50	14.75	15.81	5.43	
4	99+29.35	N/A	A	4.25	2	N/A	0	N/A	N	N/A	13.36	12.61	N/A	6.03	
5	106+85.00	771+98.81	A	4.25	2	I	0	0	N	N	21.31	20.00	N/A	16.35	
6	175+35.15	840+83.40	B	4.25	2	I	2	TRIPLEX	DUPLEX	Y	Y	317.34	316.59	316.83	307.77
7	N/A	762+30.00	A	4.25	N/A	2	N/A	0	N/A	N					
8	239+43.34	905+44.49	A	4.25	2	I	1	DUPLEX	SINGLE	Y	Y	309.8	309.1	N/A	302.9
9	318+54.78	984+53.15	A	4.50	2	I	1	DUPLEX	SINGLE	Y	Y	346.7	346.0	N/A	344.8
10	363+54.05	N/A	A	4.50	2	N/A	1	DUPLEX	N/A	Y	N/A	369.2	368.4	N/A	366.6
11	434+57.05	1100+85.99	A	5.00	2	N/A	0	0	Y	Y	365.62	364.87	N/A	358.7	
12	497+93.18	1164+21.98	A	6.00	2	I	0	0	N	N	339.31	338.35	N/A	335.07	
13	531+12.64	1197+61.99	B	4.25	2	I	0	0	Y	Y	374.28	372.34	371.72	358.72	
14	543+15.64	1209+57.27	A	5.00	2	I	0	0	Y	Y	374.04	373.08	N/A	369.57	
15	563+22.80	1229+53.92	A	4.75	2	I	0	0	Y	Y	360.75	360.00	N/A	354.17	

GENERAL NOTES
SEE SHEET 189 FOR GENERAL NOTES

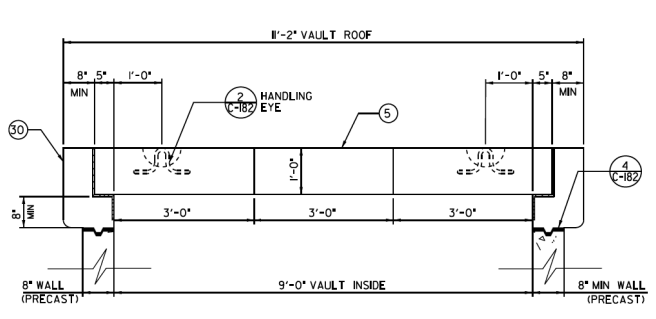
KEYED NOTES
SEE SHEET 188 FOR KEYED NOTES



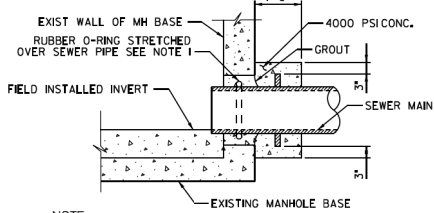
- NOTES:
- EXCEPT AS OTHERWISE INDICATED HEREON OR ON THE PROJECT PLANS, CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PORTIONS OF STANDARD PLAN.
 - THE HANDHOLE TRAP MAY BE FABRICATED OF MITERED SECTION AS SHOWN HEREON, OR OF A SINGLE UNIT WITH CURVED SEGMENTS.
 - PLAIN END PIPE MAY BE USED IN LIEU OF BELL (ISOCKET) AND SPIGOT FITTED PIPE PROVIDED APPROVED COUPLINGS ARE USED.
 - THE CONCRETE ENCASMENT AROUND THE RISER MAY BE CIRCULAR OR RECTANGULAR IN CROSS SECTION, FROM THE BOTTOM OF THE ENCASMENT TO OF THE LATERAL CONNECTION TEE, THE ENCASMENT SHALL BE RECTANGULAR IN CROSS SECTION, ENCASMENT SHALL BE CLASS 420-2000 CONCRETE.
 - THE HANDHOLE TRAP SHALL BE BEDDED IN THE SAME MANNER AS THE LATERAL CONNECTION SEWER.



- KEY NOTES:
- BANDED RUBBER COUPLING WITH OUTSIDE TYPE 316 STAINLESS STEEL SHEAR RING.
 - VC² WYE FITTING
 - GASKETED PVC PIPE COUPLING REPAIR STYLE
 - GASKETED PVC WYE FITTING
 - SDR-35 PVC PIPE MINIMUM LENGTH 12 INCHES
- NOTES:
- WHEN 12 INCH MINIMUM SPACE BETWEEN EDGE OF COUPLING AND BELL, CANNOT BE PROVIDED, CUT-OUT NEAREST BELL JOINT AND INSERT PLAIN-END PIPE
 - ALL DEBRIS SHALL BE KEPT OUT OF THE SEWER. THE PIPE REACH CUT-INTO SHALL BE CLEANED AND BALLED, IF NECESSARY, AS DIRECTED BY THE CITY REPRESENTATIVE.
 - DAMAGED PIPE SHALL BE REPLACED AS DIRECTED BY THE CITY REPRESENTATIVE.
 - SADDLE-TYPE CONNECTIONS SHALL ONLY BE USED FOR SPECIAL SITUATIONS, AND SHALL NOT BE CONSTRUCTED WITHOUT PRIOR "WRITTEN APPROVAL" BY THE CITY.



GAS TRAP (P-TRAP) SCALE: NTS



- NOTE:
- RUBBER O-RING OR A FLEXIBLE CONNECTOR (AS SHOWN IN PRECAST MANHOLE BASE TYPE "B") SHALL BE USED WHEN BREAKING INTO EXISTING MANHOLE.

MANHOLE PIPE CONNECTORS SCALE: 3/4" = 1'-0"

GRAVITY LATERAL CUT-IN WYE CONNECTION SCALE: NTS

PLANS FOR THE CONSTRUCTION OF PWP MORENA CONVEYANCE SOUTH

CIVIL PIPE PROFILE

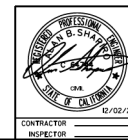
VAULT & MISC DETAILS - 1

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 190 OF 339 SHEETS

SEWER MBS B-15141
J. BERMUDO
A. ABUTIN

DESCRIPTION BY APPROVED DATE FILMED
ORIGINAL DP/LW
ADDENDUM D ABCM

DATE STARTED DATE COMPLETED
40067-190-D



MODIFY TABLE VAULT #3 TO VAULT TYPE A

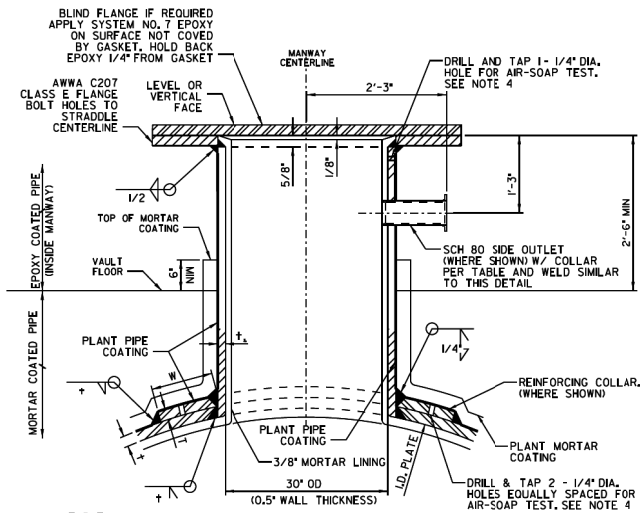
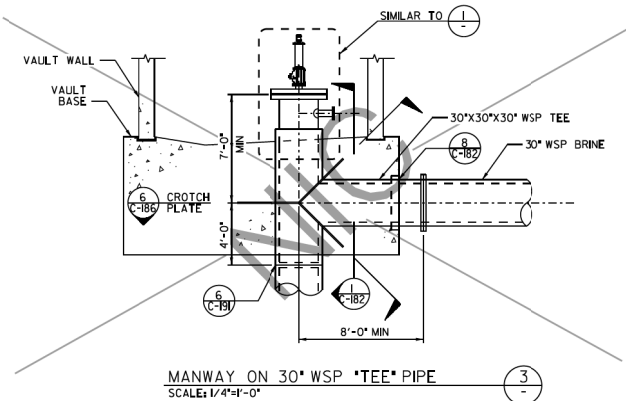


TABLE 1

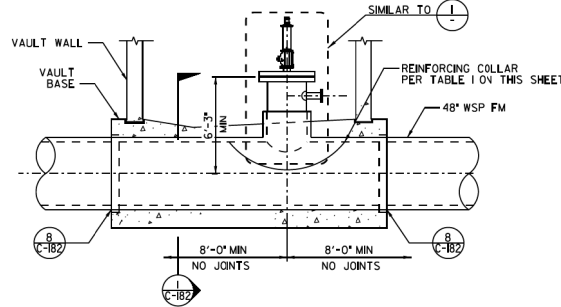
REINFORCING COLLAR DIMENSIONS							
MAIN DIA	OUTLET DIA	"W"	"T"	MAIN DIA	OUTLET DIA	"W"	"T"
30"	6"	6"	SEE NOTE 1	42"	4"	6"	SEE NOTE 2
30"	6"	7"	SEE NOTE 1	42"	6"	8"	SEE NOTE 2
30"	8"	8"	1/2"	48"	4"	6"	SEE NOTE 2
30"	12"	10"	3/8"	48"	6"	8"	SEE NOTE 2
30"	22"	CROTCH PLATE		48"	30"	20"	MAIN "T"
30"	30"	CROTCH PLATE					

- FOR MANWAY MANHOLE DRAIN PIPING, COLLAR THICKNESS, SHALL MATCH MAIN PIPE STEEL THICKNESS, FOR BLOW OFF SCH80 SIDE OUTLETS COLLAR THICKNESS SHALL MATCH SIDE OUTLET STEEL THICKNESS.
- FOR MANWAY MANHOLE DRAIN PIPING, COLLAR THICKNESS SHALL MATCH THE MAIN PIPE OR SIDE OUTLET STEEL THICKNESS, WHICHEVER IS LESSER.
- "T" IS PER PIPELINE PROFILES
- BEFORE WELDING, DRILL AND TAP TEST HOLES, AIR AND SOAP TEST AFTER WELDING IS COMPLETED, PLUG WELD HOLES AFTER SUCCESSFUL COMPLETION OF JOINT TEST.

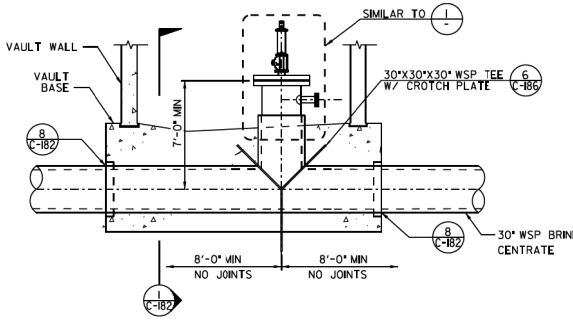
MANWAY DETAIL
SCALE: 1/4"=1'-0"



MANWAY ON 30" WSP *TEE* PIPE
SCALE: 1/4"=1'-0"

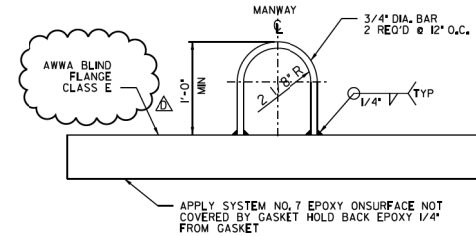


MANWAY ON 48" WSP STRAIGHT PIPE
SCALE: 1/4"=1'-0"

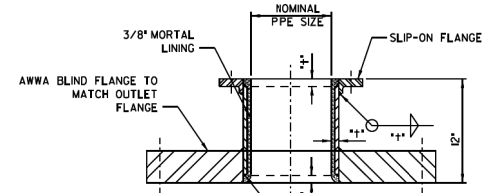
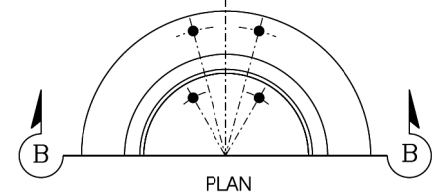


MANWAY ON 30" WSP STRAIGHT TEE
SCALE: 1/4"=1'-0"

NOTE:
SEE SHEET 191 FOR THE REINFORCED CONCRETE STRUCTURE BASE

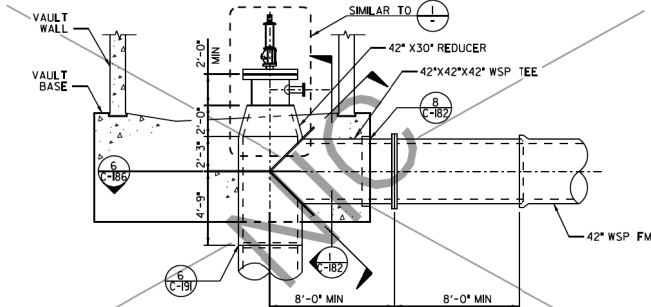


MANWAY LIFTING LUGS
SCALE: 1/2"=1'-0"



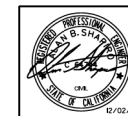
SECTION B-B

REDUCING FLANGE
NTS



MANWAY ON 42" WSP *TEE* PIPE
SCALE: 1/4"=1'-0"

PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE SOUTH
CIVIL PIPE PROFILE
MANWAY DETAILS



CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 198 OF 339 SHEETS		SEWER WBS: B-15141
FOR CITY PROJECT: DESIGNED BY: J. BERMUDO PROJECT NO.: DATE: 3-3-22	APPROVED BY: J. BERMUDO DATE: 3-3-22	PROJECT COORDINATOR: A. ABUTIN
DESCRIPTION: ORIGINAL BY: JAV/W DATE: 3-3-22	APPROVED BY: JAV/W DATE: 3-3-22	SEE SHEETS COORDINATOR
ADDENDUM D	BY: AECOM DATE: 3-3-22	SEE SHEETS COORDINATOR
CONTRACTOR: 48702/JK INSPECTOR:	DATE STARTED: DATE COMPLETED:	40067-198-D

CHANGE DETAIL 6 BLIND FLANGE TO CLASS E

MANWAY DETAILS

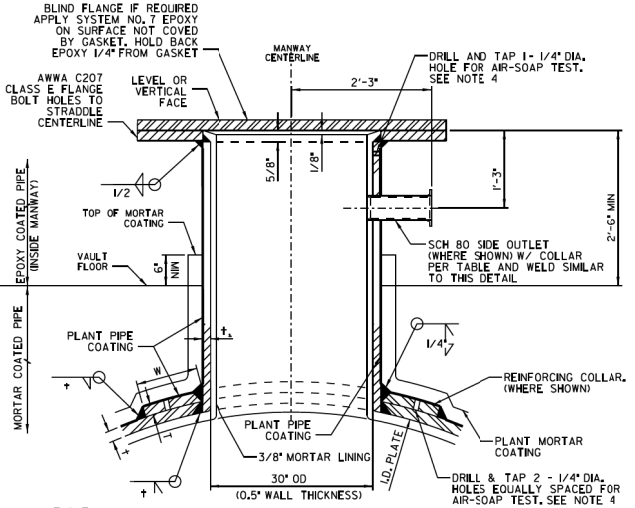
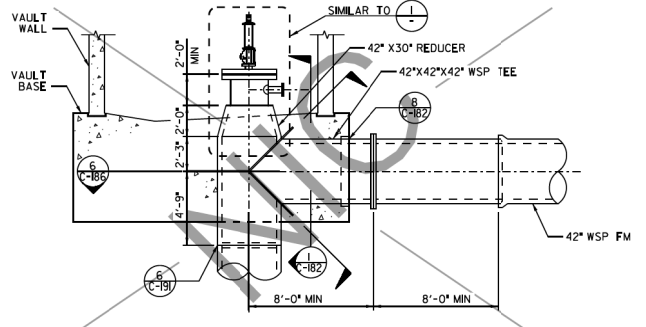


TABLE 1

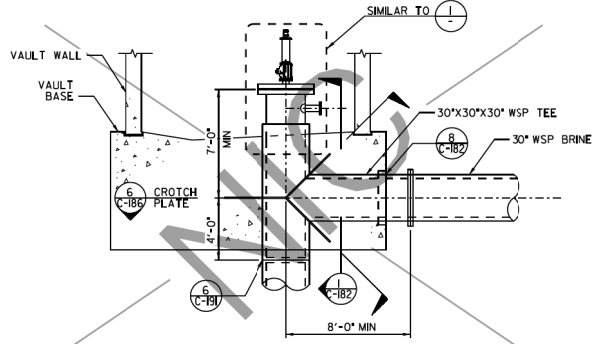
REINFORCING COLLAR DIMENSIONS							
MAIN DIA	OUTLET DIA	"W"	"T"	MAIN DIA	OUTLET DIA	"W"	"T"
30"	6"	6"	SEE NOTE 1	42"	4"	6"	SEE NOTE 2
30"	6"	7"	SEE NOTE 1	42"	6"	8"	SEE NOTE 2
30"	8"	8"	1/2"	48"	4"	6"	SEE NOTE 2
30"	12"	10"	3/8"	48"	6"	8"	SEE NOTE 2
30"	22"	CROUCH PLATE		48"	30"	20"	MAIN "T"
30"	30"	CROUCH PLATE					

- FOR MANWAY MANHOLE DRAIN PIPING, COLLAR THICKNESS, SHALL MATCH MAIN PIPE STEEL THICKNESS, FOR BLOW OFF SCH80 SIDE OUTLETS COLLAR THICKNESS SHALL MATCH SIDE OUTLET STEEL THICKNESS.
- FOR MANWAY MANHOLE DRAIN PIPING, COLLAR THICKNESS SHALL MATCH THE MAIN PIPE OR SIDE OUTLET STEEL THICKNESS, WHICHEVER IS LESSER.
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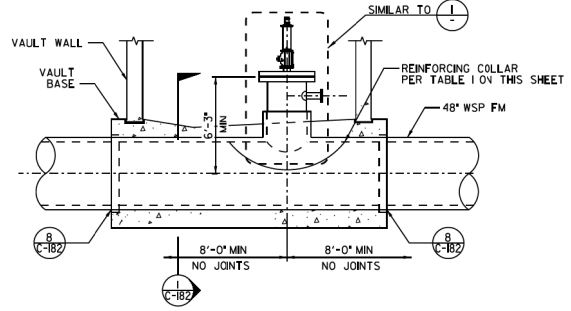
MANWAY DETAIL
SCALE: 1/4"=1'-0"



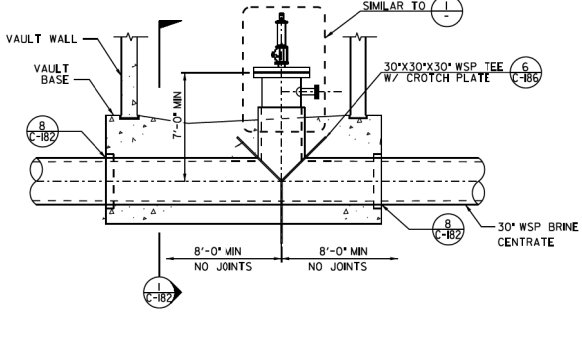
MANWAY ON 42" WSP *TEE* PIPE
SCALE: 1/4"=1'-0"



MANWAY ON 30" WSP *TEE* PIPE
SCALE: 1/4"=1'-0"

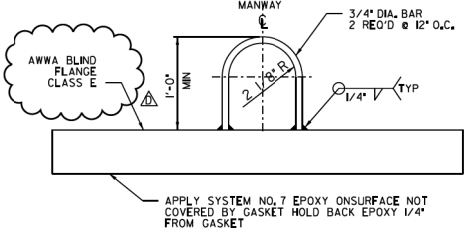


MANWAY ON 48" WSP STRAIGHT PIPE
SCALE: 1/4"=1'-0"

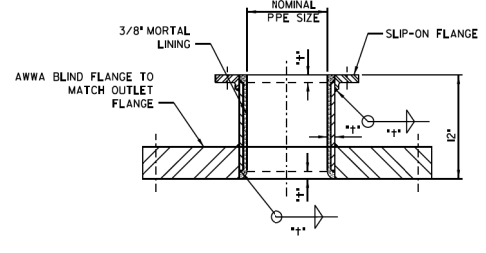
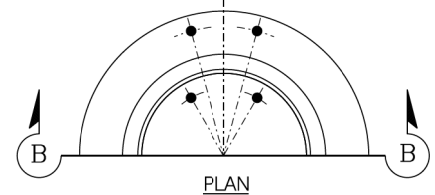


MANWAY ON 30" WSP STRAIGHT TEE
SCALE: 1/4"=1'-0"

NOTE:
SEE SHEET 191 FOR THE REINFORCED CONCRETE STRUCTURE BASE



MANWAY LIFTING LUGS
SCALE: 1/2"=1'-0"



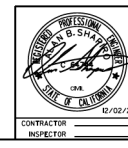
SECTION B-B
REDUCING FLANGE
NTS

C-189

**PLANS FOR THE CONSTRUCTION OF
PWP MORENA CONVEYANCE MIDDLE**

**CIVIL PIPE DETAILS
MANWAY DETAILS**

CITY OF SAN DIEGO, CALIFORNIA ENGINEERING & CAPITAL PROJECTS DEPARTMENT SHEET 198 OF 339 SHEETS				NUMBER: B-15141 PROJECT: J. BERMUDO PROJECT MANAGER: A. ABUTIN PROJECT ENGINEER: SEE SHEETS CHECK COORDINATOR: SEE SHEETS DESIGN COORDINATOR: 40067-198-D
FOR THE PROJECT: DESIGNED BY: [Signature] PROJECT DATE: 2022	APPROVED: [Signature] DATE: 3-3-22	DESCRIPTION: ORIGINAL BY: JAL/W APPROVED: AECOM DATE: 3-3-22	DATE FILMED: [Blank] CONTRACTOR: 48/02/24 INSPECTOR: [Blank]	



CHANGE DETAIL 6 BLIND FLANGE TO CLASS E **ADDENDUM D**

COMMITMENT TO COMPLY WITH SKILLED AND TRAINED WORKFORCE REQUIREMENTS

Bidder, on behalf of itself and its subcontractor(s) at every tier, hereby commits that a skilled and trained workforce will be used to perform all work on the Project that falls within an apprenticeship occupation in the building or construction trades in accordance with Chapter 2.9 (commencing with Section 2600) of Part 1 of Division 2 of the Public Contract Code. Pursuant to Public Contract Code section 2601, as of January 1, 2018:

“Skilled and trained workforce” means a workforce that meets all of the following conditions: All the workers performing work in an apprenticeable occupation in the building and construction trades are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the chief.

For work performed on or after January 1, 2018, at least 40 percent of the skilled journeypersons employed to perform work on the contract or project by every contractor and each of its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation. This requirement shall not apply to work performed in the following occupations: acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, teamster, terrazzo worker or finisher, and tile layer, setter, or finisher.

For work performed on or after January 1, 2019, at least 50 percent of the skilled journeypersons employed to perform work on the contract or project by every contractor and each of its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation. This requirement shall not apply to work performed in the following occupations: acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, teamster, terrazzo worker or finisher, and tile layer, setter, or finisher.

For work performed on or after January 1, 2020, at least 60 percent of the skilled journeypersons employed to perform work on the contract or project by every contractor and each of its subcontractors at every tier are graduates of an apprenticeship program for the applicable occupation. This requirement shall not apply to work performed in the following occupations: acoustical installer, bricklayer, carpenter, cement mason, drywall installer or lather, marble mason, finisher, or setter, modular furniture or systems installer, operating engineer, pile driver, plasterer, roofer or waterproofer, stone mason, surveyor, teamster, terrazzo worker or finisher, and tile layer, setter, or finisher.

NOTE: The above commitment is required by California Public Utilities Code section 132354.7 and must be submitted by Bidder in order for the Bid to be responsive to the IFB.

Name of Bidder: Sukut Construction, LLC

Name and Title of Bidder’s Authorized Representative: Nick Osborne, Vice President/Chief Estimator

Signature of Bidder’s Representative:


(SIGN HERE)

Date: March 17, 2022

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
		N/A			

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator
Name

Signature Date March 17, 2022

USE ADDITIONAL FORMS AS NECESSARY

**DEBARMENT AND SUSPENSION CERTIFICATION
PRIME CONTRACTOR
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE**

EFFECT OF DEBARMENT OR SUSPENSION
To promote integrity in the City's contracting processes and to protect the public interest, the City shall only enter into contracts with responsible- bidders and contractors. In accordance with San Diego Municipal Code §22.0814 (a): <i>Bidders</i> and <i>contractors</i> who have been <i>debarred</i> or <i>suspended</i> are excluded from submitting bids, submitting responses to requests for proposal or qualifications, receiving <i>contract</i> awards, executing <i>contracts</i> , participating as a <i>subcontractor</i> , employee, agent or representative of another <i>person</i> contracting with the City.

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 Names of the Principal Individual owner(s).

The names of all persons interested in the foregoing proposal as Principals are as follows:

****Please see attached Sukut Construction, LLC Action Board with the full list of Sukut Officers****

NAME	TITLE
Steve Yurosek	President/CEO
Nicholas Osborne	Vice President/Chief Estimator
Lawrence Damore	Vice President
Oren Post	CFO

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Bidder or other interested person is an individual, state first and last names in full.

The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State or local agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State or local agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.


If there are any exceptions to this certification, insert the exceptions in the following space.

N/A

Exceptions will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Signature

Date March 17, 2022

NOTE: Providing false information may result in criminal prosecution or administrative sanctions.

SUKUT CONSTRUCTION, LLC

SPECIAL MEETING OF THE BOARD OF DIRECTORS ELECTION OF OFFICERS

A telephonic meeting of the Board of Directors of Sukut Construction, LLC (the "Company") was held at 4010 West Chandler Avenue, in the City of Santa Ana, State of California, on January 11, 2021 at 11:00 a.m.


Present at the meeting were Don Barnes, Eddie Juarez, Mike Crawford, Mike Ortiz, Mike Zanamoni, Steve Yurosek, and Oren Post, constituting the full membership of the Board. Mike Crawford acted as the Chairperson and Oren Post acted as the Secretary of the meeting.

The Board approved the ability of the below officers to sign contracts on the Company's behalf. This approval is effective immediately and their individual ability to bind the Company to such contracts shall remain in effect until such time as respective successors are chosen by the Board.

Mike Crawford	Chairman
Lawrence Damore	Vice President
Eddie Juarez	Vice President
Eric Mauldin	Vice President
Nick Osborne	Vice President
Oren Post	Chief Financial Officer and Company Secretary
Matt Williams	N. CA Area Manager
Steve Yurosek	CEO & President
Mike Zanamoni	Vice President

Votes being duly cast by all directors, the Chairman announced that the aforementioned individuals had been unanimously elected to the office indicated next to their names to assume the duties and responsibilities as established in the By-Laws.

Dated: January 11, 2022



Oren Post
Company Secretary

SUKUT CONSTRUCTION, LLC

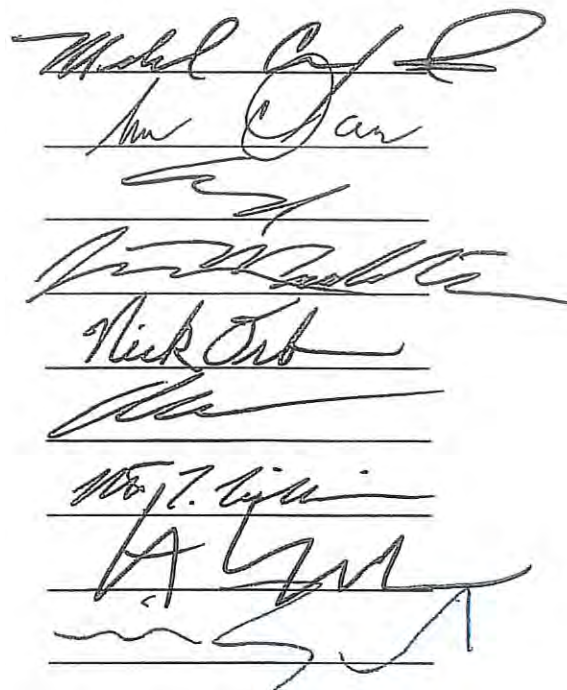
DIRECTORS RESOLUTION AUTHORIZING OFFICERS AS SIGNATORIES TO CONSTRUCTION CONTRACTS

RESOLVED, that the individuals listed below are authorized and empowered to enter into construction contracts for and on behalf of this Company.

RESOLVED FURTHER, that all contracts for the performance of work shall be valid and binding on the Company only when signed by the individuals listed below.

RESOLVED FURTHER, that the individuals listed below are elected, qualified and acting officers of the Company, holding on the date set forth herein the title indicated next to their name.

Mike Crawford	Chairman
Lawrence Damore	Vice President
Eddie Juarez	Vice President
Eric Mauldin	Vice President
Nick Osborne	Vice President
Oren Post	CFO & Company Secretary
Matt Williams	N. CA Area Manager
Steve Yurosek	CEO & President
Mike Zanaboni	Vice President



Handwritten signatures of the listed officers, each on a horizontal line. From top to bottom: Mike Crawford, Lawrence Damore, Eddie Juarez, Eric Mauldin, Nick Osborne, Oren Post, Matt Williams, Steve Yurosek, and Mike Zanaboni.

Dated: January 11, 2022



Handwritten signature of Oren Post on a horizontal line.

Oren Post
Company Secretary

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
F3 and Associates, Inc. - Gene Feickert - Jeffery Baker	Principal

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Pureeffect, Inc - Robert Robinson	President

SUBCONTRACTOR SUPPLIER MANUFACTURER


NAME	TITLE
Griffin Dewatering - David Singleton	CEO and President
Griffin Dewatering - Alon Najer	SVP

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
G&F Concrete Cutting, Inc	
Rita Vigil Ferguson	CEO and President

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Date March 17, 2022
 Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

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Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Zamborelli Enterprises, Inc. - Rod Maclean	Vice President
Zamborelli Enterprises, Inc. - Dave Heaney	President
Zamborelli Enterprises, Inc. - Dan Luong	Vice President

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Leinaia's Transportation - Leinaia King	President

SUBCONTRACTOR SUPPLIER MANUFACTURER


NAME	TITLE
Keller - Greg Ziegler	Vice President
Keller - Kyle Camper	Vice President

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
CSDA Design Group - Randy Waldeck	Principal
CSDA Design Group - Michael Schoen	Principal

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Date March 17, 2022
 Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
All American Asphalt - Mark Luer	President
All American Asphalt - Edward J. Carlson	Vice President
All American Asphalt - Mchael Farkas	Secretary

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Crest Equipent - Wendi Belio	President
Crest Equipent - Steve Belio	Vice President
Crest Equipent - Guwynn Harris	Director

SUBCONTRACTOR SUPPLIER MANUFACTURER


NAME	TITLE
Trench Shoring Company	
Kevin Malloy	Owner
Troy Junkin	Business Development Mngr.

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Southern Contracting Company	
Philip Waterman	President
Darlene McBride	Secretary/Treasurer

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Signature

Date March 17, 2022

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Alcorn Fence Company - Gustavo Madrigal	President
Alcorn Fence Company - Thomas Stack	Vice President
Alcorn Fence Company - Oscar Mancilla	Treasurer/CFO

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
NHTP Ventures - Hunter Patrick	CEO

SUBCONTRACTOR SUPPLIER MANUFACTURER


NAME	TITLE
Whitson Contracting & Management	
Mitch Whitson	President
Austin Whitson	Vice President
Vince Fuller	Vice President

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Western Waterworks - Bruce Himes	CEO

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Date March 17, 2022
 Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
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Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Ultra Welding Inc. - Brad Cummings	CEO

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Anua International - Sean Martin	President

SUBCONTRACTOR SUPPLIER MANUFACTURER


NAME	TITLE
Hanson - Ian Firth	General Manager

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Marina - Ali Tavakoli	Vice President

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Signature

Date March 17, 2022

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
TO BE COMPLETED BY BIDDER
FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Thompson Pipe Group - Ken D. Thompson	CEO

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
VAG - Miaden Milcinovic	Principal

SUBCONTRACTOR SUPPLIER MANUFACTURER


NAME	TITLE
Old Castle - Mark Towe	President/CEO

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Air X Utility Surveyor, Inc - Gail McMorran	President

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Date March 17, 2022
 Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
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Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Ferreira Construction - Nelson Ferreira	President

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Area Wide Protective	
DBA - Statewide Safety Systems	
Robert Sehnert	CFO
Jarrold Wachter	COO

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Hardy & Harper - Daniel Maas	Presidnt
Hardy & Harper - Michael Murray	Vice President
Hardy & Harper - Tanner Hambright	Vice President
Hardy & Harper - Kristen Paulino	Secretary

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Hardy & Harper - Kristen Paulino	
Cindy Trump, Inc. Dba Lindys Cold planing -	Owner
Cindy Trump	

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Date March 17, 2022
 Signature

USE ADDITIONAL FORMS AS NECESSARY*

**DEBARMENT AND SUSPENSION CERTIFICATION
 SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
 TO BE COMPLETED BY BIDDER
 FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE**

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Gexpro - Jeffery	CEO
Baker	

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Rexel - Jeffery	CEO
Baker	

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Corrpro Companies, Inc. - Wes Johnson	Senior Vice President

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Summit Environmental Contractors - David Aronne	Vice President / General Manager

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Signature

Date March 17, 2022

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION
SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS
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Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
F3 and Associates, Inc. - Gene Feickert	Principal

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Amber Steel Company - Kriss Lewis	Owner/CEO

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Safe T Lite Rental - Georgina A Eichhorst	President
Safe T Lite Rental - Robert A Eichhorst	Vice President

SUBCONTRACTOR SUPPLIER MANUFACTURER

NAME	TITLE
Payco Specialties Inc. - Rebecca Llewellyn	Owner

Contractor Name: Sukut Construction, LLC

Certified By Nick Osborne Title Vice President/Chief Estimator

Name

 Date March 17, 2022
 Signature

USE ADDITIONAL FORMS AS NECESSARY*

LOBBY PROHIBITION, CERTIFICATION AND DISCLOSURE

In acknowledgment that funds received under this agreement have been provided pursuant to a Federal grant, recipient hereby recognizes the prohibitions against lobbying the Federal government with any of these funds. Recipient agrees that it shall comply with the laws set forth at 31 U.S.C. § 1352 (1989) and 24 C.F.R. part 87, to wit:

A. Conditions on use of funds

Recipient shall not expend any funds received pursuant to this agreement to pay any person to influence an officer or employee of Federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with any of the following Covered Federal actions:

- (1) The awarding of any federal contract
- (2) The making of any Federal grant
- (3) The making of any Federal Loan
- (4) The entering into of any cooperative agreement
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

For purposes of defining the terms of this part of the agreement, the definitions set forth in 24 C.F.R. § 87.105 are hereby adopted and incorporated herein by reference.

B. Certification and Disclosure

Each recipient at every tier under this agreement shall file a certification regarding lobbying, and a Disclosure Form-LLL, where required by 24 C.F.R. § 87.110. The certification form and Disclosure Form-LLL are attached to this agreement.

C. Certifications must be filed:

- (1) By any person upon each submission that initiates agency consideration for an award of a Federal contract, grant, or cooperative agreement exceeding \$100,000, or a Federal loan or loan guarantee exceeding \$150,000.
- (2) Upon receipt by any person of a Federal contract, grant, or cooperative agreement exceeding \$100,000, or upon receipt of a Federal loan or loan guarantee exceeding \$150,000.
- (3) By any person who requests or receives from a person referred to in subsections 1 and 2 of this paragraph:
 - a. A subcontract exceeding \$100,000 at any tier under a Federal contract;
 - b. A subgrant, contract or subcontract exceeding \$100,000 at any tier under a Federal grant;
 - c. A contract or subcontract exceeding \$100,000 at any tier under a Federal loan exceeding \$150,000;
 - d. A contract or subcontract exceeding \$100,000 at any tier under a Federal cooperative agreement.

D. Disclosure Forms-LLL must be filed in every instance when a person applies for, requests, or receives Federal appropriations exceeding \$100,000 pursuant to a contract, subcontract, grant, subgrant, loan, or cooperative agreement when such person has paid or expects to pay any sum, in cash or in kind, to influence or attempt to influence any officer or employee of an agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress. Further, Disclosure Form-LLL must be filed by recipients at any tier at the end of each calendar quarter in which there occurs any event that requires disclosure or materially affects information submitted in prior disclosures. Such events include:

- (1) 1. An increase of \$25,000 in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action;
- (2) 2. A change in the person(s) influencing or attempting to influence a covered action;
- (3) 3. A change in the officer(s), employee(s), or member(s) contacted to influence a covered action.

All disclosure Forms-LLL, but not certifications, shall be forwarded from tier to tier until received by the principal recipient, which in turn will file them with the appropriate Federal agency.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLLA Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the Implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing this report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLLA Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing datasources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

DISCLOSURE OF LOBBYING ACTIVITIES Approved by
CONTINUATION SHEET

OMB0348-0046

Reporting Entity: _____ Page ____ of ____

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Authorized for Local Reproduction
Standard Form - LLL-A



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.


Subcontractor Name Payco Specialties Inc		Project Name PWP Morena Conveyance South & Middle and Morena Conveyance Bike Lanes	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Jeremy Griffin	
Address 120 N. Second Ave Chula Vista CA, 91910			
Telephone No. 619-422-9204		Email Address JEREMY@PAYCO.BIZ	
Prime Contractor Name Sukut Construction, LLC		Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract	

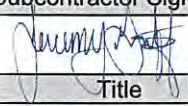
Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
11,69-71,74, 85-96,119-1 21,124-126, 129-149	STRIPING REMOVALS, STRIPING, PAVEMENT MARKINGS, PAVEMENT MARKERS, SIGNS, CHANNELIZERS, PED BARRICADES	\$1,044,174.00
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input checked="" type="checkbox"/> Other: <u>Caltrans CUCP</u>		Meets/exceeds EPA certification standards? YES NO <input checked="" type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/2022

Subcontractor Signature	Print Name
	JEREMY GRIFFIN
Title	Date
ESTIMATING	03/17/22

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.


Subcontractor Name Crest Equipment		Project Name Pure Water Program (PWP) Morena Conveyance South, Morena Pipeline and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3	Assistance Agreement ID No. (if known)	Point of Contact Wendi Belio	
Address 161 Scottford Drive, El Cajon, CA 92021			
Telephone No. 619-444-5061		Email Address belio@sbcglobal.net	
Prime Contractor Name <i>Subul Construction LLC</i>		Issuing/Funding Entity City of San Diego	

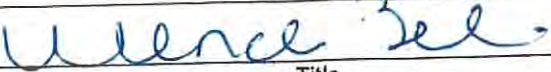
Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
7-9, 33-34, 38, 54-56, 60-64, 66-67, 75-76, 81, 112-113, 117-118,	<i>Trucking</i>	\$5,736,974.36
DBE Certified By: <input checked="" type="checkbox"/> DOT <input type="checkbox"/> SBA Other: _____		Meets/exceeds EPA certification standards? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	Nicholas Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	Wendi Belio
Title	Date
President	3/15/22

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Performance Form

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name G&F Concrete Cutting		Project Name Pure Water Program (PWP) Morena Conveyance South, Morena Pipeline and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3	Assistance Agreement ID No. (if known)	Point of Contact Michael Phillips	
Address 13653 Alondra Blvd. Santa Fe Springs, CA 90670			
Telephone No. 562-229-0227		Email Address m.phillips@gfconcretecutting.com	
Prime Contractor Name		Issuing/Funding Entity City of San Diego	


Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
34, 47, 54-56, 75, 112-113	Saw cutting / coring	\$ 417,111.85
DBE Certified By: <input checked="" type="checkbox"/> DOT <input type="checkbox"/> SBA Other: _____		Meets/exceeds EPA certification standards? YES NO <input checked="" type="checkbox"/> Unknown

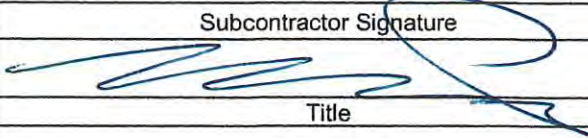
¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-3 (DBE Subcontractor Performance Form)

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	Michael Phillips
Title	Date
Estimator	3-16-22

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name Cindy Trump Inc., dba Lindys Cold Planing		Project Name Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Brianna Trump	
Address P.O.BOX 385 La Habra, Ca 90631			
Telephone No. 562-697-2286		Email Address Brianna@wegrindasphalt.com	
Prime Contractor Name Sukut Construction, LLC		Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract	

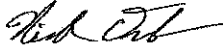
Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
72, 122	Asphalt grinding, Sweeping.	\$451,180.00
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input checked="" type="checkbox"/> Other: <u>Metro</u>		Meets/exceeds EPA certification standards? YES NO <input checked="" type="checkbox"/> Unknown


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² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-3 (DBE Subcontractor Performance Form)

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	Brianna Trump
Title	Date
C.S.O.	3/17/2022

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name AirX Utility Surveyors, Inc.		Project Name Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Gail McMorran
Address 785 East Mission Road, Suite 100 San Marcos CA 92069		
Telephone No. 760-480-2347 ofc 760-419-3738 mbl		Email Address gmcMorran@airxus.com
Prime Contractor Name Sukut Construction, LLC		Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract


Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
14,16-18, 54,55,56, 112,113	Subsurface utility engineering services to include: vacuum excavation, utility locating, cctv locating / inspection, traffic control & right of way plan drafting, permit processing, traffic control technicians / devices on site, pothole backfill & compaction, street surface repairs for potholed locations with ac hot patch or other material.	\$387,232.00
DBE Certified By: <input checked="" type="checkbox"/> DOT <input checked="" type="checkbox"/> SBA <input checked="" type="checkbox"/> Other: <u>CPUC, WEBNC, see attached certificates</u>		Meets/exceeds EPA certification standards? <input checked="" type="checkbox"/> YES NO Unknown


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² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-3 (DBE Subcontractor Performance Form)

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	Gail McMorran
Title	Date
President / CEO	March 17, 2022

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.


Subcontractor Name Ferreira Construction		Project Name PWP Morena Conveyance South & Middle and Morena Conveyance Bike Lanes	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Steven Kujawa	
Address 10370 Commerce Center Drive, Suite B-200, Rancho Cucamonga, Ca 91730			
Telephone No. 909 606-5900		Email Address skujawa@ferreiraconstruction.com	
Prime Contractor Name Sukut Construction, LLC		Issuing/Funding Entity CASRF/EPA	


Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
#26, #34, #95, #126 & #127	#26 Install Temporary Vehicle Detection #34 Install Fiber Optic, conduit, pull boxes, cabling, and splicing. #95 Installation of Type Q Loops #126 Installation of Type Q Loops #127 Installation of Type C Loops	\$ 755,529.00
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input checked="" type="checkbox"/> Other: CPUC Clearing House		Meets/exceeds EPA certification standards? YES NO <input checked="" type="checkbox"/> Unknown

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² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

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Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	Steven Kujawa
Title	Date
Estimator	02-23-22

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name Leinaia's Transportation		Project Name Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Leinaia King	
Address 7345 SPINNAKER ST, CARLSBAD, CA 92011			
Telephone No. 661-618-2752		Email Address Leinaiastrucking@sbcglobal.net	
Prime Contractor Name Sukut Construction, LLC		Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract	


Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
7-9, 33-34, 38, 54-56, 60-64, 66-67, 75-76, 81, 112-113, 117-118,	Trucking	\$3,177,414.00
DBE Certified By: <input checked="" type="checkbox"/> DOT <input checked="" type="checkbox"/> SBA <input checked="" type="checkbox"/> Other: <u>Supplier Clearinghouse (WBE)</u>		Meets/exceeds EPA certification standards? <input checked="" type="checkbox"/> YES NO Unknown

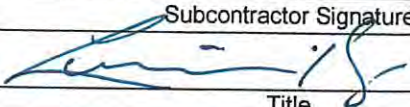
¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.2015 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

FORM 4500-3 (DBE Subcontractor Performance Form)

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	Leinaia King
Title	Date
President	3/17/22

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

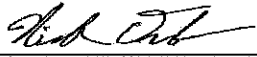
This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. A Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name Hudson Safe-T-Lite Rentals		Project Name <small>Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)</small>	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact John Eichhorst	
Address PO Box 117, El Cajon, CA 92022			
Telephone No. 619-441-3644		Email Address john@hudsonsafelite.com	
Prime Contractor Name Sukut Construction, LLC		Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract	

Contract Item Number	Description of Work Submitted from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
23, 24	Traffic Control	\$88,000.00
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input checked="" type="checkbox"/> Other: <u>WBE-Caltrans</u>		Meets/exceeds EPA certification standards? <input checked="" type="checkbox"/> YES NO Unknown

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² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.

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Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	3/17/22

Subcontractor Signature	Print Name
	John Eichhorst
Title	Date
Vice-President	3/17/22

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-3 (DBE Subcontractor Performance Form)



Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractor's² and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name Sukut Construction, LLC		Project Name Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Nick Osborne	
Address 4010 W. Chandler Avenue, Santa Ana, CA 92704			
Telephone No. 7147-540-5351		Email Address estimating@sukut.com	
Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract			

I have identified potential DBE certified subcontractors. YES NO
 If yes, please complete the table below. If no, please explain:

Subcontractor Name/ Company Name	Company Address / Phone / Email	Estimated Dollar Amount	Currently DBE Certified?
Payco Specialties Inc.	120 N. Second Ave Chula Vista CA, 91910 619-422-9204 JEREMY@PAYCO.BIZ	\$1,044,174.00	YES
Crest Equipment Inc.	161 Scottford Drive, El Cajon, CA 92021 619-444-5061 belio@sbcglobal.net	\$5,736,974.36	YES
G&F Concrete Cutting	13653 Alondra Blvd., Santa Fe Springs, CA 90670 562-229-0227 m.phillips@gfconcretecutting.com	\$ 417,111.85	YES

--Continue on back if needed--

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Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractor's² and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name Sukut Construction, LLC		Project Name Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Nick Osborne	
Address 4010 W. Chandler Avenue, Santa Ana, CA 92704			
Telephone No. 7147-540-5351		Email Address estimating@sukut.com	
Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract			

I have identified potential DBE certified subcontractors. YES NO
 If yes, please complete the table below. If no, please explain:

Subcontractor Name/ Company Name	Company Address / Phone / Email	Estimated Dollar Amount	Currently DBE Certified?
Cindy Trump Inc., DBA Lindys Cold Planing	P.O.BOX 385 La Habra, Ca 90631 562-697-2286 Brianna@wegrindasphalt.com	\$451,180.00	YES
Air X Utility Surveyors, Inc.	785 East Mission Road, Suite 100 San Marcos CA 92069 760-480-2347 gmcmorran@airxus.com	\$387,232.00	YES
Ferreira	10370 Commerce Center Drive, Suite B-200 Rancho Cucamonga, CA 91730 skujawa@ferreiraconstruction.com / (949) 350-5784	\$ 755,529.00	YES

--Continue on back if needed--

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² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an award of financial assistance.



**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractor's² and the estimated dollar amount of each subcontract. A Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name Sukut Construction, LLC		Project Name Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)	
Bid / Proposal No. K-22-1797-DBB-3-A	Assistance Agreement ID No. (if known)	Point of Contact Nick Osborne	
Address 4010 W. Chandler Avenue, Santa Ana, CA 92704			
Telephone No. 7147-540-5351		Email Address estimating@sukut.com	
Issuing/Funding Entity City of San Diego / CASRF & EPA Funded Contract			

I have identified potential DBE certified subcontractors. YES NO
If yes, please complete the table below. If no, please explain:


Subcontractor Name/ Company Name	Company Address / Phone / Email	Estimated Dollar Amount	Currently DBE Certified?
LEINAI'S TRANSPORTATION	7345 SPINNAKER ST, CARLSBAD, CA 92011 leinaiastrucking@sbcglobal.net 661-618-2752	\$ 3,177,414.00	YES
Safe T Lite Rentals	PO Box 117, El Cajon, CA 92022 619-441-3644 john@hudsonsafetlite.com	\$88,000.00	YES

--Continue on back if needed--

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Prime Contractor Signature	Print Name
	Nick Osborne
Title	Date
Vice President/Chief Estimator	March 17, 2022

The public reporting and record keeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Do not send the completed form to this address.

FORM 4500-4 (DBE Subcontractor Utilization Form)

Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Legal Name		DBA	
Sukut Construction, LLC		N/A	
Street Address	City	State	Zip
4010 W. Chandler Avenue, Santa Ana		CA	92704
Contact Person, Title		Phone	Fax
Nick Osborne, Vice President/Chief Estimator		714-540-5351	714-545-2003

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.

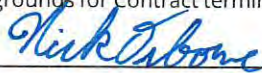
Name	Title/Position
Nick Osborne	Vice President/Chief Estimator
City and State of Residence	Employer (if different than Bidder/Proposer)
Laguna Niguel, CA	Same as Above
Interest in the transaction	
1% Ownership in Corporation	

Name	Title/Position
Robbie Zwick	Estimator
City and State of Residence	Employer (if different than Bidder/Proposer)
Lakewood, CA	Same as Above
Interest in the transaction	
1% Ownership in Corporation	

* 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.

Nick Osborne, Vice President/Chief Estimator



March 17, 2022

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	
Sukut Construction, LLC		N/A	
Street Address	City	State	Zip
4010 W. Chandler Avenue, Santa Ana		CA	92704
Contact Person, Title		Phone	Fax
Nick Osborne, Vice President/Chief Estimator		714-540-5351	714-545-2003

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.

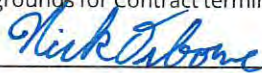
Name	Title/Position
Ariel Vaca	Estimating Administrator Supervisor
City and State of Residence	Employer (if different than Bidder/Proposer)
Costa Mesa, CA	Same as Above
Interest in the transaction	
N/A - 0% Ownership in Corporation	

Name	Title/Position
Matthew Bahnsen	Estimator
City and State of Residence	Employer (if different than Bidder/Proposer)
Rancho Mission Viejo, CA	Same as Above
Interest in the transaction	
0.75% Ownership in Corporation	

* Use Additional Pages if Necessary *

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Nick Osborne, Vice President/Chief Estimator



March 17, 2022

Print Name, Title

Signature

Date

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Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Legal Name		DBA	
Sukut Construction, LLC		N/A	
Street Address	City	State	Zip
4010 W. Chandler Avenue, Santa Ana		CA	92704
Contact Person, Title		Phone	Fax
Nick Osborne, Vice President/Chief Estimator		714-540-5351	714-545-2003

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.

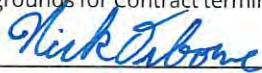
Name	Title/Position
Rick Welshiemer	
City and State of Residence	Employer (if different than Bidder/Proposer)
Lake Elsinore, CA	Same as Above
Interest in the transaction	
0.4% Ownership in Corporation	

Name	Title/Position
Matthew Fleming	Project Manager
City and State of Residence	Employer (if different than Bidder/Proposer)
San Diego, CA	Same as Above
Interest in the transaction	
N/A - 0% Ownership in Corporation	

* 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.

Nick Osborne, Vice President/Chief Estimator



March 17, 2022

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	
Sukut Construction, LLC		N/A	
Street Address	City	State	Zip
4010 W. Chandler Avenue, Santa Ana		CA	92704
Contact Person, Title		Phone	Fax
Nick Osborne, Vice President/Chief Estimator		714-540-5351	714-545-2003

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.

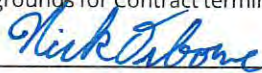
Name	Title/Position
Charles Malis	Project Engineer
City and State of Residence	Employer (if different than Bidder/Proposer)
Temecula, CA	Same as Above
Interest in the transaction	
N/A - 0% Ownership in Corporation	

Name	Title/Position
Lawrence Damore	Vice President, Public Works
City and State of Residence	Employer (if different than Bidder/Proposer)
Aliso Viejo	Same as Above
Interest in the transaction	
N/A - 0% Ownership in Corporation	

* 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.

Nick Osborne, Vice President/Chief Estimator



March 17, 2022

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	
Sukut Construction, LLC		N/A	
Street Address	City	State	Zip
4010 W. Chandler Avenue, Santa Ana		CA	92704
Contact Person, Title		Phone	Fax
Nick Osborne, Vice President/Chief Estimator		714-540-5351	714-545-2003

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.

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- 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.

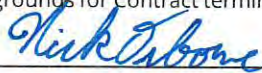
Name	Title/Position
Jakob Brishke	Project Engineer
City and State of Residence	Employer (if different than Bidder/Proposer)
Yucaipa, CA	Same as Above
Interest in the transaction	
N/A - 0% Ownership in Corporation	

Name	Title/Position
Lizette Nuñez	Project Engineer
City and State of Residence	Employer (if different than Bidder/Proposer)
Paramount, CA	
Interest in the transaction	
N/A - 0% Ownership in Corporation	

* 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.

Nick Osborne, Vice President/Chief Estimator



March 17, 2022

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	
Sukut Construction, LLC		N/A	
Street Address	City	State	Zip
4010 W. Chandler Avenue, Santa Ana		CA	92704
Contact Person, Title		Phone	Fax
Nick Osborne, Vice President/Chief Estimator		714-540-5351	714-545-2003

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).

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- 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.

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- 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.

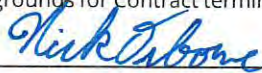
Name	Title/Position
Monica Maldonado	Bid Coordinator
City and State of Residence	Employer (if different than Bidder/Proposer)
Jurupa Valley, CA	
Interest in the transaction	
N/A - 0% Ownership in Corporation	

Name	Title/Position
City and State of Residence	Employer (if different than Bidder/Proposer)
Interest in the transaction	

* 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.

Nick Osborne, Vice President/Chief Estimator



March 17, 2022

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.

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-22-1797-DBB-3-A

CONTRACT OR TASK TITLE: Morena Conveyance South, Middle and Bike Lanes

CONTRACTOR: Sukut Construction, LLC

Funding Phase	Phase Description	Phase Start	Phase Finish	Not-to-Exceed Amount
1	<p>Wastewater: 48" WSP CML&TCMC Pipe, Trench Shoring, Valves, Misc. Appurtenances, Asphalt, Misc. Concrete, Tecolote Creek Crossing, Concrete Barrier, Barrier Fence, Dewatering, Materials on Hand <i>Cluster St, Sherman St, Morena Blvd (Sta. 10+00 to 81+30)</i> <i>Chicago St, Jellett St, Denver St (Sta. 106+00 to 126+00)</i></p> <p>Water: 30" Brine Line Pipe, Trench Shoring, Valves, Misc. Appurtenances, Asphalt, Misc. Concrete, Tecolote Creek Crossing, Concrete Barrier, Barrier Fence, Dewatering, Materials on Hand <i>Cluster St, Sherman St, Morena Blvd (Sta. 674+00 to 746+60)</i> <i>Chicago St, Jellett St, Denver St (Sta. 771+00 to 791+00)</i></p>	NTP	8/31/2023	\$51,995,815.66 \$14,684,162.33
2	<p>Wastewater: 48" WSP CML&TCMC Pipe, Trench Shoring, Valves, Misc. Appurtenances, Asphalt, Misc. Concrete, Dewatering <i>Morena Blvd, Milton St, Denver St (Sta. 81+30 to 106+00)</i> <i>Denver St, Clairemont Dr (Sta. 126+00 to 227+60)</i></p> <p>Water: 30" Brine Line Pipe, Trench Shoring, Valves, Misc. Appurtenances, Asphalt, Misc. Concrete, Dewatering <i>Morena Blvd, Milton St, Denver St (Sta. 746+60 to 771+00)</i> <i>Denver St, Clairemont Dr (Sta. 791+00 to 893+20)</i></p>	9/1/2023	8/31/2024	\$28,605,223.01 \$ 8,494,019.91
3	<p>Wastewater: 48" WSP CML&TCMC Pipe, Trench Shoring, Valves, Misc. Appurtenances, Asphalt, Misc. Concrete <i>Clairemont Dr, Clairmont Mesa, Genessee (Sta. 227+60 to 368+00)</i></p> <p>Water: 30" Brine Line Pipe, Trench Shoring, Valves, Misc. Appurtenances, Asphalt, Misc. Concrete <i>Clairemont Dr, Clairemont Mesa, Genessee (Sta. 893+20 to 1034+32)</i></p>	9/1/2024	Final Completion & Project Acceptance	\$20,375,715.43 \$ 5,598,958.66
Contract Total				\$129,753,895.00

Notes:

- 1) WHITEBOOK section 6-1.4, "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: Steve Lindsay
Construction Senior Engineer

Signature: Steve Lindsay

Date: 6/22/22

PRINT NAME: Reyhaneh Martin
Design Senior Engineer

Signature: Reyhaneh Martin

Date: 6/22/2022

CONTRACTOR

PRINT NAME: LAWRENCE DAMORE

Title: VICE-PRESIDENT

Signature: Lu Damore

Date: 6/21/22

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).**

Prime Contractor Name: Sukut Construction, LLC

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	DIR REGISTRATION NUMBER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK
Name: _____ Address: _____ City: _____ State: _____ Zip: _____ Phone: _____ Email: _____	N/A			
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 ****



May 31, 2022

Project Labor Coordinator
The City of San Diego
525 B Street, Suite 750, MS908A
San Diego, CA 92101-4905

Attention: Stephen Samara


**Re: City of San Diego Project Labor Agreement for
Pure Water Program Phase I Project**

Dear Sir:

This is to confirm that Sukut Construction, LLC agrees to be party to and bound by the City of San Diego Project Labor Agreement for Construction of Pure Water Program Phase I Projects, effective May 1, 2020, as such Agreement may from time to time be amended by the negotiating Parties or interpreted pursuant to its terms. Such obligation to be a Party and bound by this Agreement shall extend to all work covered by the Agreement undertaken by this Company on the Project pursuant to K-22-1797-DBB-3-A, Morena Conveyance South, Middle, and Bike Lanes, and this Company shall require all of its subcontractors of whatever tier to be similarly bound for all work within the scope of the Agreement by signing and furnishing to you an identical Letter of Assent prior to their commencement of work.

Sincerely,

Sukut Construction, LLC

By: 
Eddie Juarez, Vice President

Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)
Attachment I - Project Labor Agreement

617 | Page

4010 W. Chandler Avenue • Santa Ana, CA 92704
Tel: 714.540.5351 • Fax: 714.540-1434 • www.sukut.com
Contractor's License No. 985106

SUKUT CONSTRUCTION, LLC

SPECIAL MEETING OF THE BOARD OF DIRECTORS ELECTION OF OFFICERS

A telephonic meeting of the Board of Directors of Sukut Construction, LLC (the "Company") was held at 4010 West Chandler Avenue, in the City of Santa Ana, State of California, on January 11, 2021 at 11:00 a.m.


Present at the meeting were Don Barnes, Eddie Juarez, Mike Crawford, Mike Ortiz, Mike Zanaboni, Steve Yurosek, and Oren Post, constituting the full membership of the Board. Mike Crawford acted as the Chairperson and Oren Post acted as the Secretary of the meeting.

The Board approved the ability of the below officers to sign contracts on the Company's behalf. This approval is effective immediately and their individual ability to bind the Company to such contracts shall remain in effect until such time as respective successors are chosen by the Board.

Mike Crawford	Chairman
Lawrence Damore	Vice President
Eddie Juarez	Vice President
Eric Mauldin	Vice President
Nick Osborne	Vice President
Oren Post	Chief Financial Officer and Company Secretary
Matt Williams	N. CA Area Manager
Steve Yurosek	CEO & President
Mike Zanaboni	Vice President

Votes being duly cast by all directors, the Chairman announced that the aforementioned individuals had been unanimously elected to the office indicated next to their names to assume the duties and responsibilities as established in the By-Laws.

Dated: January 11, 2022



Oren Post
Company Secretary

SUKUT CONSTRUCTION, LLC

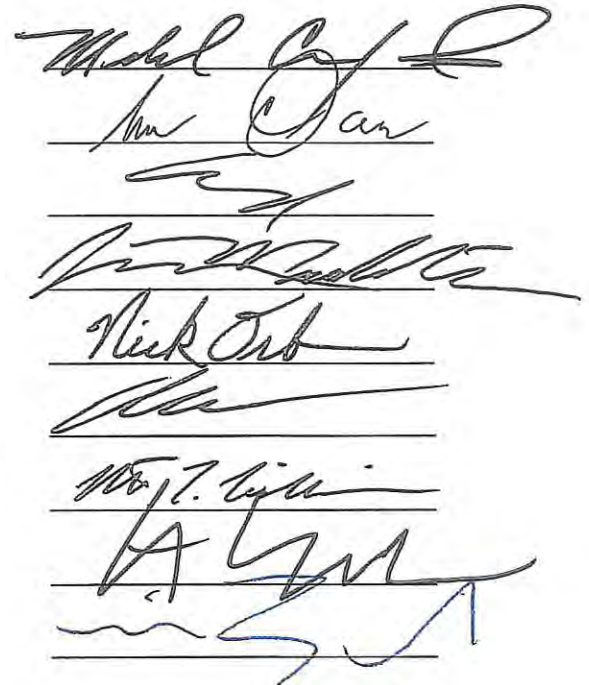
**DIRECTORS RESOLUTION AUTHORIZING OFFICERS AS SIGNATORIES TO
CONSTRUCTION CONTRACTS**

RESOLVED, that the individuals listed below are authorized and empowered to enter into construction contracts for and on behalf of this Company.

RESOLVED FURTHER, that all contracts for the performance of work shall be valid and binding on the Company only when signed by the individuals listed below.

RESOLVED FURTHER, that the individuals listed below are elected, qualified and acting officers of the Company, holding on the date set forth herein the title indicated next to their name.

Mike Crawford	Chairman
Lawrence Damore	Vice President
Eddie Juarez	Vice President
Eric Mauldin	Vice President
Nick Osborne	Vice President
Oren Post	CFO & Company Secretary
Matt Williams	N. CA Area Manager
Steve Yurosek	CEO & President
Mike Zanaboni	Vice President



Handwritten signatures of the listed individuals, each written over a horizontal line. The signatures are: Mike Crawford, Lawrence Damore, Eddie Juarez, Eric Mauldin, Nick Osborne, Oren Post, Matt Williams, Steve Yurosek, and Mike Zanaboni.

Dated: January 11, 2022



Oren Post
Company Secretary

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

Sukut Construction, LLC, 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 One Hundred Twenty
Nine Million Seven Hundred Fifty Three Thousand Eight Hundred Ninety
Five Dollars and 00/100 (\$129,753,895.00) for the faithful performance of the
Nine Million Seven Hundred Fifty Three Thousand Eight
Hundred Ninety Five Dollars and 00/100 (\$129,753,895.00) 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.

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

The Surety expressly agrees that the City of San Diego may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal.

The Surety shall not utilize the Principal in completing the improvements and work specified in the Agreement in the event the City terminates the Principal for default.

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

THE CITY OF SAN DIEGO

By: [Signature]

Print Name: Matthew Vespi, Chief Financial Officer
Mayor or designee

Date: 7/29/2022

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By: [Signature]

Print Name: ADAM WANDER
Deputy City Attorney

Date: 8/3/22

CONTRACTOR

Sukut Construction, LLC

By: [Signature]

Print Name: Eddie Juarez, VP

Date: 6/1/22

SURETY

Liberty Mutual Insurance Company

By: [Signature]
Attorney-In-Fact

Print Name: Noemi Quiroz, Attorney-in-Fact

Date: May 31, 2022

790 The City Drive South Suite 200, Orange, CA 92868

Local Address of Surety

(714) 634-5720

Local Phone Number of Surety

\$673,478.00

Premium

024261077

Bond Number

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 Orange)

On June 1, 2022 before me, Tania Sue Schroeder, Notary Public

Date Here Insert Name and Title of the Officer

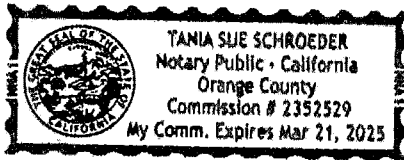
personally appeared Eddie Juarez

Name(s) of Signer(s)

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

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

WITNESS my hand and official seal.



Signature Tania Sue Schroeder
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is 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: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

Civil Code § 1189

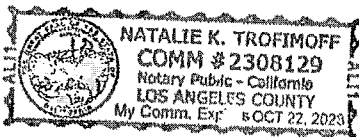
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

State of California)
) ss
County of Los Angeles)

On 5-31-22, before me, Natalie K. Trofimoff, Notary Public, personally appeared Noemi Quiroz, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.



(Seal)

Signature: Natalie K. Trofimoff
Natalie K. Trofimoff, Notary Public

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. Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees. For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-6240 or email HOSUR@libertymutual.com.



Liberty Mutual.
SURETY

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

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 Noemi Quiroz of the city of Los Angeles, state of CA its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the following surety bond:

Principal Name: Sukut Construction, LLC

Obligee Name: City of San Diego

Surety Bond Number: 024281077 Bond Amount: See Bond Form

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 March, 2021.



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

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA SS
COUNTY OF MONTGOMERY

On this 12th day of March, 2021, 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 - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
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 Liberty Mutual Insurance Company, The Ohio Casualty 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, whenever 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, of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company do hereby certify that this 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 31st day of May, 2022.



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

CONTRACT AGREEMENT

CONSTRUCTION CONTRACT

This Phase-Funded contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and Sukut Construction, LLC., herein called "Contractor" for construction of **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)**. Bid No. **K-22-1797-DBB-3-A**; in the total amount of One Hundred Twenty Nine Million, Seven Hundred Fifty Three Thousand, Eight Hundred Ninety-Five Dollars (\$129,753,895.00), consisting of an amount not to exceed \$ 66,679,977.99 for Phase 1; \$37,099,242.92 for Phase 2; and \$25,974,674.09 for Phase 3.

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

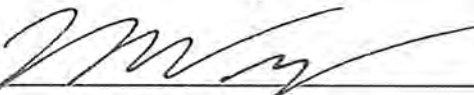
1. The following are incorporated into this contract as though fully set forth herein:
 - (a) The attached Faithful Performance and Payment Bonds.
 - (b) The attached Proposal included in the Bid documents by the Contractor.
 - (c) Reference Standards listed in the Instruction to Bidders and the Supplementary Special Provisions (SSP).
 - (d) Phased Funding Schedule Agreement.
 - (e) That certain documents entitled **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)** on file in the office of the City Clerk as Document No. **B-15141**, as well as all matters referenced therein.
2. The City wishes to construct this Project on a Phase-Funded basis. In accordance with Whitebook section 7-3.10, the City is only obligated to pay for Phase I; Contractor cannot begin, nor is the City financially liable for any additional Phases, unless and until Contractor is issued a Notice to Proceed for each additional Phase by the City.
3. 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 **Pure Water Program (PWP) Morena Conveyance South & Middle and Morena Conveyance Bike Lanes (BL)**, Bid Number **K-22-1797-DBB-3-A**, San Diego, California.
4. 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 (See WHITEBOOK, Section 7-3.10, Phased Funding Compensation).
5. 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.
6. This contract is effective as of the date that the Mayor or designee signs the agreement and is approved by the City Attorney in accordance with San Diego Charter Section 40.

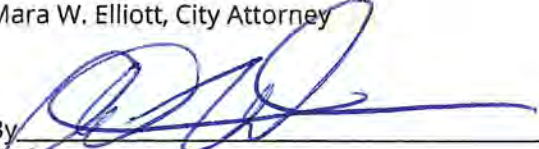
CONTRACT AGREEMENT (continued)

IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Resolution No. R - 312062 authorizing such execution.


THE CITY OF SAN DIEGO

APPROVED AS TO FORM

By 

Mara W. Elliott, City Attorney
By 

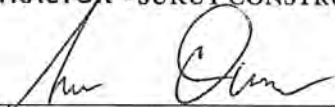
Print Name: Matthew Vespi
Chief Financial Officer

Print Name: 
Deputy City Attorney

Date: 7/29/2022

Date: 

CONTRACTOR - SUKUT CONSTRUCTION LLC

By 

Print Name: Lawrence Damore

Title: Vice President

Date: 6/29/2022

City of San Diego License No.: B2015046469

State Contractor's License No.: 985106

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000001133

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

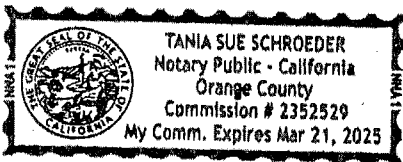
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Orange)
On June 29, 2022 before me, Tania Sue Schroeder, Notary Public
Date Here Insert Name and Title of the Officer
personally appeared Lawrence Damore
Name(s) of Signer(s)

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

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

WITNESS my hand and official seal.



Signature Tania Sue Schroeder
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is 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: _____ 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 or Conservator Trustee Guardian or Conservator
 Other: _____ Other: _____
Signer Is Representing: _____ Signer Is Representing: _____