

City of San Diego

ORIGINAL

CONTRACTOR'S NAME: Vailston Company, Inc.

ADDRESS: 774 N. Twin Oaks Valley Rd., Ste. C, San Marcos, CA 92069

TELEPHONE NO.: 760-757-3857

FAX NO.: 760-757-3848

CITY CONTACT: Clementina Giordano, Contract Specialist, Email: Cgiordano@sandiego.gov

Phone No. (619) 533-3481, Fax No. (619) 533-3633

Y. Benyamin / J. Borja / LJI

BIDDING DOCUMENTS



FOR

MOC 5 MATERIAL BINS

BID NO.: L-17-6405-DBB-2

SAP NO. (WBS/IO/CC): B-14133

CLIENT DEPARTMENT: 2011

COUNCIL DISTRICT: 6

PROJECT TYPE: BS

THIS CONTRACT WILL BE SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- COMPETITION RESTRICTED TO: SLBE-ELBE or ELBE FIRMS ONLY .
- PREVAILING WAGE RATES: STATE FEDERAL
- APPRENTICESHIP

BID DUE DATE:

1:30 PM

AUGUST 3, 2016

CITY OF SAN DIEGO

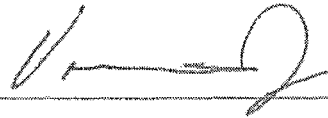
PUBLIC WORKS CONTRACTS

1010 SECOND AVENUE, 14th FLOOR, MS 614C

SAN DIEGO, CA 92101

ENGINEER OF WORK

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

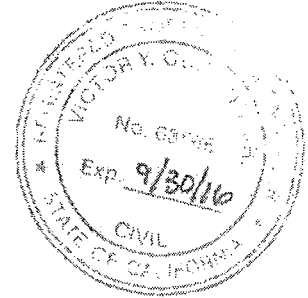


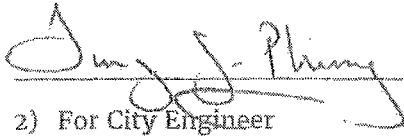
1) Registered Engineer

6/20/16

Date

Seal:





2) For City Engineer

6/27/16

Date

Seal:



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NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for MOC 5 Material Bins project. For additional information refer to Attachment A.
2. **LIMITED COMPETITION:** This contract may only be bid by the Contractors on the City's approved Prequalified Contractor's List **and** SLBE-ELBE Construction Limited Competition Contractors List in accordance with the designation stated on the cover page. For information regarding the SLBE-ELBE Construction Program and registration visit the City's web site: <http://www.sandiego.gov>.
3. **ESTIMATED CONSTRUCTION COST:** The City's estimated construction cost for this project is **\$453,000**.
4. **BID DUE DATE AND TIME ARE:** August 3, 2016 at 1:30 PM.
5. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.
6. **LICENSE REQUIREMENT:** The City has determined that the following licensing classification is required for this contract: Class A.
7. **SUBCONTRACTING PARTICIPATION PERCENTAGES:**
 - 7.1. The City has incorporated voluntary subcontractor participation percentage to enhance competition and maximize subcontracting opportunities as follows.
 - 7.2. The following voluntary subcontractor participation percentage for DBE, DVBE, WBE, MBE, SLBE, and ELBE certified Subcontractors shall apply to this contract:

Total voluntary subcontractor participation percentage for this project is 26.2%.
8. **PRE-BID MEETING:**
 - 8.1. Prospective Bidders are encouraged to attend the Pre-Bid Meeting. The purpose of the meeting is to discuss the scope of the Project, submittal requirements, the pre-qualification process and any Equal Opportunity Contracting Program requirements and reporting procedures. To request a sign language or oral interpreter for this visit, call the Public Works Contracts Division at (619) 533-3450 at least 5 Working Days prior to the meeting to ensure availability. The Pre-Bid meeting is scheduled as follows:

Date: July 20, 2016
Time: 10:00 AM
Location: 1010 Second Avenue, Suite 1400, San Diego, CA 92101

Attendance at the Pre-Submittal Meeting will be evidenced by the Bidder's representative's signature on the attendance roster. It is the responsibility of the Bidder's representative to complete and sign the attendance roster.

9. AWARD PROCESS:

- 9.1. 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.
- 9.2. Upon acceptance of a Bid, the City will prepare contract documents for execution within approximately 21 days of the date of the Bid opening. The City will then award the Contract within approximately 14 days of receipt of properly signed Contract, bonds, and insurance documents.
- 9.3. 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.
- 9.4. The low Bid will be determined by Base Bid alone
- 9.5. Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base bid alone.

10. SUBMISSION OF QUESTIONS:

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

Public Works Contracts
1010 Second Avenue, 14th Floor
San Diego, California, 92101
Attention: Clementina Giordano

OR:

EMAIL: [Clementina Giordano@sandiego.gov](mailto:Clementina_Giordano@sandiego.gov)

- 10.2.** Questions received less than 14 days prior to the date for opening of Bids may not be considered.
- 10.3.** 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.
- 10.4.** 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.

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. Complete information and links to the on-line prequalification application are available at:

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

- 1.2. The completed application must be submitted online no later than 2 weeks prior to the bid opening. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.
- 1.3. Due to the City's fiduciary requirement to safeguard vendor data, 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 an 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 which has until the "Bid Due Date and Time" to change, rescind or retrieve its proposal should it

desire to do so.

- 2.5. **BIDS MUST BE SUBMITTED BY BID DUE DATE AND TIME.** Once the bid deadline is reached, no further submissions are accepted into the system. Once the Bid Due Date and Time has lapsed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, EOCP compliance and other issues. The City may require any Bidder to furnish statement of experience, financial responsibility, technical ability, equipment, and references.
- 2.6. **RECAPITULATION OF THE WORK.** Bids shall not contain any recapitulation of the Work. Conditional Bids may be rejected as being non-responsive. Alternative proposals will not be considered unless called for.
- 2.7. **BIDS MAY BE WITHDRAWN** by the Bidder only up to the bid due date and time.
 - 2.7.1. **Important Note:** Submission of the electronic bid into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.
- 2.8. **ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE.** : To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed in 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 (90 days for federally funded contracts and contracts valued at \$500,000 or less) 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.shtml>.
 - 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 10 Working Days after receiving the Contract forms. See 2-1.1.2, "Joint Venture Contractors" in The WHITEBOOK for details.

7. **PREVAILING WAGE RATES WILL APPLY:** Refer to Attachment D.

8. **SUBCONTRACTING PARTICIPATION PERCENTAGES:** Subcontracting participation percentages apply to this contract. Refer to Attachment E.

9. **INSURANCE REQUIREMENTS:**
 - 9.1. 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.
 - 9.2. Refer to sections 7-3, "LIABILITY INSURANCE", and 7-4, "WORKERS' COMPENSATION INSURANCE" of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

10. **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") | 2015 | PWPI070116-01 |
| City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")* | 2015 | PWPI070116-02 |

| Title | Edition | Document Number |
|---|---------|-----------------|
| City of San Diego Standard Drawings* | 2016 | PWPI070116-03 |
| Caltrans Standard Specifications | 2010 | PITS070112-04 |
| Caltrans Standard Plans | 2010 | PITS070112-05 |
| California MUTCD | 2012 | PITS070112-06 |
| City Standard Drawings - Updates Approved For Use (when specified)* | Varies | Varies |
| Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84 | 1984 | 769023 |
| NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml | | |

11. **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 addendum are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt of Addenda at the time of bid submission.
12. **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.
13. **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.
14. **SUBCONTRACTOR INFORMATION:**
 - 14.1. **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 further state within the description, the **PORTION** of the work which will be performed by each subcontractor under this Contract. The Contractor shall list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement may result in the Bid being rejected as **non-responsive** and ineligible for award. The Bidder's attention is directed to the

- Special Provisions - General; Paragraph 2-3 Subcontracts, 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.
- 14.2. **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)** 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.
 - 14.3. **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.
15. **SUBMITTAL OF "OR EQUAL" ITEMS:** See Section 4-1.6, "Trade Names or Equals" in The WHITEBOOK and as amended in the SSP.
 16. **AWARD PROCESS:**
 - 16.1. The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award.
 - 16.2. 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.
 - 16.3. 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.
 17. **SUBCONTRACT LIMITATIONS:** The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" 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.
 18. **AVAILABILITY OF PLANS AND SPECIFICATIONS:** Contract Documents may be obtained by visiting the City's website: <http://www.sandiego.gov/cip/>. Plans and Specifications for this contract are also available for review in the office of the City Clerk or Public Works Contracts.
 19. **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.

20. **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.

21. **BIDDER'S GUARANTEE OF GOOD FAITH (BID SECURITY):**

21.1. 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.

21.2. 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.

21.3. 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.

21.4. At the time of bid submission, bidders must upload and submit an electronic PDF copy of the aforementioned bid security. Whether in the form of a cashier's check, a properly certified check or an approved corporate surety bond payable to the City of San Diego, the bid security must be uploaded to the City's eBidding system. Within twenty-four (24) hours after the bid due date and time, the first five (5) apparent low bidders must provide the City with the original bid security.

21.5. Failure to submit the electronic version of the bid security at the time of bid submission AND failure to provide the original within twenty-four (24) hours may cause the bid to be rejected and deemed **non-responsive**.

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

22.1. This contract may be awarded to the lowest responsible and reliable Bidder.

22.2. Bidders shall complete ALL eBid forms as required by this solicitation. Incomplete eBids will not be accepted.

22.3. 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.

22.4. 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.
- 22.5. 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.
 - 22.6. 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.
 - 22.7. 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.
 - 22.8. 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.

23. BID RESULTS:

- 23.1. 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.
- 23.2. 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.

24. THE CONTRACT:

- 24.1. 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.
- 24.2. 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.
- 24.3. 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.

- 24.4. 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.
- 24.5. 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 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.
25. **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 2-7, 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.
26. **CITY STANDARD PROVISIONS:** This contract is subject to the following standard provisions. See The WHITEBOOK for details.
- 26.1. The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.
- 26.2. The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.
- 26.3. The City of San Diego Municipal Code §22.3004 for Pledge of Compliance.
- 26.4. The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
- 26.5. 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.
- 26.6. The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
- 26.7. The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.

27. PRE-AWARD ACTIVITIES:

27.1. The contractor selected by the City to execute a contract for this Work shall submit the required documentation as specified in the herein and in the Notice of Award. Failure to provide the information as specified may result in the Bid being rejected as **non-responsive**.

27.2. 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.

Issued in Triplicate

Bond number: 54-210919

Premium: \$9,541

Premium will be adjusted
based on final contract price.

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

Vailston Company, Inc., a corporation, as principal, and
Financial Pacific 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
Four Hundred Seventy Seven Thousand Forty Five and 00/100 (\$477,045.00) for the faithful performance of the
annexed contract, and in the sum of Four Hundred Seventy Seven Thousand Forty Five and 00/100 for the
benefit of laborers and materialmen designated below. (\$477,045.00)

Conditions:

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

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

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

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

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

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

Dated August 9, 2016

Approved as to Form

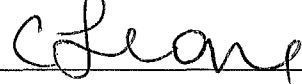
Vailston Company, Inc.

By 
Principal

Nate Johnston, President

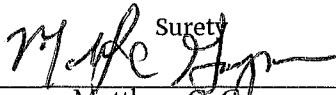
Printed Name of Person Signing for Principal

Jan I. Goldsmith, City Attorney

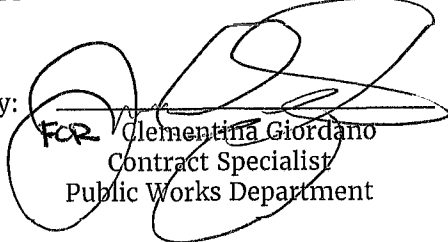
By 

Deputy City Attorney

Financial Pacific Insurance Company

By 
Surety
Matthew C. Gaynor
Attorney-in-fact

Approved:

By: 
FOR Clementina Giordano
Contract Specialist
Public Works Department

3880 Atherton Rd

Local Address of Surety

Rocklin, CA 95765

Local Address (City, State) of Surety

(800) 371-8067

Local Telephone No. of Surety

Premium \$ 9,541

Bond No. 54-210919



(original on file at Home Office of Company - See Certification)

KNOW ALL PERSONS BY THESE PRESENTS, That UNITED FIRE & CASUALTY COMPANY, a corporation duly organized and existing under the laws of the State of Iowa; UNITED FIRE & INDEMNITY COMPANY, a corporation duly organized and existing under the laws of the State of Texas; and FINANCIAL PACIFIC INSURANCE COMPANY, a corporation duly organized and existing under the laws of the State of California (herein collectively called the Companies), and having their corporate headquarters in Cedar Rapids, State of Iowa, does make, constitute and appoint DANIEL FRAZEE, OR KIM VASQUEZ, OR MATTHEW C. GAYNOR, ALL INDIVIDUALLY of SANTEE CA

their true and lawful Attorney(s)-in-Fact with power and authority hereby conferred to sign, seal and execute in its behalf all lawful bonds, undertakings and other obligatory instruments of similar nature provided that no single obligation shall exceed \$50,000,000.00 and to bind the Companies thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Companies and all of the acts of said Attorney, pursuant to the authority hereby given and hereby ratified and confirmed.

The Authority hereby granted shall expire the 12th day of December, 2016 unless sooner revoked by UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, AND FINANCIAL PACIFIC INSURANCE COMPANY.

This Power of Attorney is made and executed pursuant to and by authority of the following bylaw duly adopted on May 15, 2013, by the Boards of Directors of UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, and FINANCIAL PACIFIC INSURANCE COMPANY.

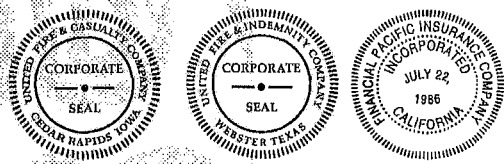
"Article VI - Surety Bonds and Undertakings"

Section 2, Appointment of Attorney-in-Fact. "The President or any Vice President, or any other officer of the Companies may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Companies in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. The signature of any officer authorized hereby, and the Corporate seal, may be affixed by facsimile to any power of attorney or special power of attorney or certification of either authorized hereby; such signature and seal, when so used, being adopted by the Companies as the original signature of such officer and the original seal of the Companies; to be valid and binding upon the Companies with the same force and effect as though manually affixed. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority shall have full power to bind the Companies by their signature and execution of any such instruments and to attach the seal of the Companies thereto. The President or any Vice President, the Board of Directors or any other officer of the Companies may at any time revoke all power and authority previously given to any attorney-in-fact.

IN WITNESS WHEREOF, the COMPANIES have each caused these presents to be signed by its vice president and its corporate seal to be hereto affixed this 12th day of December, 2014

UNITED FIRE & CASUALTY COMPANY
UNITED FIRE & INDEMNITY COMPANY
FINANCIAL PACIFIC INSURANCE COMPANY

By: *Dennis J. Richmann* Vice President



State of Iowa, County of Linn, ss:

On 12th day of December, 2014, before me personally came Dennis J. Richmann

to me known, who being by me duly sworn, did depose and say; that he resides in Cedar Rapids, State of Iowa; that he is a Vice President of UNITED FIRE & CASUALTY COMPANY, a Vice President of UNITED FIRE & INDEMNITY COMPANY, and a Vice President of FINANCIAL PACIFIC INSURANCE COMPANY the corporations described in and which executed the above instrument; that he knows the seal of said corporations; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporations and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporations.

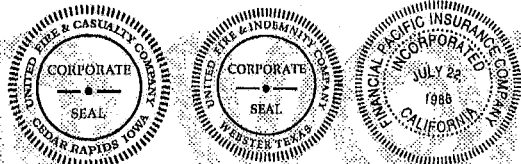


Judith A. Davis Notary Public
My commission expires: 04/23/2018

I, David A. Lange, Secretary of UNITED FIRE & CASUALTY COMPANY and Assistant Secretary of UNITED FIRE & INDEMNITY COMPANY, and Assistant Secretary of FINANCIAL PACIFIC INSURANCE COMPANY, do hereby certify that I have compared the foregoing copy of the Power of Attorney and affidavit, and the copy of the Section of the bylaws and resolutions of said Corporations as set forth in said Power of Attorney, with the ORIGINALS ON FILE IN THE HOME OFFICE OF SAID CORPORATIONS, and that the same are correct transcripts thereof, and of the whole of the said originals, and that the said Power of Attorney has not been revoked and is now in full force and effect.

In testimony whereof I have hereunto subscribed my name and affixed the corporate seal of the said Corporations
this 9th day of August 2016

By: *David A. Lange*
Secretary, UF&C
Assistant Secretary, UF&I/FPIC



ACKNOWLEDGMENT

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

State of California
County of San Diego)

On August 9, 2016 before me, Kathy Scheuerman, Notary Public
(insert name and title of the officer)

personally appeared Matthew C. Gaynor,
who proved to me on the basis of satisfactory evidence to be the pers on(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 pers on(s) acted, executed the i nstrument.

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

WITNESS my hand and official seal.

Signature Kathy Scheuerman (Seal)



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

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

State of California)
County of San Diego)

On 8/10/20 before me, Heather Barnhill ~ Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared Nate Johnston
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 Heather Barnhill
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: Performance and Material Bond
Document Date: 8/9/2016 Number of Pages: 1
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: _____

ATTACHMENT A

SCOPE OF WORK

SCOPE OF WORK

- 1. SCOPE OF WORK:** The MOC 5 Material Bins project involves partial demolition of the existing material storage bin structure foundation and portions of asphalt and concrete pavement adjacent to the bin locations. Five new material storage bins are to be constructed, including all work necessary such as excavation, backfill, and soil compaction, to prepare the site for a new reinforced concrete foundation. The new bins shall be constructed of reinforced concrete and a metal canopy cover supported on the bins using structural steel members shall be provided. This project also includes above- and below - grade water piping, a spray water system controlled by a timer or control module, new lighting and electrical wiring connections to the existing electrical system, and minor surface restoration and improvements after the bins are in place.

1.1. The Work shall be performed in accordance with:

1.1.1. The Notice Inviting Bids and Plans numbered **37523-1-D** through **37523-26-D**, inclusive.

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

5655 Kearny Villa Rd., San Diego, CA 92123

- 3. CONTRACT TIME:** The Contract Time for completion of the Work shall be **129 Working Days**.

ATTACHMENT B
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ATTACHMENT C

EQUAL OPPORTUNITY CONTRACTING PROGRAM

EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS

1. To The WHITEBOOK, Chapter 10, Sections D and E, DELETE each in its entirety, and SUBSTITUTE with the following:

D. CITY'S EQUAL OPPORTUNITY COMMITMENT.

1. Nondiscrimination in Contracting Ordinance.

1. The Contractor, Subcontractors and Suppliers shall comply with requirements of the City's Nondiscrimination in Contracting Ordinance, San Diego Municipal Code §§22.3501 through 22.3517.

The Contractor shall not discriminate on the basis of race, gender, gender expression, gender identity, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers. The Contractor shall provide equal opportunity for subcontractors to participate in subcontracting opportunities. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment, or other sanctions.

The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. Disclosure of Discrimination Complaints. As part of its Bid or Proposal, 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 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.
3. Upon the City's request, the Contractor agrees to provide to the City, within 60 days, a truthful and complete list of the names of all Subcontractors and Suppliers that the Contractor has used in the past 5 years on any of its contracts that were undertaken within San Diego County, including the total dollar amount paid by the Contractor for each subcontract or supply contract.
4. The Contractor further agrees to fully cooperate in any investigation conducted by the City pursuant to the City's Nondiscrimination in Contracting Ordinance, Municipal Code §§22.3501 through 22.3517. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result in remedies being ordered against the Contractor up to and including contract termination,

debarment and other sanctions for violation of the provisions of the Nondiscrimination in Contracting Ordinance. The Contractor further understands and agrees that the procedures, remedies and sanctions provided for in the Nondiscrimination in Contracting Ordinance apply only to violations of the Ordinance.

E. EQUAL EMPLOYMENT OPPORTUNITY OUTREACH PROGRAM.

1. The Contractor, Subcontractors and Suppliers shall comply with the City's Equal Employment Opportunity Outreach Program, San Diego Municipal Code §§22.2701 through 22.2707.

The Contractor shall not discriminate against any employee or applicant for employment on any basis prohibited by law. Contractor shall provide equal opportunity in all employment practices. Prime Contractor shall ensure their subcontractors comply with this program. Nothing in this section shall be interpreted to hold a prime contractor liable for any discriminatory practice of its subcontractors.

The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. If the Contract is competitively solicited, the selected Bidder shall submit a Work Force Report (Form BB05), within 10 Working Days after receipt by the Bidder of Contract forms to the City for approval as specified in the Notice of Intent to Award letter from the City.
3. If a Work Force Report is submitted, and the City determines there are under-representations when compared to County Labor Force Availability data, the selected Bidder shall submit an Equal Employment Opportunity Plan.
4. If the selected Bidder submits an Equal Employment Opportunity Plan, it shall include the following assurances:
 1. The Contractor shall maintain a working environment free of discrimination, harassment, intimidation and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work.
 2. The Contractor reviews its EEO Policy, at least annually, with all on-site supervisors involved in employment decisions.
 3. The Contractor disseminates and reviews its EEO Policy with all employees at least once a year, posts the policy statement and EEO posters on all company bulletin boards and job sites, and documents every dissemination, review and posting with a written record to identify the time, place, employees present, subject matter, and disposition of meetings.

4. The Contractor reviews, at least annually, all supervisors' adherence to and performance under the EEO Policy and maintains written documentation of these reviews.
5. The Contractor discusses its EEO Policy Statement with subcontractors with whom it anticipates doing business, includes the EEO Policy Statement in its subcontracts, and provides such documentation to the City upon request.
6. The Contractor documents and maintains a record of all bid solicitations and outreach efforts to and from subcontractors, contractor associations and other business associations.
7. The Contractor disseminates its EEO Policy externally through various media, including the media of people of color and women, in advertisements to recruit, maintains files documenting these efforts, and provides copies of these advertisements to the City upon request.
8. The Contractor disseminates its EEO Policy to union and community organizations.
9. The Contractor provides immediate written notification to the City when any union referral process has impeded the Contractor's efforts to maintain its EEO Policy.
10. The Contractor maintains a current list of recruitment sources, including those outreaching to people of color and women, and provides written notification of employment opportunities to these recruitment sources with a record of the organizations' responses.
11. The Contractor maintains a current file of names, addresses and phone numbers of each walk-in applicant, including people of color and women, and referrals from unions, recruitment sources, or community organizations with a description of the employment action taken.
12. The Contractor encourages all present employees, including people of color and women employees, to recruit others.
13. The Contractor maintains all employment selection process information with records of all tests and other selection criteria.
14. The Contractor develops and maintains documentation for on-the-job training opportunities, participates in training programs, or both for all of its employees, including people of color and women, and establishes apprenticeship, trainee, and upgrade programs relevant to the Contractor's employment needs.

15. The Contractor conducts, at least annually, an inventory and evaluation of all employees for promotional opportunities and encourages all employees to seek and prepare appropriately for such opportunities.
16. The Contractor ensures the company's working environment and activities are non-segregated except for providing separate or single-user toilets and necessary changing facilities to assure privacy between the sexes.

ATTACHMENT D
PREVAILING WAGES

1. PREVAILING WAGE RATES: Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.

1.1. Compliance with Prevailing Wage Requirements. Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.

1.1.1. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <http://www.dir.ca.gov/OPRLDPreWageDetermination.htm>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.

1.1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.

1.2. Penalties for Violations. Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed.

- 1.3. Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.
- 1.3.1.** For contracts entered into on or after April 1, 2015, Contractor and their subcontractors shall furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.
- 1.4. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.
- 1.5. Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on design professionals and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.
- 1.6. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- 1.7. Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract."
- 1.8. Labor Compliance Program.** The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or assistance, please contact the City of San Diego's Equal Opportunity Contracting Department at 619-236-6000.

1.9. Contractor and Subcontractor Registration Requirements. This project is subject to compliance monitoring and enforcement by the DIR. As of March 1, 2015, no contractor or subcontractor may be listed on a bid or proposal for a public works project unless registered with the DIR pursuant to Labor Code section 1725.5. As of April 1, 2015, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, or enter into any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 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 DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration to the City upon request.

1.9.1. A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.

ATTACHMENT E
SUPPLEMENTARY SPECIAL PROVISIONS

SUPPLEMENTARY SPECIAL PROVISIONS

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

- 1) The **2015 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK") currently in effect.
- 2) The **2015 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK") including the following:

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

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

The **Normal Working Hours** are **8:30 AM to 3:30 PM**.

SECTION 2 - SCOPE AND CONTROL OF WORK

- 2-3.2 Self Performance.** DELETE in its entirety and SUBSTITUTE with the following:

1. You must perform, with your own organization, Contract work amounting to at least 50% of the base bid alone or base bid and any additive or deductive alternate(s) that together when added or deducted form the basis of award.
2. The self performance percentage requirement will be waived for contracts when a "B" License is required or allowed.

- 2-5.3.1 General.** To the City Supplement, ADD the following:

7. For products for which an AML is available, products listed in the AML shall be used. A submittal review will be conducted for products not identified on an AML on a case-by-case basis when:
 - a) The product type or category is not in the AML.
 - b) The AML does not list at least two available manufacturers of the product.
 - c) The material or manufacturer listed in the AML is no longer available. Documentation to substantiate the product is no longer available or in production is required as part of the submittal.

In the case of conducting a submittal review when required by the Plans or Special Provisions, or when requested by the Engineer, all submittals shall be accompanied by the City's submittal form.

The Product Submittal Form is available for download at:

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

2-7 SUBSURFACE DATA. To the City Supplement, ADD the following:

4. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:
 1. Report of Geotechnical Evaluation dated May 23, 2013 by Ninyo & Moore and Associates.
5. The reports listed above are available for review by contacting the Contract Specialist or visiting:

<ftp://ftp.sannet.gov/OUT/ECP/2-7%20SUBSURFACE%20DATA/>

2-14.3 Coordination. To the City Supplement, ADD the following:

1. Other adjacent City projects are scheduled for construction for the same time period in the vicinity of Metropolitan Operations Complex. See Appendix "E" for the approximate location. Coordinate the Work with the adjacent projects as listed below:
 - a) MOC Complex Solar Project, Project Manager – Michael Ramirez, Phone No. (619) 533-4111

2-16 CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM. To the City Supplement, item 1, DELETE in its entirety.

SECTION 4 - CONTROL OF MATERIALS

4-1.3.4 Inspection Paid For By the Contractor. To the City Supplement, ADD the following:

2. The special inspections required are listed as follows:
 - a) as indicated on Sheets S-1, S-2, and S-3 of these contract plans.

4-1.3.6 Preapproved Materials. To the City Supplement, 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.

ADD:

4-1.3.7

Testing under the Direction of the Engineer. When a bid item for "Testing Under The Direction Of The Engineer" is provided, the you shall employ and pay for the services of a qualified third party independent laboratory to perform the required testing. You will be reimbursed for the cost of testing under this bid item.

4-1.6

Trade Names or Equals. ADD the following:

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

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

SECTION 5 – UTILITIES

5-2

PROTECTION. ADD the following:

1. You shall repair or replace traffic signal and lighting system equipment within 72 hours after notification of defects by the Engineer.
2. While working in or around meter boxes, you shall protect in place all Advanced Metering Infrastructure (AMI) devices attached to the water meter or located in or near water meter boxes, coffins, or vaults. This includes any antenna installed through the meter box lid.
 - a) Avoid damaging the antenna, cable, and endpoints when removing the meter box lid and when disconnecting AMI endpoints from the register on top of the water meter.
 - b) If meters or AMI devices need to be removed or relocated, the AMI endpoints shall be reinstalled with the Encoder/Receiver/Transmitter (ERT) pointing upwards.
 - c) Because the AMI equipment is uniquely matched to each service location and to specific meter serial numbers, any AMI devices that are removed or disconnected shall be reinstalled on the same service lateral as well as to the same meter serial number it was attached to originally.
 - d) Do not change or modify the lid if the lid has an antenna drilled through it.
 - e) If you encounter damaged, disconnected, buried, or broken AMI endpoints, cables between the registers, antennae, lids, or ERTs, notify the Engineer within 24 hours.
 - f) Any AMI equipment damaged by you shall be repaired or replaced by City Forces at your expense.
 - g) Refer to Appendix "G" for more information on the protection of AMI devices.

5-6 COOPERATION. ADD the following:

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

ADD:

6-3.2.1.1

Environmental Document. The City of San Diego Environmental Analysis Section (EAS) of the Development Services Department has prepared a **Notice of Exemption** for **MOC 5 Material Bins Capital Improvements Project**, as referenced in the Contract Appendix. You must comply with all requirements of the **Notice of Exemption** as set forth in the Contract **Appendix A**.

2. Compliance with the City's environmental document shall be included in the Contract Price, unless bid items has been provided.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 INSURANCE. DELETE in its entirety and SUBSTITUTE with the following:

7-3 INSURANCE.

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

7-3.1 Policies and Procedures.

1. You must 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.

7-3.2 Types of Insurance.

7-3.2.1 Commercial General Liability Insurance.

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

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

7-3.2.2 Commercial Automobile Liability Insurance.

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

7-3.2.3

Contractors Pollution Liability Insurance.

1. You shall procure and maintain at your expense or require your Subcontractor, as described below, to procure and maintain the Contractors Pollution Liability Insurance including contractual liability coverage to cover liability arising out of cleanup, removal, storage, or handling of hazardous or toxic chemicals, materials, substances, or any other pollutants by you or any Subcontractor in an amount not less than \$2,000,000 limit for bodily injury and property damage.
2. All costs of defense shall be outside the limits of the policy. Any such insurance provided by your Subcontractor instead of you shall be approved separately in writing by the City.
3. For approval of a substitution of your Subcontractor's insurance, you shall certify that all activities for which the Contractors Pollution Liability Insurance will provide coverage will be performed exclusively by the Subcontractor providing the insurance. The deductible shall not exceed \$25,000 per claim.
4. Contractual liability shall include coverage of tort liability of another party to pay for bodily injury or property damage to a third person or organization. There shall be no endorsement or modification of the coverage limiting the scope of coverage for either "insured vs. insured" claims or contractual liability.
5. Occurrence based policies shall be procured before the Work commences and shall be maintained for the Contract Time. Claims Made policies shall be procured before the Work commences, shall be maintained for the Contract Time, and shall include a 12 month extended Claims Discovery Period applicable to this contract or the existing policy or policies that shall continue to be maintained for 12 months after the completion of the Work without advancing the retroactive date.
6. Except as provided for under California law, the policy or policies shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.2.5

Contractors Builders Risk Property Insurance.

1. You shall provide at your expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance shall be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits shall be 100% of this Contract value of the Work plus 15% to cover administrative costs, design costs, and the costs of inspections and construction management.

2. Insured property shall include material or portions of the Work located away from the Site but intended for use at the Site and shall cover material or portions of the Work in transit. The policy or policies shall include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies shall cover the cost of removing debris, including demolition.
3. The policy or policies shall provide that all proceeds thereunder shall be payable to the City as Trustee for the insured, and shall name the City, the Contractor, Subcontractors, and Suppliers of all tiers as named insured. The City, as Trustee, will collect, adjust, and receive all monies which may become due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.
4. Any deductible applicable to the insurance shall be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles shall be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each claimant shall pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City shall be entitled to 100% of its loss. You shall pay the City any portion of that loss not covered because of a deductible at the same time the proceeds of the insurance are paid to the City as trustee.
5. Any insured, other than the City, making claim to which a deductible applies shall be responsible for 100% of the loss not insured because of the deductible. 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.

7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this Contract as described herein shall be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

7-3.3.1 Non-Admitted Carriers. The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

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

7-3.4 Evidence of Insurance. Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document shall be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

7-3.5 Policy Endorsements.

7-3.5.1 Commercial General Liability Insurance

7-3.5.1.1 Additional Insured.

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

7-3.5.1.2 Primary and Non-Contributory Coverage. The policy shall be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it shall provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

7-3.5.1.3 Project General Aggregate Limit. The policy or policies shall be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work shall reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit shall be in addition to the aggregate limit provided for the products-completed operations hazard.

7-3.5.2 Commercial Automobile Liability Insurance.

7-3.5.2.1 Additional Insured. Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

7-3.5.3 Contractors Pollution Liability Insurance Endorsements.

7-3.5.3.1 Additional Insured.

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

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

2. In any case where a claim or loss encompasses the negligence of the Insured and the active negligence of the City and its respective elected officials, officers, employees, agents, and representatives that are not

covered because of California Insurance Code §11580.04, the insurer's obligation to the City and its respective elected officials, officers, employees, agents, and representatives shall be limited to obligations permitted by California Insurance Code §11580.04.

- 7-3.5.3.2 Primary and Non-Contributory Coverage.** The policy or policies shall be endorsed to provide that the insurance afforded by the Contractors Pollution Liability Insurance policy or policies is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives with respect to operations including the completed operations of the Named Insured. Any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.
- 7-3.5.3.3 Severability of Interest.** For Contractors Pollution Liability Insurance, the policy or policies shall provide that your insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability and shall provide cross-liability coverage.
- 7-3.5.5 Builders Risk Endorsements.**
- 7-3.5.5.1 Waiver of Subrogation.** The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.
- 7-3.5.5.2 Builders Risk – Partial Utilization.** If the City desires to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this Contract, the City will notify you and you shall immediately notify your Builder's Risk insurer and obtain an endorsement that the policy or policies shall not be cancelled or lapse on account of any such partial use or occupancy. You shall obtain the endorsement prior to the City's occupation and use.
- 7-3.6 Deductibles and Self-Insured Retentions.** You shall pay for all deductibles and self-insured retentions. You shall disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.
- 7-3.7 Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this Contract.

7-3.8 Notice of Changes to Insurance. You shall notify the City 30 Days prior to any material change to the policies of insurance provided under this Contract.

7-3.9 Excess Insurance. Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.

7-4 NOT USED. DELETE in its entirety and SUBSTITUTE with the following:

7-4 WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY INSURANCE.

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

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

| <u>Workers' Compensation</u> | <u>Statutory Employers Liability</u> |
|------------------------------|--------------------------------------|
| Bodily Injury by Accident | \$1,000,000 each accident |
| Bodily Injury by Disease | \$1,000,000 each employee |
| Bodily Injury by Disease | \$1,000,000 policy limit |

3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you shall comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

7-4.1 Waiver of Subrogation. The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from

7-8.6 Water Pollution Control. ADD the following:

6. Based on a preliminary assessment by the City, the Contract is subject to **WPCP.**

7-10.5.3 Steel Plate Covers. Table 7-10.5.3 (A), REVISE the plate thickness for 5'-3" trench width to read 1¾".

7-20

ELECTRONIC COMMUNICATION. ADD the following:

- 2. Virtual Project Manager will be used on this contract.

SECTION 9 - MEASUREMENT AND PAYMENT

9-3.2.5

Withholding of Payment. To the City Supplement, item 1, subsection i), DELETE in its entirety and SUBSTITUTE with the following:

- i) Your failure to comply with 7-2.3, "PAYROLL RECORDS" and 2-16, "CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM".

ADD:

9-3.7

Compensation Adjustments for Price Index Fluctuations. To the City Supplement ADD the following:

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

SECTION 203 – BITUMINOUS MATERIALS

203-15

RUBBER POLYMER MODIFIED SLURRY (RPMS). To the City Supplement, CORRECT section numbering as follows:

| OLD SECTION NUMBER | TITLE | NEW SECTION NUMBER |
|--------------------|---------------------------------------|--------------------|
| 203-15 | RUBBER POLYMER MODIFIED SLURRY (RPMS) | 203-16 |
| 203-15.1 | General | 203-16.1 |
| 203-15.2 | Materials | 203-16.2 |
| 203-15.3 | Composition and Grading | 203-16.3 |
| 203-15.4 | Mix Design | 203-16.4 |

ADD the following:

RPMS shall be used on this contract.

SECTION 212 - LANDSCAPE AND IRRIGATION MATERIALS

ADD:

~~212-3.2.2.3~~ **Trench Marker Tape.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

1. Trench marker tape shall be installed in accordance with Standard Drawing SDM-105, "Warning/Identification Tape Installation".

SECTION 300 - EARTHWORK

300-1.4 **Payment.** To the City Supplement, item 2, DELETE in its entirety and SUBSTITUTE with the following:

2. Payment for existing pavement removal and disposal of up to 12 inches thick, within the excavation e.g., trench limits, shall be included in the Bid item for the installation of the mains or the Work item that requires pavement removal.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

TECHNICALS

TECHNICAL SPECIFICATIONS

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DIVISION 01 – GENERAL REQUIREMENTS

05120 Measurement and Payment

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15061 Steel Pipe

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DIVISION 16 – ELECTRICAL

16050 General Requirements for Electrical Work

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 WORK OF THIS SECTION

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall only apply for work within the Metropolitan Operations Center 5 (MOC 5). Bid Schedule as specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, manufactured articles, and for all labor and services, operations, and incidentals appurtenant to the items of Work being described, 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 cost 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 for the various appurtenant items of Work.
- B. Payment references for all work within public right of way shall be per the current editions of the Standard Specifications for Public Works Construction (Greenbook), City of San Diego Standard Specifications for Public Works Construction (Whitebook), and Project Supplementary Special Provisions. Where applicable, bid schedule for these items is detailed in the Contract Documents. No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs shall be included in the prices named in the Bid Schedule for the various items of WORK.

1.2 MEASUREMENT - GENERAL

Items of work indicated to be paid on a Lump Sum, L.S. basis will be measured in the most logical and cost effective units for the applicable item.

1.3 PAYMENT AND PERFORMANCE BONDS (BID ITEM NO. 1) LUMP SUM

- A. No measurement shall be made for this item.
- B. Bonds required for this Work shall be in accordance with Section 2-4 of the Whitebook. Payment for bonds will be made in accordance with Section 2-4.1 of the Whitebook.

1.4 BUILDING PERMITS – TYPE 1 (BID ITEM NO. 2) ALLOWANCE

- A. No measurement shall be made for this item.

- B. CONTRACTOR may mobilize but shall not start construction until the issuance of all necessary permits. Contractor costs associated with permit delays related to mobilized field crew stand-by time in advance of permit issuance shall be at the Contractor's expense
 - C. CONTRACTOR shall be responsible for following all permit requirements and shall bear the cost of any permit infractions.
 - D. Initial permit fees necessary for permit issuance/acquisition prior to construction activities will be paid by the Contractor.
 - E. An allowance shall be set aside for permit fees. The required allowance amount is shown on the Bid Schedule under Item No. 2.
- 1.5 FIELD ORDERS – TYPE II (BID ITEM NO. 3) ALLOWANCE
- A. No measurement shall be made for this item.
 - B. An allowance shall be set aside for field orders. The required allowance amount is shown on the Bid Schedule under Item No. 3. Payment for field orders shall be in accordance with Section 9-3.5 of the Whitebook. Payment for WORK under this bid item will be made only to the extent that such WORK is specifically authorized in advance by the Engineer. Unused portions of the field order allowance will revert to the City at acceptance of the Work, as described in Section 1-2 of the Whitebook.
- 1.6 DEMOLITION OF EXISTING STRUCTURE FOUNDATION, ASPHALT CONCRETE, CONCRETE IMPROVEMENTS AND AGGREGATE BASE (BID ITEM NO. 4) LUMP SUM
- A. No measurement shall be made for this item.
 - B. Payment for the demolition of the existing structure foundation and asphalt concrete shall include but not limited to structure demolition, below-grade demolition, excavation, removal of portion of fence, hauling and disposal of demolished materials, patching, repairing, cleaning, restoration of fence, utilities and facilities indicated in the Contract Documents, and all other work necessary to complete this item of work. Payment will be made at the lump sum price named in the Bid Schedule under Item No. 4.
- 1.7 STRUCTURAL CONCRETE (BID ITEM NO. 5) LUMP SUM
- A. No measurement shall be made for this item.
 - B. Payment shall include furnishing of materials and installation of structural concrete as shown in the Contract Documents. Payment shall include all concrete, leveling aggregate, labor, equipment, water, expansion joints, control joints and incidentals to place and finish concrete. It shall include any saw cutting of adjacent surfaces, final cure and protection of finished surface where indicated, at the lump sum price named in the Bid Schedule under Item No. 5.
- 1.8 STRUCTURAL CANOPY (BID ITEM NO. 6) LUMP SUM

- A. No measurement shall be made for this item.
 - B. Payment for this work shall include furnishing of materials and installation of structural canopy as shown in the Contract Documents. Payment shall include all structural steel members, metal canopy deck, appurtenant items such as nuts, washers, bolts, fasteners, brace connections, rain gutters, downspouts, labor, equipment, and incidentals to furnish the work. Payment shall be in the amount of the lump sum price named in the Bid Schedule under Item No. 6.
- 1.9 MECHANICAL PIPING (BID ITEM NO. 7) LUMP SUM
- A. No measurement shall be made for this item.
 - B. Payment for this work shall include furnishing of materials and installation of mechanical piping and appurtenances as shown in the Contract Documents. Payment shall include all piping, spray nozzles, appurtenant items such as nuts, washers, bolts and fasteners, bollard posts, and incidentals to furnish the work. Payment shall be in the amount of the lump sum price named in the Bid Schedule under Item No. 7.
- 1.10 ASPHALTIC CONCRETE PAVEMENT FOR ELECTRICAL & INSTRUMENTATION (BID ITEM NO. 8) LUMP SUM
- A. No measurement shall be made for this item.
 - B. Payment for this work shall include furnishing of materials and installation of asphaltic concrete. Work shall include furnishing of materials and installation of Asphalt Concrete pavement. Payment shall include all labor, equipment and incidentals to haul, spread, and compact asphalt concrete to final profile grade at locations shown in the Contract Documents. It shall include all preparation work of subgrade, including all saw cutting, and the removal, hauling and disposal of excavated material. It shall include the application of all prime, tack, and seal coats where indicated, and the protection of adjacent areas. Payment shall be in the amount of the lump sum price named in the Bid Schedule under Item No. 8.
- 1.11 ELECTRICAL & INSTRUMENTATION SYSTEM (BID ITEM NO. 9) LUMP SUM
- A. No measurement shall be made for this item.
 - B. Payment for this work shall include furnishing of materials and installation of electrical and instrumentation systems. Payment shall include all labor, equipment and incidentals to install electrical conduits, wiring, lamps, Rainbird irrigation controller, weatherproof enclosures, and all appurtenant items such as fasteners, nuts, bolts, sealants, and incidentals required to furnish the work. Payment shall be in the amount of the lump sum price named in the Bid Schedule under Item No. 9.
- 1.12 WATER POLLUTION CONTROL PROGRAM (WPCP) DEVELOPMENT (BID ITEM NO. 10) LUMP SUM
- A. No measurement shall be made for this item.

- B. Development of the WPCP shall include work within the MOC 5 property. Payment reference is per City of San Diego Whitebook section 701-13.9.5. Payment shall be made at the lump sum price named in the Bid Schedule under Item No. 10.
-

1.13 WATER POLLUTION CONTROL PROGRAM (WPCP) IMPLEMENTATION (BID ITEM NO. 11) LUMP SUM

- A. No measurement shall be made for this item.
- B. Implementation of the WPCP shall include work within the MOC 5 property. Payment reference is per City of San Diego Whitebook section 701-13.9.5. Payment shall be made at the lump sum price named in the Bid Schedule under Item No. 11.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

*** END OF SECTION ***

SECTION 05120
STRUCTURAL STEEL

PART 1 -- GENERAL

1.01 WORK OF THIS SECTION

- A. The Contractor shall provide structural steel beams, columns, bracings, galvanizing, and appurtenances, complete, in accordance with the Contract Documents.

1.02 RELATED SECTIONS

- A. The Work of the following Sections apply to the Work of this Section. Other Sections, not referenced below, shall also apply to the extent required for proper performance of the Work.
- B. Related Work Specified in Other Sections.
 - 1. Section 05500 Miscellaneous Metals
 - 2. Steel supports, hangers, brackets and other miscellaneous items accessory to the mechanical and electrical installations, and indicated or detailed on the Drawings and in Divisions 15 and 16

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. The current edition of the California Building Code (CBC) as adopted by the City of San Diego Municipal Code.
- B. COMMERCIAL STANDARDS (Current Edition):

| | |
|-----------|--|
| AISC M011 | Manual of Steel Construction for Shop and Field Welding |
| AISC S326 | Design, Fabrication and Erection of Structural Steel for Buildings |
| AWS-B3.0 | Welding Procedures and Performance Qualifications |
| AWS-D1.1 | Structural Welding Code - Steel |
| AWS-W1 | Welding Metallurgy |
- C. ASTM STANDARDS IN BUILDING CODE (Current Edition):

| | |
|---------|---|
| ASTM A6 | General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use |
|---------|---|

| | |
|-----------|---|
| ASTM A36 | Structural Steel |
| ASTM A53 | Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless, Grade B |
| ASTM A123 | Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products |
| ASTM A283 | Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes and Bars |
| ASTM A325 | High Strength Bolts for Structural Steel Joints |
| ASTM A490 | Heat-Treated Structural Steel Bolts |
| ASTM A500 | Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes |

1.4 SUBMITTALS

- A. Submittals shall be provided in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook, and shall include the items listed below.
- B. SHOP DRAWINGS AND ERECTION DRAWINGS: The shop drawings shall provide a materials and specification list, construction and fabrication details, layout and erection diagrams, and the method of anchorage to adjacent construction. The shop drawings shall give the location, type, size and extent of welding and bolted connections, and clearly distinguish between shop and field connections. Before submittal of the shop drawings, the Contractor shall coordinate the shop drawings and related trades to ensure proper mating of assemblies. All work shall conform to the approved shop drawings.
- C. TEST REPORTS: The Contractor shall furnish certified physical and chemical mill test reports for material used for structural members. All tests shall be performed in accordance with applicable ASTM Standards.
- D. SHOP PAINTING DATA: The Contractor shall submit a product list with product data sheets of intended shop coats, which for reasons of compatibility, shall be the same products and manufacturer as those of deferred field-applied systems.

1.05 DELIVERY

- A. The Fabricator shall deliver the fabricated material to the job site in the sequence as approved by the Resident Engineer.
- B. All shipped material to be piece-marked for erection with metal tags or other appropriate method approved by the Resident Engineer.

- C. All material shipments shall include sufficient bolts for erection, plus at least the following extra bolts:
 - 1. Add a minimum of 2% for high strength bolts.
 - 2. Add a minimum of 5% for unfinished bolts.
- D. The Resident Engineer reserves the right to inspect fabricated material at Fabricator's shop. The Resident Engineer's expenses for shop expenses will be borne by the Owner. In the event the Resident Engineer identifies faulty materials or workmanship in fabricated material at the Fabricator's shop, the costs of additional inspections shall be borne by the Contractor. The Resident Engineer shall be notified at least 7 days before the shipment of material. Shipments of material shall not be deleted if the Resident Engineer does not require inspection.
- E. Material damaged in shipment shall be replaced or repaired at the Contractor's expense at no additional cost to the Owner.

1.06 QUALITY ASSURANCE

- A. The Contractor shall fabricate and erect structural steel work in accordance with the latest edition of AISC "Specification for the Design, Fabrication and Erection of Steel for Buildings", and "Code of Standard Practice for Steel Buildings and Bridges", except whenever there is a discrepancy between the Drawings and this Section, the Drawings will govern.
- B. CONTINUOUS INSPECTIONS:
 - 1. The Contractor shall perform all welding and high strength bolting of structural steel assemblies under continuous inspection of an ICC-certified Special Inspector. Should such fabrication be performed in the shop of a licensed Fabricator approved by the governing Building Official and certified by ICC, only the field welding and high strength bolting of structural steel assemblies will be required to be performed under continuous inspection of the ICC-certified Special Inspector.
 - 2. The Contractor shall notify the Resident Engineer at least 24 hours in advance of the needed inspection.
 - 3. The Contractor shall provide copies of inspection reports to the Resident Engineer and Building Department.

1.07 WARRANTY

- A. The Fabricator shall furnish a warranty to the Owner to replace or repair all defective material and workmanship within 18 months of shipment, or 12 months of plant startup, whichever occurs first, excluding defects due to normal usage.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. GENERAL. All materials shall be new, sound and conform to the requirements herein. Unless otherwise indicated, structural steel shall be galvanized.
- B. STRUCTURAL STEEL: Rolled shapes, plates and bars shall conform to the latest edition of the AISC "Manual of Steel Construction", and shall also conform to current ASTM Designation indicated on the Drawings.
- C. PIPE: Pipe shall conform to ASTM A53, Grade B seamless galvanized as required, Schedule 40, except as otherwise shown on the Drawings.
- D. TUBES: Tubes shall conform to ASTM A500 Grade B ($F_y = 46\text{ksi}$).
- E. HIGH STRENGTH STRUCTURAL BOLTS: Bolts, nuts and washers shall conform to ASTM A325, unless otherwise noted on the Drawings.
- F. WELDING ELECTRODES: The Contractor shall use steel electrodes conforming with AWS D1.1, except that E7024 rods or electrodes shall not be used.
- G. GALVANIZING:
 - 1. Iron and Steel. ASTM A123, with an average weight of 2.0 ounces per square foot, and not less than 1.8 ounces per square foot.
 - 2. Ferrous Metal Hardware Items. ASTM A153 with average weight of 1.3 ounces per square foot.
 - 3. Touch-up Material for Galvanized Coatings. The Contractor shall repair galvanized coatings marred or damaged during erection or fabrication by use of Drygalv, as manufactured by the American Solder and Flux Company, Galvalloy, Galvion, Rust-Oleum 7085 Cold Galvanizing Compound, or equal, applied in accordance with the manufacturer's instructions.
- H. PATCH COAT FOR GALVANIZED SURFACES. The Contractor shall patch all galvanized surfaces which are scratched, marred, or otherwise damaged with Kop-Coat's Carbo Zinc 11, Drygalv" by American Solder and Flux Co., Ruse-Oleum 2185 Cold Galvanizing Compound, Glidden's Glid Zinc organic 5526/5527/5528, Mobil 13F1180, Sherwin-William's Zinc Clad I (Low VOC) B69AW9, Tnemec 90-97, or equal.

2.02 FABRICATION

- A. Fabrication shall be in accordance with AISC S326 and indicated requirements. All structural steel welding in off-site fabrication shops shall be continuously inspected by a City of San Diego Certified Special Inspector with the inspection cost of the Special Inspector to be borne by the Contractor. The continuous inspection will be waived if the work is done in a shop certified by the AISC and approved by the City of San Diego.

PART 3 -- EXECUTION

3.01 INSTALLATION

A. GENERAL

1. Structural assemblies and shop and field welding shall meet the requirements of AISC M011 and AISC S326.
2. Measurements and dimensions shall be verified at the site.
3. Bolt holes shall be 1/16 inch larger than the nominal size of bolts. Where thick metals are indicated, holes shall be sub-punched and drilled, or reamed.
4. Dissimilar metals shall be protected from galvanic corrosion by means of pressure tapes, coatings or isolators.
5. Bolts shall not be permitted to drift, and holes shall not be enlarged to correct misalignment. In the event of mismatching of holes, new materials shall be provided.
6. Structural steel completely encased in concrete shall not be galvanized or painted, and shall have a clean surface for bonding to concrete.
7. Damaged structural steel shall be replaced. Use of salvaged, reprocessed, or scrap materials shall not be permitted.

B. WELDING: Welding shall be performed by operators who have been qualified by tests as prescribed by AWS-W1 Section 7, to perform the type of welding indicated. Welding shall comply with AWS Code for Arc Welding in Building Construction, Section 4, Workmanship. Electrodes shall be matching per AWS.

C. GALVANIZING: All structural steel plates shapes, bars and fabricated assemblies required to be galvanized shall, after the steel has been thoroughly cleaned of rust and scale, be galvanized in accordance with the requirements of ASTM A123. Any galvanized part that becomes warped during the galvanizing operation, shall be straightened. Bolts, anchor bolts, nuts and similar threaded fasteners, after being properly cleaned, shall be galvanized in accordance with the requirements of ASTM A153. Field repairs to galvanizing shall be made using "Galvinox", "Galvo-Weld, or equal.

D. PAINTING: The Contractor shall give one or more shop coats of paint on all structural steel, except galvanized metals. Before priming, the Contractor shall thoroughly clean surfaces. The Contractor shall allow shop coats to dry before materials are loaded for delivery to the job site. After erection, the Contractor shall paint all areas where the shop coats have been rubbed off or omitted, and all field bolting and welding as specified for shop priming. The Contractor shall perform surface preparation, prime coatings, finish painting and coatings.

2.03 INSPECTION

- A. The Owner reserves the right to inspect all materials and workmanship covered in this Specification. However, such inspection shall not relieve the Contractor of its responsibility to furnish materials and workmanship in accordance with the Contract requirements. If inspection indicates a weld or part of the material is defective, the Contractor shall remove and replace it at the Contractor's expense.
- B. Shop inspection may include, but not be limited to, the following:
1. Verification of conformance of materials with this Specification and the Drawings. The limits of acceptability and repair of surface imperfections for structural steel shall be in accordance with ASTM A-6.
 2. Visual and dimensional inspection of shop-fabricated structural steel members and assemblies shall be in conformance with this Specification and the Drawings.
 3. Inspection of high strength bolted connections shall be in accordance with AISC "Specification for Structural Joints Using ASTM A-325 or A-490 Bolts".
 4. Verification of welding procedures, welding operations, and welder and tacker certificates of qualification shall be in accordance with this Specification and AWS D1.1.

****END OF SECTION****

SECTION 05311

STEEL ROOF DECK

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required and install steel roof deck complete as shown on the Drawings and as specified herein.

1.02 RELATED WORK

- A. Section 05120 – Structural Steel.
- B. Section 05500 – Miscellaneous metal.
- C. Section 07710 – Manufactured Roof Specialties.

1.03 SUBMITTALS

- A. Submittals shall be provided in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook, and shall include the following:
 - 1. SHOP DRAWINGS: Submit shop drawings showing:
 - a. Location and size of all members
 - b. Projections and openings.
 - c. Fastener types and layout patterns.
 - d. Erection marks. Mark each bundle to correspond to the shop drawings.
 - 2. PRODUCT DATA: Submit product data showing:
 - a. Materials, finishes and details of construction of all members.
 - b. Manufacturer's load table including design thickness in inches and section properties, gravity load carrying capability at the span used, diaphragm shear capacity and ICC-ESR Evaluation Report.
- B. QUALITY ASSURANCE/CONTROL:
 - 1. Certification from the Steel Deck Institute (SDI) that the steel roof deck is designed in accordance with the SDI.
 - 2. Certification for welders.

3. Written Welding Procedure Specifications (WPS's) in accordance with AWS D1.3 and SDI requirements for each different welded joint proposed for use whether prequalified or qualified by testing.
4. Electrode manufacturer's data for actual electrodes proposed. Data shall include manufacturer's recommended welding parameters for each electrode to be used.

1.04 REFERENCE STANDARDS

A. STEEL DECK INSTITUTE (SDI):

1. SDI Specifications and Commentary for Steel Roof Deck.

B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM):

1. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron, Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A780 - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

C. AMERICAN IRON AND STEEL INSTITUTE (AISI):

1. AISI SG03-3 – North American Specification for the Design of Cold-Formed Steel Structural Members.

D. AMERICAN WELDING SOCIETY (AWS):

1. AWS D1.3 – Structural Welding Code – Sheet Steel.

E. INTERNATIONAL CODE COUNCIL (ICC).

- ##### F. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALITY ASSURANCE

- ##### A. Steel roof deck shall conform to the requirements of the SDI.

- ##### B. Field welding shall be done by certified welders and shall be in accordance with AWS D1.3 and the AISI.

1. Qualify welders in accordance with AWS D1.3 for each process, position, and joint configuration.
2. WPS's for each joint type shall indicate proper AWS qualification and be available where welding is performed.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Handle material with cranes and derricks. Do not dump material off cars or trucks, or handle in any way likely to cause damage.
- B. Store material off the ground with one end elevated to provide drainage. Protect from the elements with a waterproof covering, ventilated to avoid condensation.
- C. Material with excessive damage, in the opinion of the Engineer, shall not be incorporated in the work. Remove and replace them with new undamaged material at no additional cost to the Owner.

1.07 PROJECT/SITE REQUIREMENTS

- A. Notify the Engineer in writing of any inaccuracies in alignment or level of structural steel. Correct inaccuracies before the deck is placed at no additional cost to the Owner.
- B. Coordinate sizes and locations of HVAC openings and hatch penetrations with architectural, structural, mechanical, or HVAC drawings, using the approved curb and equipment details.
- C. Coordinate size, location and details of all penetrations with the Drawings, other trades and details of approved equipment.
- D. Provide reinforcement and miscellaneous framing for all penetrations as shown on the Drawings and as specified herein.

1.08 DEFINITIONS

- A. TRANSVERSE SUPPORTS: Supports which are perpendicular to the direction of the deck ribs.
- B. LONGITUDINAL SUPPORT: Supports which are parallel to the direction of the deck ribs.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Steel roof deck shall conform to the SDI Specifications for Steel Roof Deck and to the AISI.
 - 1. North American Specification for the Design of Cold-Formed Steel Structural Members.
- B. The depth, type and gauge of steel roof deck shall be as shown on the Drawings. Unless otherwise noted, steel roof deck shall be 1-1/2-in deep, 36-in wide, Type HSB.

- C. Steel deck shall be as manufactured by Verco Manufacturing Company or equal. For a proposed deck to be considered equal, the deck gauge, fastening pattern to supports, and side lap connections must be sufficient to provide diaphragm shears greater than or equal to those published in ICC-ESR Evaluation Report 1735P for the deck specified using the same spans, welding pattern, and type and spacing of side lap connections shown on the Drawings. An ICC-ESR Evaluation Report will be required to substantiate all values.
- D. Steel roof deck and accessories shall be manufactured from steel conforming to ASTM A653, designation SS, Grade 33 or higher.
- E. Steel roof deck and accessories shall be galvanized in accordance with ASTM A653, coating designation G90.
- F. Provide minimum 20 gauge galvanized closure strips, eave plates, ridge plates, etc. as shown on the Drawings and as specified herein. Provide reinforcing plates same gauge as deck for openings 6-in and larger but less than 12-in in greatest dimension.
- G. Provide galvanized touch-up to repair damaged surfaces.

PART 3 -- EXECUTION

3.01 INSTALLATION

- A. Install steel roof deck as shown on the Drawings, in accordance with manufacturer's instructions and in accordance with approved shop drawings. Where possible, extend deck sheets over a minimum of three spans.
- B. End laps of steel roof deck shall be at least 2-in long and shall occur over transverse supporting members.
- C. Fasten deck to all supporting steel by arc spot (puddle) welds of the surface diameter indicated and specified below:
 - 1. Weld Diameter: $\frac{3}{4}$ -in, nominal.
 - 2. Weld Spacing: Weld edge ribs of panels at each support. Space and locate additional welds as indicated on the Drawings.
 - 3. Weld Washers: Install weld washers at each location.
- D. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels between supports, at intervals not exceeding the lesser of $\frac{1}{2}$ of the span or 12 inches, and as follows:
 - 1. Fasten with a minimum of 1-1/2-in long weld.
- E. POUR STOPS AND GIRDER FILLERS: Weld steel sheet pour stops and girder fillers to supporting structure according to SDI recommendations, unless otherwise indicated.

- F. DECK CLOSURES: Weld steel sheet column closures, cell closures, and Z-closures to deck, according to SDI recommendations, to provide tight-fitting closures at open ends of ribs and sides of deck.
- G. Coordinate size, location and details of all penetrations with the Drawings, other trades and details of approved equipment. Pipe and conduit openings in the steel roof deck shall be reinforced according to the manufacturer's recommendation.
 - 1. Cutting and Fitting:
 - a. Cut and fit steel roof deck units and accessories around projections through steel roof deck.
 - b. Cut openings in steel roof deck true to dimensions using metal saws or drills. Do not use cutting torches.
 - c. Make cuts neat, square and trim. Make cuts free of burrs.
 - d. Reinforce openings 6-in and larger but less than 12-in in greatest dimension with a 24-in by 24-in flat plate, same gauge thickness as deck, centered on the opening.
- H. Do not attach suspended ceilings, light fixtures, ducts, piping, conduits or other utilities to steel roof deck.
- I. Do not use deck for storage or work platforms until permanently secured into position.
- J. Construction loads shall not exceed safe capacity of deck and supporting construction.

3.02 FIELD TESTING

- A. TESTING AGENCY:
 - 1. Engage a qualified independent testing and inspecting agency to perform field test and inspection and prepare test reports.
 - 2. Testing agency will report inspection results promptly and in writing to Contractor and Engineer.
- B. Remove and replace work that does not comply with specified requirements.

3.03 FIELD PAINTING

- A. Clean and repair all steel surfaces which have become abraded or where galvanizing has been damaged due to welding and/or erection procedures.
- B. Repair abraded or damaged galvanized areas using the touch-up material specified above to produce a dry film thickness of not less than 6 mils. Conduct all repairs of galvanizing in accordance with ASTM A780.

3.04 INSPECTION

- A. Field welding will be inspected visually and by non-destructive testing by AWS certified welding inspectors provided by the Contractor.
- B. The Engineer and the certified welding inspector will inspect steel roof deck in the field for compliance with this Section and the approved shop drawings. The Engineer and the certified welding inspector may reject or require repair or refabrication of any steel roof deck or accessories not meeting these requirements.

****END OF SECTION****

SECTION 05500

MISCELLANEOUS METALS

PART 1 -- GENERAL

1.01 WORK OF THIS SECTION

- C. The Contractor shall provide miscellaneous metals and appurtenances, complete, in accordance with the Contract Documents.
- D. Work Included in this Section. Principal items are:
 - 1. Shop/erection drawings and samples.
 - 2. Steel channels and/or angle frames and thresholds with anchors.
 - 3. Welding electrodes.
 - 4. Shop prime paint.
 - 5. Pipe supports with saddles, hangers, bracing and attachments as detailed and required, except as provided by other trades.
 - 6. Guard post assemblies of removable and stationary types.
 - 7. Miscellaneous iron and steel items indicated, specified, or required for completion of the Contract, unless included under other Sections.
 - 8. Galvanizing and shop primer finishes, including field touch-up.

1.02 RELATED SECTIONS

- E. The Work of the following Sections apply to the Work of this Section. Other, not referenced below, shall also apply to the extent required for proper performance of this Work.
 - 1. Section 05120 Structural Steel
 - 2. Section 07710 Manufactured Roof Specialties
 - 3. Steel supports, hangers, brackets and other miscellaneous items accessory to mechanical and electrical installations indicated on the Drawings, or covered in Divisions 15 and 16.

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Except as otherwise indicated in this Section of the Specifications, the Contractor shall comply with the latest adopted edition of the Standard Specifications for Public Works Construction (SSPWC), together with the latest adopted editions of the Regional and City of San Diego Supplement Amendments.
- B. The current edition of the California Building Code (CBC) as adopted by the City of San Diego Municipal Code.
- C. Except as otherwise indicated, the current editions of the following Federal Specifications apply to the Work of this Section:
 - 1. QQ-F-461 Floor Plate, Steel, Rolled
 - 2. MIL-G-18015 A (Ships) Aluminum Planks. (6063-T6)
 - 3. MIL-A-907E Antiseize Thread Compound, High Temperature
- D. Except as otherwise indicated, the current editions of the following commercial standards apply to the Work of this Section:
 - 1. Commercial Standards:

| | |
|---------------|--|
| AA-M32C22A41 | Aluminum Association |
| AASHTO | HS-20 Truck Loading |
| AISC | Specification for Design, Fabrication and Erection of Structural Steel for Buildings with Commentary and Code of Standard Practice for Steel Buildings and Bridges |
| AISC | Manual of Steel Construction |
| AISI | Design of Light Gauge, Cold-Formed Steel Structural Members |
| ANSI/AWS D1.1 | Structural Welding Code - Steel |
| ANSI/AWS D1.2 | Structural Welding Code - Aluminum |
| ANSI/AWS QC1 | Specification for Qualification and Certification of Welding Inspectors |
| NFPA 101 | Life Safety Code |
| NAOMM | Metal Stairs Manual |
| AWS-AS | Welding of Stainless Steel with Electrodes and Techniques |
 - 2. ASTM Standards in Building Codes:

| | |
|----------|------------------------------------|
| ASTM A36 | Specification for Structural Steel |
|----------|------------------------------------|

| | |
|-----------|--|
| ASTM A48 | Specification for Gray Iron Castings |
| ASTM A53 | Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless |
| ASTM A123 | Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products |
| ASTM A125 | Specification for Steel Springs, Helical, Heat Treated |
| ASTM A153 | Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware |
| ASTM A167 | Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip |
| ASTM A193 | Specification for Alloy-Steel and Stainless steel Bolting Materials for High-Temperature Service |
| ASTM A194 | Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure and High-Temperature Service |
| ASTM A276 | Specification for Stainless Steel Bars and Shapes |
| ASTM A283 | Specification for Low and Intermediate Tensile Strength Carbon Steel Plates |
| ASTM A307 | Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile |
| ASTM A320 | Specification for Alloy-Steel Bolting Material for Low-Temperature Service |
| ASTM A424 | Specification for Steel, Sheet, for Porcelain Enameling |
| ASTM A500 | Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes |
| ASTM A536 | Specification for Ductile Iron Casting |
| ASTM A563 | Specification for Carbon and Alloy Steel Nuts |
| ASTM A569 | Specification for Steel, Carbon (0.15 Maximum Percent), Hot Rolled Sheet and Strip Commercial Quality |
| ASTM A575 | Specifications for Steel Bars, Carbon, Merchant Quality, M-Grades |
| ASTM A786 | Specification for Rolled Steel Floor Plates |
| ASTM B98 | Specification for Copper-Silicon Alloy Rod, Bar, and Shapes |
| ASTM B210 | Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes |
| ASTM B221 | Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes |

1.04 SUBMITTALS

- A. Submittals shall be provided in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook, and shall include the following:
1. **SHOP DRAWINGS:** Submit shop drawings for all metal fabrications.
 2. **LAYOUT DRAWINGS:** Layout drawings for grating shall be submitted showing the direction of span, type and depth of grating, size and shape of grating panels, seat angle details, and details of grating hold down fasteners. Load and deflection tables shall be submitted for each style and depth of grating used.
 3. **PRODUCT LIST AND PRODUCT DATA SHEETS:** A product list shall be submitted with product data sheets of intended shop coats. Shop coats shall be the same products and manufacturer as those of deferred field-applied systems.

1.05 QUALITY ASSURANCE

- A. Miscellaneous metals shall be fabricated and erected in accordance with the latest edition of the AISC "Specification for the Design, Fabrication and Erection of Steel for Buildings", and "Code of Standard Practice for Steel Buildings and Bridges", except whenever there is a discrepancy between the design drawings and this specification, the Drawings shall govern.
- B. Aluminum work shall be fabricated and erected in conformance with applicable requirements of the CBC and referenced standards of the Aluminum Association.
- C. **CONTINUOUS INSPECTIONS:** All welding and high strength bolting of structural steel assemblies shall be conducted under the continuous inspection of an International Code Council (ICC) certified "Special Inspector" selected by the Owner with costs borne by the Owner. Should such fabrication be performed in the shop of a licensed fabricator approved by the governing building official and certified by the ICC Evaluation Services, Inc. Only the field welding and high strength bolting of structural steel assemblies will be required to be performed under continuous inspection of the ICC-certified "Special Inspector." The Owner shall be notified at least 24 hours in advance of needed inspections. Copies of inspection reports for shall be provided for the Owner, Contractor, and governing building official.

PART 2 -- PRODUCTS**2.01 MATERIALS**

- A. **STEEL:** Steel shall conform to the following requirements:
1. **Shapes, Plates, Bars:** ASTM A 36 unless otherwise indicated on the Drawings

2. Pipe, Pipe Columns, Bollards: ASTM A 53, Type E or S, Grade B Schedule 40, unless noted otherwise
 3. Tubes: ASTM A 500, Grade B
- B. ALUMINUM: Aluminum structural shapes shall be new and conform to applicable Federal Specification for 6061-T6 alloy, unless otherwise noted. Aluminum Pipe shall conform to Schedule 40, or greater.
 - C. STAINLESS STEEL: Unless otherwise designated or approved, stainless steel alloy types shall conform to ASTM A167 and ASTM A276 as follows:
 1. Stainless steel plates, pipe and structural shapes: Type 316L.
 2. Stainless steel bolts, nuts and washers: Type 316L where connecting or bearing on aluminum.
 - D. CAST IRON: Cast iron shall conform to ASTM A48, except as otherwise noted.
 - E. DUCTILE IRON: Ductile iron shall conform to ASTM A536, using Grade 60-40-18 or better, except as otherwise noted.
- 2.02 STEEL PIPE HANDRAILS (NOT USED)
- 2.03 METAL STAIRS (NOT USED)
- 2.04 GRATING STAIR TREADS (NOT USED)
- 2.05 SAFETY STAIR NOSINGS (NOT USED)
- 2.06 LADDERS (NOT USED)
- 2.07 METAL GRATING (NOT USED)
- 2.08 CHECKERED PLATE (NOT USED)
- 2.09 HATCHES (NOT USED)
- 2.10 IRON CASTINGS (NOT USED)
- 2.11 CAST-IN-PLACE THRESHOLD (NOT USED)
- 2.12 GALVANIZING
- A. GALVANIZING FOR IRON AND STEEL: Galvanizing for iron and steel shall conform to ASTM A123, with the average weight of 2.0 ounces per square foot, and not less than 1.8 ounces per square foot.
 - B. FERROUS METAL HARDWARE ITEMS: Ferrous metal hardware items shall conform to ASTM A153, with average coating weight of 1.3 ounces per square foot.

2.13 WELDING ELECTRODES

- A. STEEL ELECTRODES: Welding electrodes shall conform with AWS D1.1, except E7024 rods or electrodes shall not be used.
- B. ALUMINUM ELECTRODES: Contingent upon alloys being welded, only inert gas-shielded arc or resistant-welding process with filler alloys conforming to UBC Standard No. 28, Table 28-1-C shall be used. No process requiring a welding flux shall be used.
- C. STAINLESS STEEL ELECTRODES: Welding of stainless steel with electrodes and techniques shall conform to the pertinent AWS A5 series specification, and as recommended in Welded Austenitic Chromium-Nickel Stainless Steel Techniques and Properties as published by the International Nickel Company, Inc., New York, New York.

2.14 BOLTS

- D. BOLT REQUIREMENTS: Bolts shall comply with the following:
 - 1. Nuts shall be capable of developing the full strength of the bolts. Threads shall be Coarse Thread Series conforming to the requirements of the American Standard for Screw Threads. Bolts and cap screws shall have hexagon heads and nuts shall be Heavy Hexagon Series.
 - 2. The length of all bolts shall be such that after joints are made up, each bolt shall extend through the entire nut, but in no case more than 2-inch beyond the nut.
- E. STANDARD SERVICE BOLTS (Not Buried or Inside Tanks or Channels): Except where otherwise indicated, bolts and nuts shall be steel and shall be galvanized after fabrication. Threads on galvanized bolts and nuts shall be formed with suitable taps and dies such that they retain their normal clearance after hot-dip galvanizing. Except as otherwise indicated herein, steel for bolts, anchor bolts and cap screws shall be in accordance with the requirements of ASTM A325, or threaded parts of ASTM A36. ASTM A325 bolts and nuts shall not be galvanized.
- F. BOLTS BURIED OR INSIDE TANKS OR CHANNELS: Unless otherwise indicated, bolts, anchor bolts, nuts and washers which are buried, submerged, or below the top of the wall inside any hydraulic structure shall be of Type 316 stainless steel.

2.15 SHOP PRIME PAINT

- G. SHOP PRIME PAINT: To ensure compatibility with deferred field-applied paint or coating systems, for ferrous metals other than stainless steel, galvanized steel and cast iron, provide surface preparations, and use shop prime paint product and manufacturer as painting, or protective coating system intended for field application. Shop prime shall not be provided on portions of work immediately adjacent to intended field welds, or on portions intended for embedment. Steel stair nosings shall

be painted with industrial "Safety Yellow" enamel prime and finish coats conforming with California OSHA requirements.

2.16 MANUFACTURERS

- A. Products of the type or model (if any) indicated shall be manufactured by one of the following (or equal):
 - 1. Field Repairs to Galvanizing:
 - a. "Galvinox"
 - b. "Galvo-Weld"

PART 3 -- EXECUTION

3.01 FABRICATION AND INSTALLATION REQUIREMENTS

- B. FABRICATION AND ERECTION: Except as otherwise indicated, the fabrication and erection of structural steel shall conform to the requirements of the American Institute of Steel Construction "Manual of Steel Construction."
 - 1. The Work of this Section shall be coordinated with related trades. Particular attention is required for items to be embedded in concrete work. All punchings and drillings, indicated or required, shall be provided for attachment of other work to that of this Section.
- C. PROTECTION: The Contractor shall provide and be responsible for protection and repair of adjacent surfaces and areas which may become damaged as a result of work in this Section. Work performed hereunder shall be protected until completion and final acceptance of project by the Owner. The Contractor shall repair or replace all damaged or defective work to original specified condition at no additional cost to the Owner.
 - 1. Finished floor surfaces and adjacent work shall be protected from damage. Concrete floors shall not be overloaded. Mobile equipment used in placing steel shall have pneumatic tires. Steel members shall not be placed directly on floors; pads of timber or other material shall be used for cushioning.
 - 2. Where welding is done in proximity to glass or finished surfaces, such surfaces shall be protected from damage due to weld sparks, spatter or tramp metal.
- D. PIPE AND CONDUIT SUPPORTS AND BRACING: Supports and bracing for pipe and conduit shall be fabricated and installed as detailed on the Drawings in a fully coordinated manner with the Work of other trades. Where shown or indicated, hot-dip galvanized shall be provided after fabrication, with touch-up of abraded or burned galvanizing using materials specified in this Section. Unless otherwise indicated, members shall be shop primed with a rust-inhibitive primer.

3.02 WELDING

- A. WELDING STEEL: Welding shall be performed in accordance with the "Structural Welding Code-Steel"; AWS D1.1, and current revisions, except where the Gas Metal Arc Welding (GMAW) process is used, the short-circuited mode shall only be used for light gauge material (12 gauge and lighter). Welders shall be qualified by tests in accordance with AWS B3.0.

3.03 GALVANIZING

- A. GALVANIZING: All structural steel plates shapes, bars and fabricated assemblies required to be galvanized shall, after the steel has been thoroughly cleaned of rust and scale, be galvanized in accordance with the requirements of ASTM A 123. Any galvanized part that becomes warped during the galvanizing operation shall be straightened. Bolts, anchor bolts, nuts and similar threaded fasteners, after being properly cleaned, shall be galvanized in accordance with the requirements of ASTM A 153. Field repairs to galvanizing shall be made using "Galvinox," "Galvo-Weld," or equal.

3.4 PAINTING

- B. PAINTING: One or more shop coats of paint shall be given on all ferrous metals, except cast-iron, ductile iron, stainless steel and galvanized metals. Before priming, surfaces shall be thoroughly cleaned. Shop coats shall be allowed to dry before materials are loaded for delivery to the job site. After erection, all areas shall be painted where the shop coats have been rubbed off or omitted, and all field bolting and welding areas as specified for shop priming.
- C. ISOLATION OF DISSIMILAR METALS: Aluminum members shall be isolated from contact with dissimilar metals, concrete and masonry to provide protection from electrolytic deterioration. The Contractor shall use nonabsorptive tape or gaskets, a heavy brush coat of approved zinc chromate primer made with a synthetic resin vehicle, or a heavy coat of approved alkali-resistant bituminous paint.

****END OF SECTION****

SECTION 07710

MANUFACTURED ROOF SPECIALTIES

PART 1 -- GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including the Greenbook, the City Supplement (Whitebook), and Supplementary Special Provisions apply to this Section.

1.02 SUMMARY

- A. SECTION INCLUDES:
 - 1. Roof-edge flashings.
 - 2. Roof-edge drainage systems.

1.03 PERFORMANCE REQUIREMENTS

- A. GENERAL PERFORMANCE: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. FM APPROVALS' LISTING: Manufacture and install roof-edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-60. Identify materials with FM Approvals' markings.
- C. THERMAL MOVEMENTS: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

1.04 SUBMITTALS

- A. Submittals shall be provided in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook, and shall include the following:
 - 1. PRODUCT DATA: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

2. SHOP DRAWINGS: For roof specialties. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work. Include the following:
 - a. Details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
 - b. Pattern of seams and layout of fasteners, cleats, clips, and other attachments.
 - c. Details of termination points and assemblies, including fixed points.
 - d. Details of special conditions.
3. Samples for Initial Selection: For each type of roof specialty indicated with factory-applied color finishes.
4. Samples for Verification: For roof-edge flashings, roof-edge drainage systems and counter flashings made from 12-inch lengths of full-size components including fasteners, cover joints, accessories, and attachments.
5. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for roof-edge flashings.
6. Maintenance Data: For roofing specialties to include in maintenance manuals.
7. Warranty: Sample of special warranty.

1.05 QUALITY ASSURANCE

- A. MOCKUPS: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 1. Build mockup of typical roof edge, including fascia, gutter and downspout, approximately 5 feet long, including supporting construction, seams, attachments and accessories.
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless the Resident Engineer specifically approves such deviations in writing.
 3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- B. PRE-INSTALLATION CONFERENCE: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects roof specialties including installers of roofing materials and accessories.
2. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.
- B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof specialties installation.

1.07 WARRANTY

- A. SPECIAL WARRANTY ON PAINTED FINISHES: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 2. Finish Warranty Period: **20** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 EXPOSED METALS

- A. ZINC-COATED (GALVANIZED) STEEL SHEET: ASTM A 653/A 653M, G90 coating designation.
 1. Surface: Smooth, flat finish.
 2. Mill-Phosphatized Finish: Manufacturer's standard for field painting.
 3. Exposed Coil-Coated Finishes: Prepainted by the coil-coating process to comply with ASTM A 755/A 755M. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

- a. Two-Coat Fluoropolymer: AAMA 621. System consisting of primer and Fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.

2.02 CONCEALED METALS

- A. ZINC-COATED (GALVANIZED) STEEL SHEET: ASTM A 653/A 653M, G90 coating designation.

2.03 MISCELLANEOUS MATERIALS

- A. GENERAL: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. FASTENERS: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
 - 1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
 - 2. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.
- C. ELASTOMERIC SEALANT: ASTM C 920, elastomeric polyurethane polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.

2.04 ROOF-EDGE

- A. ROOF-EDGE: Fabricated from the following exposed metal:
 - 1. ZINC-COATED STEEL: Nominal 0.034-inch thickness or thickness as required to meet performance requirements.
- B. CORNERS: Factory mitered and mechanically clinched and sealed watertight.
- C. SPLICE PLATES: Concealed, of same material, finish, and shape as fascia cover.
- D. ACCESSORIES: Fascia extenders with continuous hold-down cleats, Soffit trim and Downspout scuppers with integral conductor head and downspout adapters.
- E. ROOF-EDGE FASCIA: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet and a continuous formed- or extruded-aluminum anchor bar with integral drip-edge cleat to engage fascia cover. Provide matching corner units.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Hickman Company, W. P.
 - b. Johns Manville.
 - c. Metal-Era, Inc.
 - d. Metal-Fab Manufacturing, LLC.
 - e. National Sheet Metal Systems, Inc.
2. Fascia Cover: Fabricated from the following exposed metal:
 - a. Zinc-Coated Steel: Nominal 0.034 inch thick or thickness as required to meet performance requirements.
 3. Corners: Factory mitered and mechanically clinched and sealed watertight.
 4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
 5. Fascia Accessories: Fascia extenders with continuous hold-down cleats Soffit trim and Downspout scuppers with integral conductor head and downspout adapters.

2.05 ROOF-EDGE DRAINAGE SYSTEMS

- A. MANUFACTURERS: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Andreas Renner KG.
 2. Architectural Products Company.
 3. ATAS International, Inc.
 4. Berger Building Products, Inc.
 5. Castle Metal Products.
 6. Cheney Flashing Company.
 7. CopperCraft by FABRAL; a Euramax company.
 8. Hickman Company, W. P.
 9. Klauer Manufacturing Company.
 10. Merchant & Evans, Inc.

11. Metal-Era, Inc.
 12. Metal-Fab Manufacturing, LLC.
 13. MM Systems Corporation.
 14. National Sheet Metal Systems, Inc.
- B. GUTTERS: Manufactured in uniform section lengths not exceeding 12 feet, with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch above front edge. Furnish flat-stock gutter straps, gutter brackets, expansion joints, and expansion-joint covers fabricated from same metal as gutters.
1. Fabricate from the following exposed metal:
 - a. Zinc-Coated Steel: Nominal 0.034-inch thickness.
 2. Gutter Profile: As indicated on drawings and according to SMACNA's "Architectural Sheet Metal Manual."
 3. Corners: Factory mitered and mechanically clinched and sealed watertight.
 4. Gutter Supports: Gutter brackets, Straps with finish matching the gutters.
- C. DOWNSPOUTS: Plain rectangular complete with mitered, smooth-curve elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.
1. Zinc-Coated Steel: Nominal 0.034-inch thickness.
- D. ZINC-COATED STEEL FINISH: Two-coat Fluoropolymer.
1. Color: As selected by Architect from manufacturer's full range.

2.06 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls and roof edges for suitable conditions for roof specialties.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

- A. **GENERAL:** Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete roof-specialty systems.
 - 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
 - 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
 - 3. Install roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
 - 4. Torch cutting of roof specialties is not permitted.
 - 5. Do not use graphite pencils to mark metal surfaces.
- B. **METAL PROTECTION:** Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
- C. **EXPANSION PROVISIONS:** Allow for thermal expansion of exposed roof specialties.
 - 1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise shown on Drawings.
 - 2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. **FASTENER SIZES:** Use fasteners of sizes that will penetrate structure not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Seal joints with elastomeric sealant as required by roofing-specialty manufacturer.

- F. Seal joints as required for watertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.
- G. ~~SOLDERED JOINTS:~~ Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches except reduce pre-tinning where pre-tinned surface would show in completed Work. Tin edges of uncoated copper sheets using solder for copper. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

3.03 ROOF-EDGE FLASHING INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.04 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. GENERAL: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.
- B. GUTTERS: Join and seal gutter lengths. Allow for thermal expansion. Attach gutters to firmly anchored gutter supports spaced not more than 24 inches apart. Attach ends with rivets and seal with sealant to make watertight. Slope to downspouts.
 - 1. Install gutter with expansion joints at locations indicated but not exceeding 30 feet apart. Install expansion joint caps.
- C. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches O.C.
 - 1. Provide elbows at base of downspout to direct water away from building.

3.05 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.

- D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

****END OF SECTION****

SECTION 15061

STEEL PIPE

PART 1--GENERAL

1.01 DESCRIPTION

- A. This section specifies steel pipe and fittings.

1.02 QUALITY ASSURANCE

B. REFERENCES:

1. This section contains references to the following documents. They are a part of this section as specified and modified. Where a referenced document contains references to other standards, those documents are included as references under this section as if referenced directly. In the event of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
2. Unless otherwise specified, references to documents shall mean the documents in effect at the time of the commencement of work. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

| | |
|-----------------|--|
| ANSI B16.3 | Malleable Iron Threaded Fittings, Class 150 and 300 |
| ANSI B16.9 | Factory-Made Wrought Steel Buttwelding Fittings |
| ANSI B16.11 | Forged Steel Fittings, Socket-Welding and Threaded |
| ASTM A36/A36M | Structural Steel |
| ASTM A47 | Ferritic Malleable Iron Castings |
| ASTM A53 | Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless |
| ASTM A105/A105M | Forgings, Carbon Steel, for Piping Components |
| ASTM A106 REV A | Seamless Carbon Steel Pipe for High-Temperature Service |
| ASTM A197 | Cupola Malleable Iron |

| | |
|-----------------------|---|
| ASTM A234/A234M | Pipe Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures |
| ASTM A283/A283M REV A | Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes and Bars |
| ASTM A536 | Ductile Iron Castings |
| ASTM A570/A570M | Hot-Rolled Carbon Steel Sheet and Strip, Structural Quality |
| ASTM A572/A572M REV B | High Strength Low Alloy Columbium-Vanadium Steels of Structural Quality |
| AWWA C200 | Steel Water Pipe 6 Inches and Larger |
| AWWA C205 | Cement-Mortar Protective Lining and Coating for Steel Water Pipe--4 In. and Larger-- Shop Applied |
| AWWA C206 | Field Welding of Steel Water Pipe |
| AWWA C207 | Steel Pipe Flanges for Waterworks Services--Sizes 4 In. Through 144 In. |
| AWWA C208 | Dimensions for Fabricated Steel Water Pipe Fittings |
| AWWA C209 | Cold-Applied Tape Coating for Special Sections, Connections, and Fittings for Steel Water Pipelines |
| AWWA C210 | Liquid Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipe |
| AWWA C214 | Tape Coating Systems for the Exterior of Steel Water Pipelines |
| AWWA C600 | Installation of Ductile-Iron Water Mains and Their Appurtenances |
| AWWA M11 | Steel Pipe--A Guide for Design and Installation |
| SSPC-SP10 | Near-White Blast Cleaning |

- C. TESTING: Factory testing shall conform to the requirements of ASTM A53, ASTM A106, or AWWA C200 as applicable.

PART 2--PRODUCTS

2.01 PIPE MATERIALS

- D. Steel pipe and fittings shall be provided in accordance with ASTM A53 or AWWA C200. Steel for pipe fabricated to meet requirements of AWWA C200 shall conform to the requirements of ASTM A36, ASTM A572, Grade 42, ASTM A570, Grades 33 and 36, or ASTM A283, Grade D. Steel for ASTM A53 and ASTM A106 pipe shall be Grade B.

PIPE MANUFACTURE

- A. Unless otherwise specified, ASTM A53 pipe shall be Type E, electric resistance welded or Type S, seamless pipe. The minimum wall thickness for ASTM A53 or ASTM A106 pipe shall be Schedule 40 for pipe 10 inch diameter and less and 3/8 inch for pipe 12 inch through 24 inch diameter. Increased shell thickness shall be provided where specified.

2.03 CONNECTIONS

- A. Connections shall be as shown in the drawings.

2.04 FITTINGS AND APPURTENANCES

- A. Malleable iron threaded fittings and appurtenances shall conform to the requirements of ASTM A47 or ASTM A197, ANSI B16.3.
- B. Unless otherwise specified, steel fittings and appurtenances shall conform to the requirements of ASTM A234, ASTM A105, or ANSI B16.11; and fabricated steel fittings and appurtenances shall conform to AWWA C208.
- C. Standard steel fittings, including large size elbows, shall be forged steel conforming to ASTM A106. Standard segmentally welded fittings shall be fabricated of Schedule 40 carbon steel pipe. Unless otherwise specified, all fittings shall be rated for pressure and loadings equal to the pipe.

2.05 PIPE LINING (NOT USED)

2.06 PIPE COATING

- A. EPOXY (NOT USED)
- B. POLYETHYLENE TAPE: Where specified, pipe and fittings shall be coated and wrapped with prefabricated multilayer cold applied polyethylene tape coating in accordance with AWWA C214. The coating application shall be a continuous step operation in conformance with AWWA C214, Section 3. The total coating thickness shall be not less than 50 mils for pipe 24 inches and smaller and not less than 80 mils for pipe 26 inches and larger.

2.07 FUSION EPOXY COATING AND LINING (NOT USED)

2.08 JOINT GASKETS (NOT USED)

2.09 PRODUCT DATA

- C. The following information shall be provided in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook:

1. Affidavits of Compliance with AWWA C200, ASTM A53, or ASTM A106 as applicable.
2. Contractor's layout drawings.

PART 3--EXECUTION

3.01 INSTALLATION

- A. GENERAL: Pipe shall be installed in accordance with AWWA M11, Chapter 16. Welded joints shall be in accordance with AWWA C206.
- B. ANCHORAGE: Anchorage shall be provided where specified. Calculations and drawings for proposed alternative anchorage shall be submitted in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook.

3.02 TESTING

- C. Hydrostatic testing shall be in accordance with Section 4 of AWWA C600.

****END OF SECTION****

SECTION 15147
SOLENOID VALVES

PART 1--GENERAL

1.01 DESCRIPTION

- A. SCOPE: This section specifies 2- and 3-way solenoid valves, direct or pilot operated type, for control of process fluids.
- B. TYPE:
 - 1. Valves with piping connections less than 1-1/2 inches in diameter shall be direct-acting type.
 - 2. Valves with piping connections 1-1/2 inches in diameter and greater shall be pilot operated globe body type.
- C. DESIGN REQUIREMENTS:
 - 1. Unless otherwise specified, solenoid valves shall be designed to seal or unseal the pressurized (supply) port upon the action specified in the paragraph 1.03, Solenoid Valve Schedule.
 - 2. Valves shall be listed by Underwriters Laboratories Inc. in accordance with UL 429 and UL 1002. Solenoid valves for gas service shall be approved by Factory Mutual Engineering Corporation. The minimum acceptable operating pressure differential for pilot operated valves shall be 5 psi.

1.02 REFERENCES

- D. This section contains references to the following documents. They are a part of this section as specified and modified. Where a referenced document contains references to other standards, those documents are included as references under this section as if referenced directly. In the event of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
- E. Unless otherwise specified, references to documents shall mean the documents in effect at the time of the commencement of work. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

| | |
|----------|---|
| ASTM A48 | Gray Iron Castings |
| UL 429 | Electrically Operated Valves |
| UL 1002 | Electrically Operated Valves for Use in Hazardous Locations, Class I, Groups A, B, C, and D, and Class II, Groups E, F, and G |

1.03 SOLENOID VALVE SCHEDULE (NOT USED)

PART 2--PRODUCTS

2.01 MANUFACTURERS

A. The Owner and Resident Engineer believe the following candidate manufacturers are capable of producing equipment and/or products that will satisfy the requirements of this Section. This statement, however, shall not be construed as an endorsement of a particular manufacturer's products, nor shall it be construed that named manufacturers' standard equipment or products will comply with the requirements of this Section.

B. DIRECT ACTING TYPE: Candidate manufacturers include:

1. Automatic Switch Company (ASCO)
2. Honeywell-Skinner
3. or equal

C. PILOT TYPE: Candidate manufacturers include:

1. Cla-Val Co.
2. Golden Anderson
3. or equal

2.02 MATERIALS

D. DIRECT ACTING TYPE: Materials of construction shall be as follows:

| Component | Material |
|-----------|---------------------------|
| Body | Stainless steel, Type 304 |
| Seal | Teflon or Buna-N |
| Disc | Teflon or Buna-N |

E. PILOT TYPE: Materials of construction shall be as follows:

| Component | Material |
|--------------------|---------------------|
| Main valve body | Cast iron, ASTM A48 |
| Pilot control body | Brass |

2.03 EQUIPMENT

- A. GENERAL: Solenoid valves shall be rated for continuous duty at 24 volts DC or 120 volts AC as indicated. Valves shall be threaded for sizes 2-inch and smaller and flanged for sizes 2-1/2 inch and larger.
- B. DIRECT ACTING TYPE AND PILOT TYPE: Solenoid valves shall be suitable for the area location and usages with fully encapsulated Class H coils. Enclosure type:
 - 1. NEMA 4X watertight / dust tight / corrosion resistant
 - a. Unspecified solenoid valves enclosures shall be NEMA 4X.

2.04 PRODUCT DATA

- A. Manufacturer's product data shall be provided in accordance with with Section 2-5 and applicable subsections of the Greenbook and the Whitebook.

PART 3—EXECUTION

- A. Solenoid valves shall be installed in accordance with the manufacturer's recommendations.

****END OF SECTION****

SECTION 16050

GENERAL REQUIREMENTS FOR ELECTRICAL WORK

PART 1--GENERAL

1.01 DESCRIPTION

- A. SCOPE: This section specifies general requirements for electrical work. Detailed requirements for specific electrical items are specified in other sections but are subject to the general requirements of this section. The electrical drawings and schedules included in this project manual are functional in nature and do not specify exact locations of equipment or equipment terminations.
- B. DEFINITIONS:
1. Elementary or Schematic Diagram: A schematic (elementary) diagram shows, by means of graphic symbols, the electrical connections and functions of a specific circuit arrangement. The schematic diagram facilitates tracing the circuit and its functions without regard to the actual physical size, shape, or location of the component devices or parts.
 2. One-Line Diagram: A one-line diagram shows by means of single lines and graphical symbols the course of an electrical circuit or system of circuits and the components, devices or parts used therein. Physical relationships are usually disregarded.
 3. Block Diagram: A block diagram is a diagram of a system, instrument, computer, or program in which selected portions are represented by annotated boxes and interconnecting lines.
 4. Wiring Diagram or Connection System: A wiring or connection diagram includes all of the devices in a system and shows their physical relationship to each other including terminals and interconnecting wiring in an assembly. This diagram shall be (a) in a form showing interconnecting wiring only by terminal designation (wireless diagram), or (b) a panel layout diagram showing the physical location of devices plus the elementary diagram.
 5. Interconnection Diagram: Interconnection diagrams shall show all external connections between terminals of equipment and outside points, such as motors and auxiliary devices. References shall be shown to all connection diagrams which interface to the interconnection diagrams. Interconnection diagrams shall be of the continuous line type. Bundled wires shall be shown as a single line with the direction of entry/exit of the individual wires clearly shown. Wireless diagrams and wire lists are not acceptable.

- a. Each wire identification as actually installed shall be shown. The wire identification for each end of the same wire shall be identical. All devices and equipment shall be identified. Terminal blocks shall be shown as actually installed and identified in the equipment complete with individual terminal identification.
 - b. All jumpers, shielding and grounding termination details not shown on the equipment connection diagrams shall be shown on the interconnection diagrams. Wires or jumpers shown on the equipment connection diagrams shall not be shown again on the interconnection diagram. Signal and DC circuit polarities and wire pairs shall be shown. Spare wires and cables shall be shown.
6. Arrangement, Layout, or Outline Drawings: An arrangement, layout, or outline drawing is one which shows the physical space and mounting requirements of a piece of equipment. It may also indicate ventilation requirements and space provided for connections or the location to which connections are to be made.

1.02 QUALITY ASSURANCE

C. REFERENCES:

- 1. This section contains references to the following documents. They are a part of this section as specified and modified. Where a referenced document contains references to other standards, those documents are included as references under this section as if referenced directly. In the event of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
- 2. Unless otherwise specified, references to documents shall mean the documents in effect at the time of the commencement of work. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

| | |
|--------|---|
| NECA-1 | National Electrical Contractors Association – Standard Practices for Good Workmanship in Electrical Contracting |
|--------|---|

| | |
|------|--------------------------------------|
| NFPA | National Fire Protection Association |
|------|--------------------------------------|

| | |
|----------|--|
| NFPA-70 | National Electrical Code (NEC) |
| NFPA-70E | National Electrical Safety Code (NESC) |
| ACI 318 | Building Code Requirements for Structural Concrete |

D. IDENTIFICATION OF LISTED PRODUCTS:

1. Electrical equipment and materials shall be listed for the purpose for which they are to be used, by an independent testing laboratory. Three such organizations are Underwriters Laboratories (UL), Canadian Standards Association (CSA), and Electrical Testing Laboratories (ETL). Independent testing laboratory shall be acceptable to the inspection authority having jurisdiction.
2. When a product is not available with a testing laboratory listing for the purpose for which it is to serve, the product may be required by the inspection authority, to undergo inspection at the manufacturer's place of assembly. All costs and expenses incurred for such inspections shall be included in the original contract price.

- E. FACTORY TESTS: Where specified in the individual product specification section, factory tests shall be performed at the place of fabrication and performed on completion of manufacture or assembly. The costs of factory tests shall be included in the contract price.

1.03 SUBMITTALS

- A. Submittals shall be provided in accordance with Section 2-5 and applicable subsections of the Greenbook and the Whitebook, and shall include the following:
1. A copy of this specification section, with addendum updates included, and all referenced and applicable sections, with addendum updates included, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. Check marks shall denote full compliance with a paragraph as a whole. If deviations from the specifications are indicated, and therefore requested by the Contractor, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph, referenced to a detailed written explanation of the reasons for requesting the deviation.
 - a. The Resident Engineer shall be the final authority for determining acceptability of requested deviations. The remaining portions of the paragraph not underlined will signify compliance on the part of the Contractor with the specifications.

- b. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.
- 2. Catalog cuts of equipment, devices, and materials requested by the individual specification sections. Catalog information shall include technical specifications and application information, including ratings, range, weight, accuracy, etc. Catalog cuts shall be edited to show only the items, model numbers, and information which apply.
 - a. Catalog cuts shall be assembled in a folder. Each folder shall contain a cover sheet, indexed by item, and cross-referenced to the appropriate specification paragraph.
- 3. Interconnection diagram: The Contractor shall prepare interconnection diagrams depicting all cable requirements together with their actual terminations as specified in paragraph 16050-1.01 B.
- 4. Conduit layout drawings indicating size, location, and support, for all conduits other than single runs of 1-inch diameter or less cast in concrete construction.
 - a. Conduit layout drawings shall illustrate a system which conforms to the requirements of paragraph 16050-3.01-B.
 - b. For layouts that do not conform to 16050-3.01 B, provide engineering design and calculations signed and sealed by a Professional Engineer registered in the state of the project. Engineering design and calculations shall demonstrate that the proposed layout does not impair or significantly reduce the design structural strength.
- 5. Safety disconnect switch list including legend with equipment tag, equipment description, and power feeder circuit source and location information.

1.04 DRAWINGS

- A. Where the Contractor is required to provide information on drawings as part of the specified work, such drawings shall be prepared on 22-inch by 34-inch drafting media complete with borders and title blocks clearly identifying project name, equipment and the scope of the drawing.
- B. Drawing quality and size of presentation shall be such as to permit 50 percent reduction of such drawings for insertion in operation and maintenance manuals.

1.05 PROJECT/SITE CONDITIONS

- A. GENERAL: Unless otherwise specified, equipment and materials shall be sized and derated for the ambient conditions, but not less than an ambient temperature of 40 degrees C at an elevation ranging from sea level to 3000 feet without exceeding the manufacturer's stated tolerances.
- B. CORROSIVE AREAS: The following areas are designated as corrosive:
 - 1. All Process areas
- C. HAZARDOUS (CLASSIFIED) AREAS: As indicated on the drawings.
- D. SEISMIC:
 - 1. The installation of all equipment and appurtenances shall comply with the requirements of the current edition of the California Building Code, Uniform Building Code, and the following criteria:

| | |
|------------------------|--|
| Seismic Zone | 4 |
| Soil Profile Type | SD |
| Seismic Source Type | B |
| Seismic Coefficient Na | 1.3 |
| Seismic Coefficient Nv | 1.6 |
| Seismic Coefficient Ca | 0.44 Na |
| Seismic Coefficient Cv | 0.64 Nv |
| Importance Factor I | 1.25 for entire structure |
| Importance Factor Ip | 1.5 for elements of structures and equipment |

1.06 STORAGE OF MATERIALS AND EQUIPMENT

- A. Materials and equipment shall be stored as specified by the manufacturer. Equipment and materials to be located indoors shall be stored indoors and sealed with plastic film wrap.

PART 2—PRODUCTS

2.01 EQUIPMENT AND MATERIALS

- A. GENERAL: Equipment and materials shall be new and free from defects. All material and equipment of the same or a similar type shall be of the same

manufacturer throughout the work. Standard production materials shall be used wherever possible.

- B. ~~EQUIPMENT FINISH: Unless otherwise specified, electrical equipment shall be painted by the manufacturer.~~

2.02 WIRE MARKERS

- A. Each power and control conductor shall be identified at each terminal to which it is connected. Conductors size No. 10 AWG or smaller shall have identification sleeves. Conductors No. 8 AWG and larger shall use cable markers of the locking tab type. Tabs shall be white plastic with conductor identification number permanently embossed. Adhesive strips are not acceptable. Conductors shall be identified to indicate panel and circuit numbers.
- B. The letters and numbers that identify each wire shall be machine printed on sleeves with permanent black ink with figures 1/8 inch high. Sleeves shall be yellow or white tubing and sized to fit the conductor insulation. Shrink the sleeves with hot air after installation to fit the conductor.
- C. CONDUCTOR AND WIRE MARKER MANUFACTURE:
 - 1. TMS Thermofit Marker System by Raychem Co
 - 2. Sleeve style wire marking system by W. H. Brady Co.
 - 3. or equal.

2.03 RACEWAY MARKERS

- D. Raceway markers tags shall be:
 - 1. Solid brass with 0.036-inch minimum thickness.
 - 2. Raceway number stamped in 3/16-inch minimum height characters
 - 3. Attached to the raceway with 316 stainless steel wire.
- E. Conductors shall be identified to indicate originating panel number.

2.04 NAMEPLATES

- F. Nameplates shall be made from laminated phenolic plastic.
 - 1. Nominal size: 3/4 inch high by 2 inches long.
 - 2. Black backgrounds with 3/16-inch white letters.
 - 3. Fastened using self-tapping stainless steel screws.

- G. Abbreviations shall be submitted to the Resident Engineer prior to manufacture because of space limitations. Nameplate adhesives will not be permitted on the outside of enclosures.

2.05 TERMINAL BLOCKS

- H. Unless otherwise specified, terminal blocks shall be panhead strap screw type. Terminals shall be provided with integral marking strips that permanently identify with the connecting wire numbers as shown on the drawings:

1. Terminal blocks for P-circuits (power 208-600 volts)
 - a. Rated not less than the conductor current rating
 - b. Rated less than 600 volts AC.
2. Terminal blocks for C-circuits and S-circuits:
 - a. Rated not less than 20 amperes
 - b. Rated less than 600 volts AC.

I. Terminals shall be tin-plated.

J. Insulating material shall be nylon.

2.06 600 VOLT CONDUCTORS, WIRE, AND CABLE

- A. This section contains references to the following documents. They are a part of this section. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
- B. Unless otherwise specified, references to document shall mean the documents in effect at the time of the commencement of work. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, whether or not the document has been superseded by a version with a later date, discontinued or replaced.

| | |
|---------------|---|
| ASTM B3 | Soft or Annealed Copper Wire |
| ASTM B8 | Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft |
| ASTM B33 | Tinned Soft or Annealed Copper Wire for Electrical Purposes |
| ICEA S-68-516 | Ethylene-Propylene-Rubber-Insulated Wire |

| | |
|----------|--|
| NEMA WC7 | Cross-Linked-Thermosetting Insulated Wire and Cable for the Transmission and Distribution of Electric Energy |
| NFPA 70 | National Electric Code (NEC) |
| UL 44 | Rubber-Insulated Wires and Cables |
| UL 83 | Thermoplastic-Insulated Wires and Cables |

C. UNSCHEDULED CONDUCTORS AND CABLES:

1. Where not specified on the Drawings, conductors and cables shall be sized in accordance with the National Electrical Code for the particular equipment served with the minimum size as specified herein.
2. Unscheduled conductor with insulation shall be provided in accordance with the following:
 - a. CABLESPEC "THWN" for power, lighting and receptacles

D. CABLE SPECIFICATION SHEETS (CABLESPEC): General requirements for conductors and cables specified in this Section are listed on CABLESPEC sheets provided herein.

E. COLOR CODING:

1. Control Conductors: Single-conductor control conductors shall have the following colors for the indicated voltage:

| Control Conductor | 120V |
|----------------------|------------|
| Power (AC) | Black |
| Control (AC) | Red |
| Neutral | White |
| Ground | Green |
| Foreign Voltage (DC) | Blue/White |
| Foreign Voltage (AC) | Yellow |
| Power (DC) | Blue |
| Control (DC) | Violet |

2. Power conductors: Power conductors shall have the following colors for the indicated voltage:

| | | |
|-----------------|--------|----------|
| Power Conductor | 480V | 208/120V |
| Phase A | Brown | Black |
| Phase B | Orange | Red |
| Phase C | Yellow | Blue |
| Ground | Green | Green |
| Neutral | Gray | White |

3. Cables may be black with colored 3/4-inch vinyl plastic tape applied at each cable termination. Tape shall be wrapped with 25 percent overlay to provide 3 inches minimum coverage.

2.07 RACEWAYS, BOXES, AND SUPPORTS

- F. Unless otherwise specified, references to documents shall mean the documents in effect at the time of the commencement of work. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

1. Industrial Standards:

| | |
|-------------------|--|
| ANSI C80.1 | Rigid Steel Conduit-Zinc Coated |
| ANSI C80.3 | Electrical Metallic Tubing-Zinc Coated |
| ASTM F512 | Smooth-Wall Polyvinylchloride Conduit and Fittings for Underground Installation |
| FEDSPEC WW-C-581E | Conduit, Metal, Rigid and Intermediate; and Coupling, Elbow, and Nipple, Electrical Conduit; Zinc Coated |
| FEDSPEC W-C-1094A | Conduit and Conduit Fittings, Plastic, Rigid |
| JIC EMP-1 | Electrical Standards for Mass Production Equipment |
| NEMA ICS 6 | Industrial Control and Systems Enclosures |

| | |
|----------|---|
| NEMA TC2 | Electrical Plastic Tubing (EPT) and Conduit (EPC 40 and EPC 80) |
| NEMA TC6 | PVC and ABS Plastic Utilities Duct for Underground Installation |
| NEMA VE1 | Cable Tray Systems |
| NEMA 250 | Enclosures for Electrical Equipment (1000 volts maximum) |
| NFPA 70 | National Electrical Code (NEC) |
| NFPA 79 | Electrical Standards for Industrial Machinery |
| IBC | International Building Code |
| UL 1 | Flexible Metal Electrical Conduit |
| UL 6 | Rigid Metal Electrical Conduit |
| UL 360 | Liquid Tight Flexible Electrical Conduit |
| UL 514 | Nonmetallic Outlet Boxes, Flush-Device Boxes and Covers |
| UL 651 | Rigid Nonmetal Electrical Conduit |
| UL 797 | Electrical Metallic Tubing |
| UL 870 | Wireways, Auxiliary Gutters, and Associated Fittings |
| UL 884 | Underfloor Raceways and Fittings |
| UL 886 | Outlet Boxes and Fittings for Hazardous (Classified) Locations |

G. RACEWAYS AND FITTINGS: General requirements for raceway materials specified in this section are listed in the RACESPECS sheets at the end of this section. The type of raceways and raceway fittings to be used for any given area and application shall conform to the requirements in this section.

H. BOXES, GUTTERS, TERMINAL CABINETS, MANHOLES, AND HANDHOLES:

1. Provide Type 316 stainless products where specified. Hinges shall be continuous type and for NEMA-4X cabinets hinges shall be stainless steel.

2. Table-A specifies the electrical enclosure material and rating for the location and application.

Table-A

| Location | Electrical Enclosure Material and NEMA Rating |
|----------|---|
| All | NEMA 4X, 316 Stainless Steel |

I. PULL BOXES AND WIRING GUTTERS: Junction boxes and enclosures shall be provided with neoprene gaskets on the hinged doors or removable covers. Box and gutter sizes, metal thickness, and grounding shall comply with the National Electrical Code.

J. CONDUIT SUPPORTS:

1. Framing channel with end caps and straps shall be provided to support groups of conduit. Individual conduit supports shall be one-hole pipe straps used with clamp backs and nesting backs where required. Material as specified herein.
2. Conduit supports for PVC coated rigid steel and PVC conduit systems shall be one-hole PVC coated rigid steel clamps or oversized stainless steel clamps.

K. CEILING HANGERS: Ceiling hangers shall be adjustable steel rod hangers and fittings. Provide J-Type conduit support for single conduit. Straps or hangers of plumber's perforated tape are not acceptable. Unless otherwise shown, hanger rods shall meet ASTM A193 and be sized as 3/8-inch up to 2-inch conduit and shall be 1/2 inch all-thread rod over 2-inch conduit. Material as specified herein.

L. SUSPENDED RACEWAY SUPPORTS AND RACKS:

1. Suspended raceway supports shall consist of concrete inserts, steel rod hangers, and jamb nuts supporting framing channel or lay-in pipe hangers as required. Framing channel shall be a minimum of 12-gauge. Material as specified herein.
2. Hanger rods shall be 1/2-inch diameter all-thread rod and shall meet ASTM A193. Suspended raceway supports and racks shall be braced for seismic forces as specified in Section 16050.

M. MATERIALS:

Table-B specifies the type of raceway supports required for each location and application.

Table-B

| Location | Framing Channel | Threaded Rod, Hardware, & Fittings |
|----------|------------------|------------------------------------|
| All | PVC-Coated Steel | 316 Stainless Steel |

- N. NAMEPLATES: Nameplates shall be provided for boxes in accordance with the requirements of Section 16050. Nameplate wording shall be as shown on the drawings. Provide the functional description of the device on the nameplate, where wording is not specified
- O. PULLING LINE: Pulling line shall be polyethylene type, mildew and rot resistant with minimum of 200-pound tensile strength and minimum 1/4-inch diameter. Install in all "future" raceways. Manufacture: Greenlee, Ideal, or equal.
- P. CONDUIT THREAD LUBRICANT: Thread lubricant shall be conductive with anti-seize and anti-corrosion properties, compatible with steel and aluminum conduit materials. Manufacture: T&B CP8 KOPR-Shield; Robroy Threadcompound; or equal.
- Q. Table-C specifies the type of raceway required for each location and application by RACESPEC sheet. Unscheduled conduit shall be galvanized, rigid steel, RACESPEC type GRS.

Table-C

| Location | Application/Condition | RACESPEC |
|----------|--|----------|
| All | Final connection to equipment and light fixtures | LFS |
| All | Others | PGRS |

- R. CONDUIT:
 - 1. In general, Contractor shall be responsible for determining conduit routing that conforms to the specified installation requirements as shown on Drawings.
 - 2. Conduit installation shall conform to the requirements of the RACESPEC sheets and the following specified installation requirements:
 - a. Exposed conduit: Install parallel or perpendicular to structural members and surfaces. Install conduit horizontally and allow minimum headroom of 7 feet.
 - b. Route two or more exposed conduits in the same general routing parallel with symmetrical bends.

- c. Space exposed conduit installed on supports not more than 10 feet apart. Space multiple conduits in parallel and use framing channel.
- d. Comply with the requirements of Section 16050 and herein, where conduits are suspended from the ceiling.
- e. Secure conduit rack supports to concrete walls and ceilings with cast-in-place anchors or framing channel concrete inserts.
- f. Install conduits at least 6 inches from high temperature piping, ducts, and flues with temperatures higher than 90 degree C.
- g. Install conduits between the reinforcing steel in walls or slabs that have reinforcing in both faces.
- h. Place conduits under the reinforcement in slabs with only a single layer of reinforcing steel. Separation between conduits, conduits and reinforcement, and conduits and surfaces of concrete shall be maintained in accordance with UBC.
- i. Route conduit clear of structural openings and indicated future openings.
- j. Provide conduits with flashed and watertight seals routed through roofs or metal walls.
- k. Grout conduits into openings cut into concrete and masonry structures.
- l. Cap conduits or plug flush conduits during construction to prevent entrance of dirt, trash, and water. Cap or plug empty conduits designated as "future", "spare", or "empty" and include a pulling line accessible at both ends. Use anti-seize compound on cap and plug threads prior to installation.
- m. Determine concealed conduit stubup locations as required.
- n. Install conduit flush with structural surfaces with galvanized couplings and plugs. Caps and plugs shall match the conduit system.
- o. Terminate conduits that enter enclosures with fittings that match the NEMA rating of the enclosure.
- p. Underground conduit that turn out of concrete, masonry or earth: Install a 90-degree elbow of PVC-coated rigid steel conduit before emergence above ground.
- q. Provide O-Z Gedney "Type DX" or Crouse-Hinds "Type XD" bonded, weathertight expansion and deflection fitting for the conduit size

where conduit across structural joints that allows structural movement.

- S. ~~RACEWAY NUMBERING:~~ Each new and reused conduit shall be provided with a number tag at each end and in each manhole, handhole, or pull box.

PART 3—EXECUTION

3.01 GENERAL

A. CONSTRUCTION:

1. The work under Division 16 shall be performed in accordance with these specifications.
2. Refer to the National Electrical Contractors Association's (NECA) National Electrical Installation Standards (NEIS) for Standard Practices for Good Workmanship in Electrical Contracting (NECA-1) as a minimum baseline of quality and workmanship for installing electrical products and systems that defines what is meant by "neat and workmanlike" as required by the National Electrical Code Section 110-12. Specified requirements supersede NECA practices.
3. Electrical layout drawings are diagrammatic, unless otherwise detailed or dimensioned. The Contractor shall coordinate the location of electrical material or equipment with the work.
4. Major electrical openings may compromise the structural integrity of the slab and wall elements. Major electrical openings are defined as openings or penetrations greater than two times the wall thickness in any dimension, and include duct bank transitions into a building through structural elements. Major electrical openings shall be constructed according to standard details on the drawings, up to an opening dimension of three feet. For opening dimensions greater than three feet, construct walls and slabs as specifically detailed on the drawings for that case. Major electrical openings proposed by the Contractor shall be submitted to the Structural Engineer of Record for the project for review.
5. Minor changes in location of electrical material or equipment made prior to installation shall be made at no cost to the Owner.

- B. **CONDUITS IN CONCRETE CONSTRUCTION:** Conduits for power, control and instrumentation may be embedded in and pass through concrete construction subject to the limitations in this paragraph. Where concrete strength or serviceability requirements prevent the direct embedment of conduit, provide adequate support, bracing, and serviceability details:

1. Concrete strength shall not be impaired significantly by the embedment of conduits in or through structural sections.
2. Conduit layout shall conform to the requirements of ACI 318, Sections 3.3 – Aggregates and 6.3 – Conduits and Pipes Embedded in Concrete.
3. Conduits shall be treated similarly to reinforcing steel for purposes of clearance. In general, code sections require conduit spacing the greater of:
 - a. 1.33 times the maximum concrete aggregate size, clear.
 - b. Three diameters center to center.
 - c. Alternate spacing and layout shall be as reviewed and accepted by the Engineer.
4. Conduit and raceway penetrations through walls and slabs where:
 - a. one side is a conditioned or an occupied space and the other side not, or
 - b. one side has liquid or groundwater contact and the other not shall be detailed and constructed to prevent liquid and moisture penetration through the wall or slab section for each conduit.

C. HOUSEKEEPING:

1. Electrical equipment shall be protected from dust, water and damage. Before final acceptance, the Contractor shall touch up any scratches on equipment per manufacturer recommendations.
2. Electrical equipment temporarily exposed to weather, debris, liquids, or damage during construction shall be protected as required.

D. ELECTRICAL EQUIPMENT LABELING:

1. All new electrical equipment shall have field marked signs and labeling to warn qualified persons of the potential electric arc flash hazards per NEC Article 110.16 Flash Protection.
2. All new electrical distribution equipment and utilization equipment shall be field labels to identify the power source and the load as specified. Refer to NEC Article 110.22 for Identification of Disconnecting Means installation criteria. Specific information is required such as the equipment tag number and equipment description of both the power source and the load equipment.

E. CONDUCTOR INSTALLATION:

1. An enclosure containing disconnecting means, overcurrent devices, or electrical equipment shall not be used as a wireway or raceway for conductors not terminating within the enclosure. Provide wireways, raceways, termination boxes, or junction boxes external to the enclosure for the other conductors.
2. Conductors shall be identified at each connection terminal and at splice points. The identification marking system shall comply with Section 16050.
3. Pulling wire and cable into conduit or trays shall be completed without damaging or putting undue stress on the insulation or jacket. Manufacture recommended and UL Listed pulling compounds are acceptable lubricants for pulling wire and cable. Grease is not acceptable.
4. Raceway construction shall be complete, cleaned, and protected from the weather before cable is installed. Where wire or cable exits a raceway, a wire or cable support shall be provided.
5. Conductors in panels and electrical equipment shall be bundled and laced at intervals not greater than 6 inches, spread into trees and connected to their respective terminals. Lacing shall be made up with plastic cable ties. Cable ties shall be tensioned and cut off by using a tool specifically designed for the purpose such as a Panduit GS2B. Other methods of cutting cable ties are unacceptable.
6. Conductors crossing hinges shall be bundled into groups not exceeding 10 to 15 conductors and protected using nylon spiral flexible covers to protect conductors. Provide oversized plastic panel wiring duct within panels and panelboards.
7. Slack shall be provided in junction and pull boxes, handholes and manholes. Slack shall be sufficient to allow cables or conductors to be routed along the walls. Amount of slack shall be equal to largest dimension of the enclosure. Provide dedicated electrical wireways and insulated cable holders mounted on unistrut in manholes and handholes.
8. Circuits of the same voltage may be in the same conduit in accordance with de-rating requirements of the NEC. Splices and terminations are subject to inspection by the Resident Engineer prior to and after insulating.
9. Terminations at solenoid valves, 120 volt motors, and other devices furnished with pigtail leads shall be made using self-insulating tubular compression connectors within the termination box.

10. Spare circuits and the shield drain wire shall be terminated on terminal blocks at both ends of the cable run and be electrically continuous through terminal boxes.

3.02 TESTING

- A. GENERAL: Prior to energizing the electrical circuits, insulation resistance measurements tests shall be performed using a 1000-volt megohmmeter to verify the conductor is acceptable for use on the project. The test measurements shall be recorded on the specified forms and provided in accordance with paragraph 16050-1.03.
- B. INSULATION RESISTANCE MEASUREMENTS:
 1. General: Insulation resistance measurements shall be made on conductors and energized parts of electrical equipment. Minimum acceptable values of insulation resistance shall be in accordance with the applicable ICEA, NEMA or ANSI standards for the equipment or material being tested, unless otherwise specified. The ambient temperature at which insulation resistance is measured shall be recorded on the test form.
 - a. Insulation resistance measurements shall be recorded in a format similar to Form 16050-A, Insulation with resistance of less than 10 megohms is not acceptable.
 2. Conductor and Cable Tests: The phase-to-ground insulation resistance shall be measured for all circuits rated 120 volts and above except lighting circuits. Measurements may be made with motors and other equipment connected. Solid state equipment shall be disconnected, unless the equipment is normally tested by the manufacturer at voltages in excess of 1000 volts DC.

3.03 RECORD DOCUMENTS

- A. Contract documents shall be maintained and annotated by the Contractor during construction.

3.04 CABLE SPECIFICATION SHEETS (CABLESPEC)

- A. GENERAL: Conductor, wire, and cable types for different locations, service conditions and raceway systems are specified on individual cable specification sheets. Scheduled and unscheduled conductors, wires, and cables shall be installed in accordance with the CABLESPEC SHEETS.
- B. CABLESPEC SHEETS: The following CABLESPEC sheets are included in this section:

| Type | Volt | Product | Purpose |
|------|------|---|---------|
| THWN | 600 | PVC INSULATED WITH NYLON JACKET BUILDING GRADE CONDUCTOR | All |

Cable System Identification: THWN

Description: Single conductor lighting and receptacle type; Indoor branch circuit conductor.

Voltage: 600 volts

Conductor Material: Bare annealed copper; stranded per ASTM B8

Insulation: THWN/THHN, 90 degree C dry, 75 degree C wet, Polyvinyl Chloride (PVC) per UL 83.

Jacket: Nylon

Flame Resistance: UL 83

Manufacturer(s): Okonite, Okoseal-N, series 116-67-XXXX; or equal.

Uses Permitted: Lighting, receptacle and appliance circuits

Execution:

Installation: Install in accordance with this specification.

Testing: Test in accordance with this specification.

3.05 RACESPEC SHEETS

The following RACESPECS are included in this section:

RACEWAY IDENTIFICATION: LFS

Description: Liquidtight Flexible Steel Conduit

Application: Final connection to equipment subject to vibration or adjustment.

Compliance: UL 360

Construction: Spirally wound galvanized steel strip with successive convolutions securely interlocked and jacketed with liquidtight plastic cover.

Minimum size: 3/4 inch

| | |
|-------------------------|--|
| Fittings: | <p>Cadmium-plated malleable iron body and gland nut with cast-in lug, brass grounding ferrule threaded to engage conduit spiral.</p> <p>O-ring seals around the conduit and box connection and insulated throat.</p> <p>Provide forty-five and ninety degree fittings where applicable.</p> <p>Provide PVC coated flexible conduit and fittings where the conduit system is PVC coated.</p> |
| Installation: | <p>Length of flexible liquidtight conduit shall not exceed 15 times the trade diameter of the conduit and not exceed 36 inches in length. Use conductive thread compound.</p> |
| Raceway Identification: | <p>PGRS</p> |
| Description: | <p>Rigid Steel Conduit, Corrosion-Resistant, Polyvinyl Chloride (PVC) Coated.</p> <p>Provide factory made and coated elbows.</p> |
| Compliance: | <p>ANSI, ETL and UL. The PVC coated rigid galvanized steel conduit shall be stamped with the ETL Verification Mark "ETL Verified to PVC-001".</p> |
| Finish: | <p>PGRS shall be hot-dip galvanized rigid steel conduit as specified here in, with a PVC Coating. The PVC coating shall be gray, minimum 40 mils thick, bonded to the outside and continuous over the entire length of the conduit except at the threads, and be free of blisters, bubbles, or pinholes. Thread protectors shall be used on the exposed threads of the PVC coated conduit.</p> <p>A 2-mil coat of urethane enamel coating shall be bonded to the inside. Coating shall be free of pinholes. Bond strength shall exceed the tensile strength of the PVC coat.</p> |
| Minimum size: | <p>3/4 inch</p> |
| Fittings: | <p>Similarly coated to the same thickness as the conduit and provided with Type 316 stainless steel hardware. Conduit and fittings shall be manufactured by the same company. Conduit and fittings shall be coated by the same company. Male threads on elbows and nipples, and female threads on fittings or conduit couplings shall be protected by application of urethane coating.</p> |
| Covers: | <p>PVC coated covers shall have V-groove seal and stainless steel hardware.</p> |
| Hubs: | <p>Hubs for connection of conduit to junction, device, or terminal boxes shall be threaded cast ferrous alloy.</p> |

Hubs shall have the same PVC coating as the conduit and insulating grounding bushings. Hubs shall utilize a neoprene "O" ring and shall provide a watertight connection.

Boxes:

Nonhazardous:

NEMA Class 4X stainless steel or nonmetallic.

Hazardous:

NEMA Class 7 cast ferrous.

Manufacturers:

PVC coated conduit that bears the ETL Verified PVC-001 label by Robroy Industries, Plasti-Bond, Perma-Cote, KorKap or equal.

Installation:

Plastic coated conduit shall be made up tight, threaded, and installed using tools approved by the PVC-coated conduit manufacturer.

Exposed conduit threads shall be covered by a plastic overlap coated and sealed per manufacturer's recommendations.

Pipe wrenches and channel locks shall not be used for tightening plastic coated conduits. Damaged areas shall be patched, using manufacturer's recommended material. The area to be patched shall be built up to the full thickness of the coating. Painted fittings are not acceptable.

PVC coated conduit shall be supported away from the structure using PVC coated conduit wall hangers or PVC coated conduit mounting hardware.

Damaged work shall be replaced

Training:

Installers shall be trained and certified in the proper installation techniques provided by the PVC-coated conduit system manufacture. Proof of certification shall be provided.

****END OF SECTION****

SUPPLEMENTARY SPECIAL PROVISIONS

APPENDICES

APPENDIX A
NOTICE OF EXEMPTION

NOTICE OF EXEMPTION

(Check one or both)

TO: X RECORDER/COUNTY CLERK
P.O. BOX 1750, MS A-33
1600 PACIFIC HWY, ROOM 260
SAN DIEGO, CA 92101-2422
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET, ROOM 121
SACRAMENTO, CA 95814

FROM: CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT
1222 FIRST AVENUE, MS 501
SAN DIEGO, CA 92101

PROJECT NO.: N/A PROJECT TITLE: MOC 5 Material Storage Bins Capital Improvements Project

PROJECT LOCATION-SPECIFIC: This project is located at 5655 Kearny Villa Road, San Diego, CA 92123, a property owned and operated by the City of San Diego (APNs 760-226-63, -64, 369-040-25), within the Kearny Mesa Community Planning Area.

PROJECT LOCATION-CITY/COUNTY: City of San Diego/San Diego

DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The scope of work includes the construction of new material storage bins in the MOC 5 vehicle parking and equipment staging area. This work would involve the partial demolition of the foundation and portions of the asphalt and concrete pavement. Construction would include a retaining wall, six dividing retaining walls, and five slabs for the material storage bins. Excavation for the retaining wall includes an area 115.15 feet (ft) x 5.2 ft x 3 to 5 ft in depth, an area 115 ft x 6.2 ft x 3 to 5 ft in depth for the dividing retaining walls, and an area 21.5' ft x 21 ft x 2 to 2.5 ft in depth for the slabs. The material storage bins would be constructed of reinforced concrete with a metal canopy cover supported on the bins using structural steel. An above-and-below ground water sprinkler system would also be constructed with 415 ft of piping. Lighting and electrical improvements to the existing electrical system would also be made. All staging, stockpiling of soils and materials, and access would be located within developed areas. No impacts to sensitive biological resources are expected. No impacts to archeological resources are expected as all excavation would occur within the former material storage bin area footprint of previously disturbed soils. Erosion control would be implemented during construction and post-construction as needed. All project activities are located within developed land, and are located outside of the MHPA.

NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: Public Utilities Department, Wastewater Branch, 9192 Topaz Way, San Diego, CA 92123, Tiffany Lavan (858) 614-5714

EXEMPT STATUS: (CHECK ONE)

- () MINISTERIAL (SEC. 21080(b)(1); 15268);
() DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a));
() EMERGENCY PROJECT (SEC. 21080(B)(4)
(X) CATEGORICAL EXEMPTION; (SECTION 15302 REPLACEMENT OR RECONSTRUCTION)
() STATUTORY EXEMPTIONS; (SECTION 21080.21 PUBLIC RESOURCES CODE)

REASONS WHY PROJECT IS EXEMPT: These actions do not involve an expansion of use and would not result in significant impacts to sensitive biological or archaeological resources. Furthermore, the project meets criteria set forth in CEQA Section 15302 which allows for the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced.

LEAD AGENCY CONTACT PERSON: E. Shearer-Nguyen, Telephone: (619) 446-5375

IF FILED BY APPLICANT:

- 1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.
2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?
() YES () NO

IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM CEQA

[Signature] Senior Planner
SIGNATURE/TITLE

July 7, 2014
DATE

CHECK ONE:

- (X) SIGNED BY LEAD AGENCY DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR:
() SIGNED BY APPLICANT

Revised July 18, 2014mjfh

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.)

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|---|--------------------------------|---|
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| 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.

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

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|---|--------------------------------|---|
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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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|---|--------------------------------|---|
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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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| CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS | NUMBER DI 55.27 | DEPARTMENT Water Department |
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| FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM) | | October 15, 2002 |
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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).

**Larry Gardner
Water Department Director**

- Tab: 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)

METER SHOP (619) 527-7449

| | |
|--------|------|
| NS REQ | FAC# |
| DATE | BY |

Meter Information

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

| | | |
|--|------|---|
| Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) Zip: | 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: | | Check Box if Reclaimed Water <input type="checkbox"/> |

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: | |
| 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 | | | |

| | |
|---|-------------------------|
| Fire Hydrant Meter Removal Request | Requested Removal Date: |
| Provide Current Meter Location if Different from Above: | |
| Signature: | Title: Date: |
| Phone: () | Pager: () |

| City Meter | 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: MOC 5 Material Bins Appendix B - Fire Hydrant Meter Program (Rev. Oct. 2015) | Signature: Date: 121 Page |

MOC open

WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER

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

Note:

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

Date

Name of Responsible Party
Company Name and Address
Account Number: _____

Subject: Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

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

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

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

Sincerely,

Water Department

APPENDIX C

MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

Materials Typically Accepted by Certificate of Compliance

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

APPENDIX D

SAMPLE CITY INVOICE

| | | | |
|---|-------|---------------------------|----------------------|
| City of San Diego, Field Engineering Div., 9485 Aero Drive, SD CA 92123 | | Contractor's Name: | |
| Project Name: | | Contractor's Address: | |
| Work Order No or Job Order No. | | | |
| City Purchase Order No. | | Contractor's Phone #: | Invoice No. |
| Resident Engineer (RE): | | Contractor's fax #: | Invoice Date: |
| RE Phone#: | Fax#: | Contact Name: | 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% | \$ - |
| 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% | \$ - |
| 18 | | | | | \$ - | | \$ - | | \$ - | 0.00% | \$ - |
| | CHANGE ORDER No. | | | | \$ - | | \$ - | | \$ - | 0.00% | \$ - |
| | | | | | \$ - | | \$ - | | \$ - | 0.00% | \$ - |
| Total Authorized Amount (including approved Change Order) | | | | | \$ - | | \$ - | | \$ - | Total Billed | \$ - |

SUMMARY

| | |
|---------------------------------------|---------------|
| A. Original Contract Amount | \$ - |
| 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 |

**I certify that the materials
have been received by me in
the quality and quantity specified**

Resident Engineer

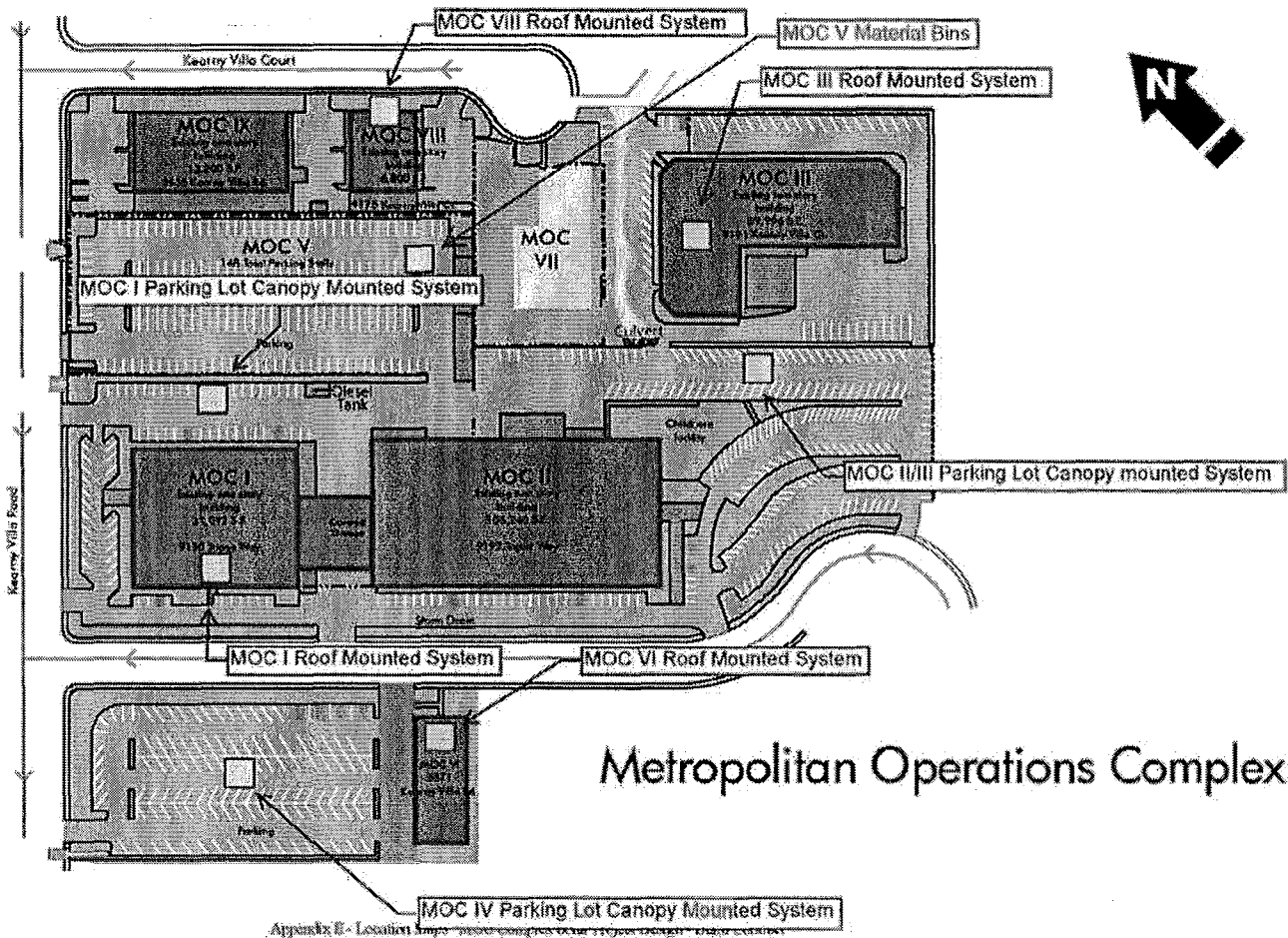
Construction Engineer

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: _____

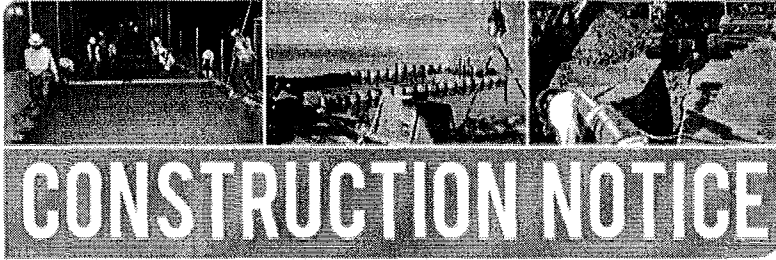
APPENDIX E
ADJACENT PROJECTS



Metropolitan Operations Complex

APPENDIX F

SAMPLE OF PUBLIC NOTICES



PROJECT NAME

Trenching on your street is complete.

What you need to know:

- Pipe installation on your street is complete and construction crews are now installing new pipeline for this project at another location.
- You may see temporary trench plates or trench caps for some time –even after construction activities have concluded on your street.

Street resurfacing:

- Your Streets will be resurfaced once the entire pipeline project is complete.
- Concrete streets will not be resurfaced curb to curb; only the trench will be backfilled.
- Street resurfacing may be delayed due to the City's slurry seal moratorium.

Estimated resurfacing completion on your street:

(Insert Date-Month and Year)

For questions related to this work

Call: (619) 533-4207

Email: engineering@sandiego.gov

Visit: sandiego.gov/CIP



This information is available in alternative formats upon request.



APPENDIX G

AMI DEVICE

Protecting AMI Devices in Meter Boxes and on Street Lights

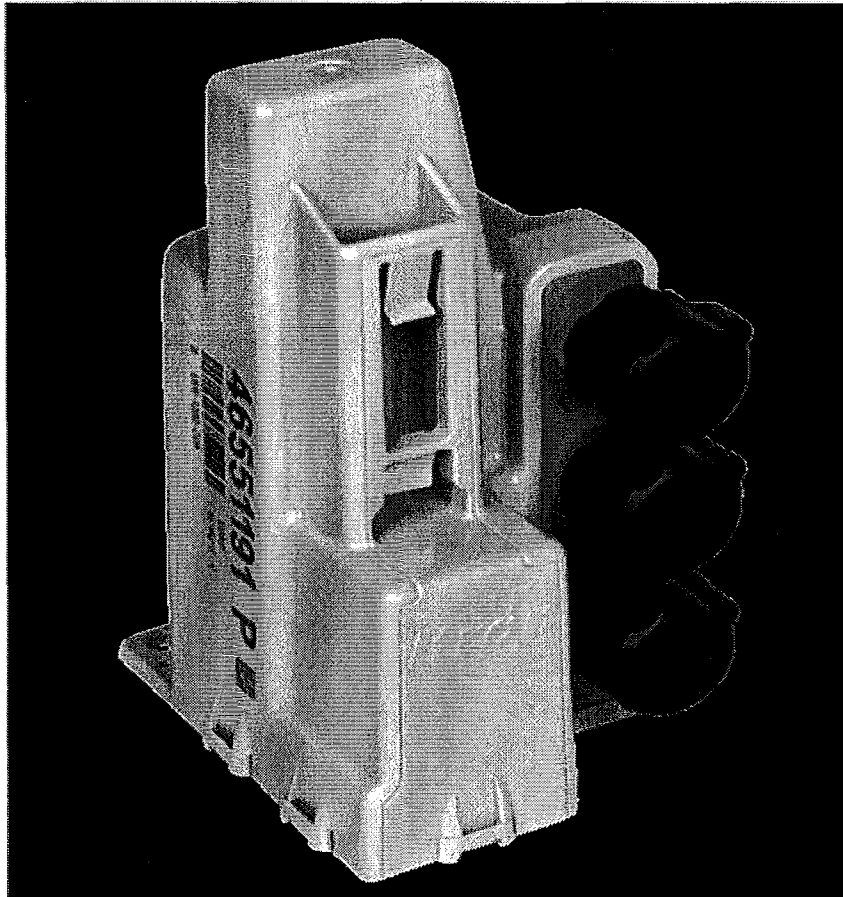
The Public Utilities Department (PUD) has begun the installation of the Advanced Metering Infrastructure (AMI) technology as a new tool to enhance water meter reading accuracy and efficiency, customer service and billing, and to be used by individual accounts to better manage the efficient use of water.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

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

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

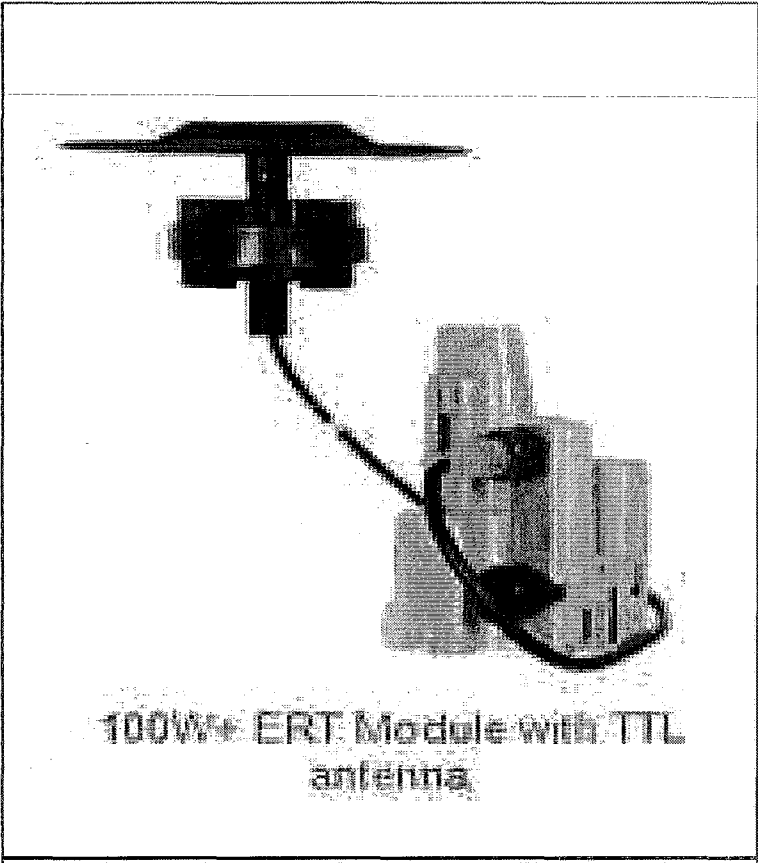
- A. Endpoints, see Photo 1:

Photo 1



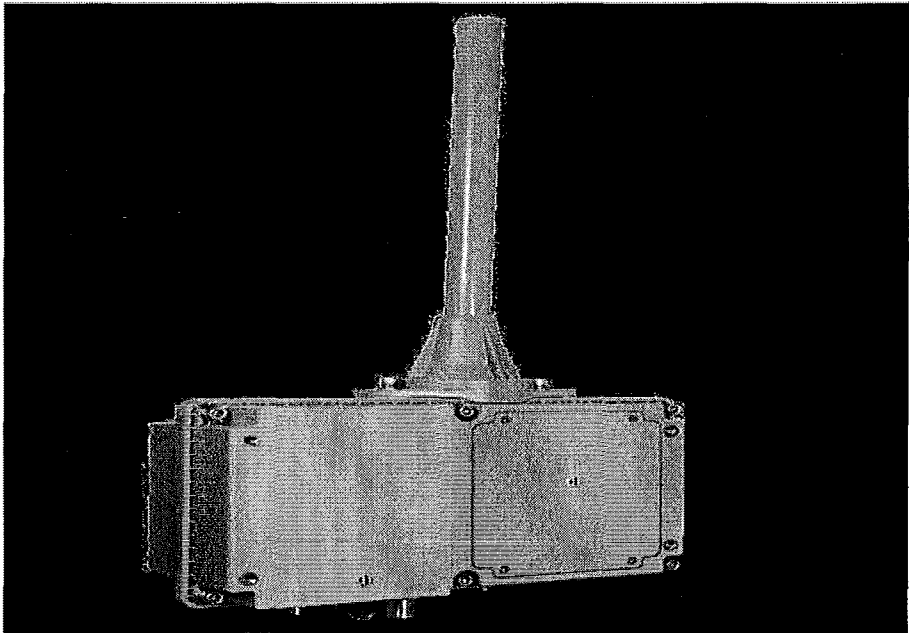
B. AMI Antenna attached to Endpoint (antenna not always required), see Photo 2:

Photo 2



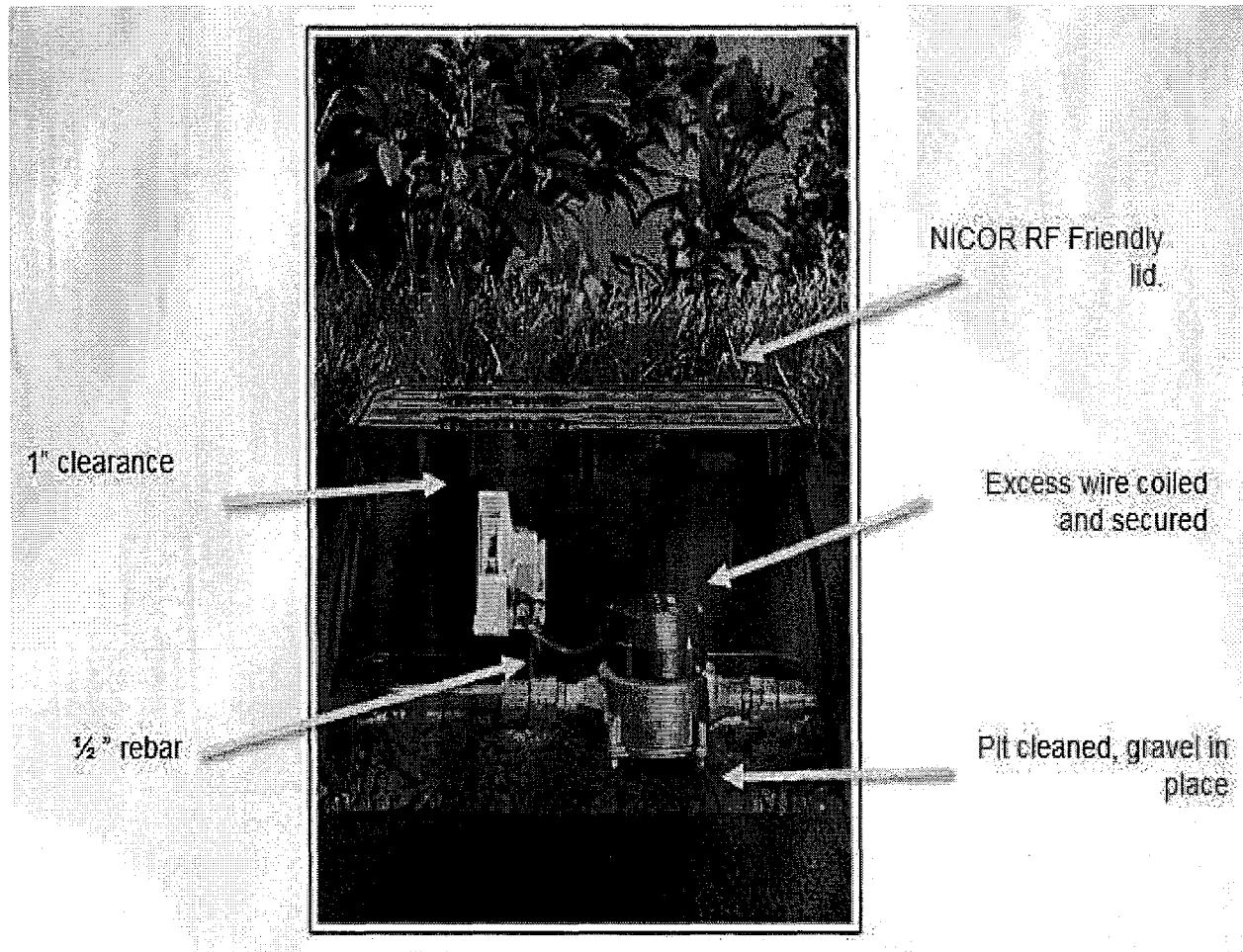
Network Devices, see Photo 3:

Photo 3



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

Photo 4



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

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

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

Photo 5

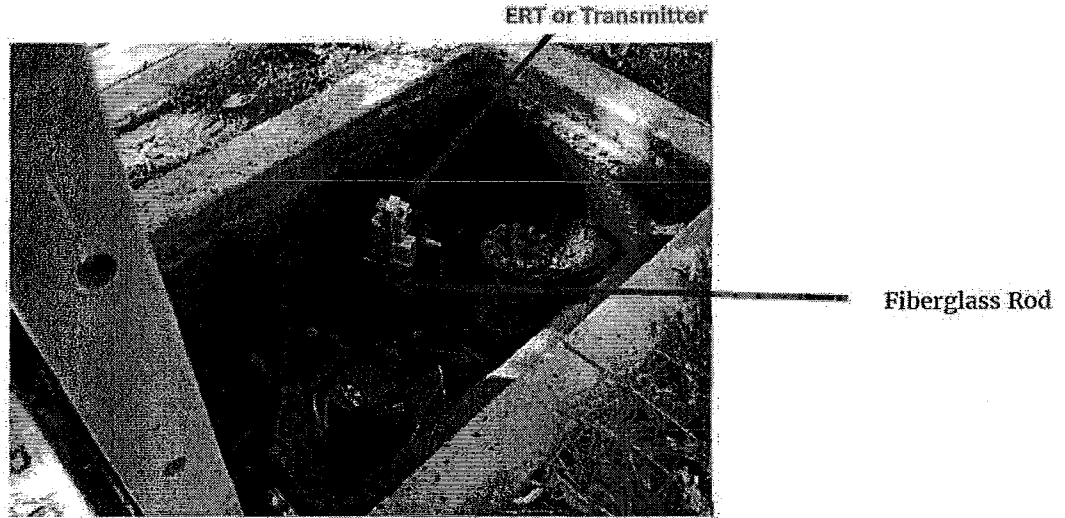
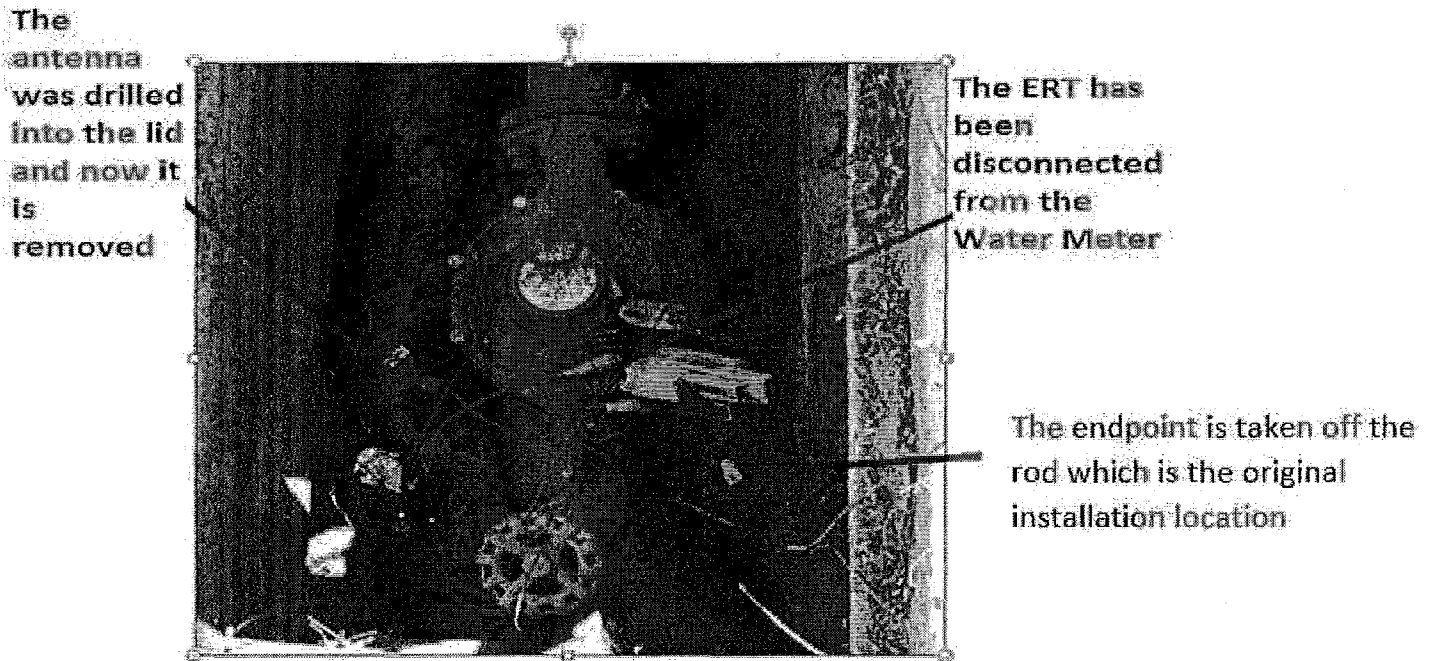


Photo 6 below is an example of disturbance that shall be avoided:

Photo 6



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

Photo 7



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

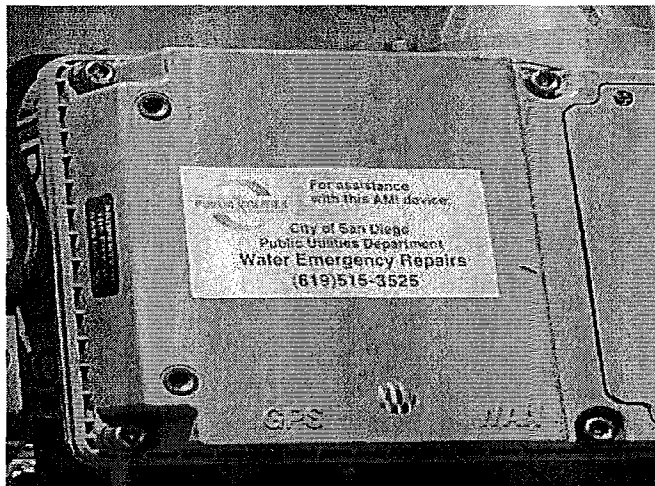
Photo 8 shows an installed network device on a street light. On the back of each Network Device is a sticker with contact information. See Photo 9. **Call PUD Water Emergency Repairs at 619-515-3525 if your work will impact these street lights.** These are assets that belong to the City of San Diego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

Photo 8



Network Device

Photo 9



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

ATTACHMENT F
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ATTACHMENT G

CONTRACT AGREEMENT

CONTRACT AGREEMENT

CONSTRUCTION CONTRACT

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and _____, herein called "Contractor" for construction of **MOC 5 Material Bins**, Bid No. **L-17-6405-DBB-2**; in the amount of **Four Hundred Seventy Seven Thousand Forty-Five Dollars and .00/100 (\$477,045.00)**, which is comprised of the Base Bid.

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

1. The following are incorporated into this contract as though fully set forth herein:
 - (a) The attached Faithful Performance and Payment Bonds.
 - (b) The attached Proposal included in the Bid documents by the Contractor.
 - (c) Reference Standards listed in the Instruction to Bidders and the Supplementary Special Provisions (SSP).
 - (d) That certain documents entitled **MOC 5 Material Bins**, on file in the office of the Public Works Department as Document No. **B-14133**, as well as all matters referenced therein.
2. The Contractor shall perform and be bound by all the terms and conditions of this contract and in strict conformity therewith shall perform and complete in a good and workmanlike manner **MOC 5 Material Bins**, Bid No. **L-17-6405-DBB-2**, San Diego, California.
3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and the Contractor shall accept such payment in full satisfaction of all claims incident to such performances.
4. No claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.
5. This contract is effective as of the date that the Mayor or designee signs the agreement.

CONTRACT AGREEMENT (continued)

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

THE CITY OF SAN DIEGO

APPROVED AS TO FORM

Jan I. Goldsmith, City Attorney

By

Print Name: Clementina Giordano,

Contract Specialist, Public Works Contracts

Date: 9/27/16

By

Print Name: Christina Leone

Deputy City Attorney

Date: 9/29/16

CONTRACTOR

By Vaultstar Company Inc.

Print Name: Nate Johnston

Title: President

Date: 8/10/16

City of San Diego License No.: _____

State Contractor's License No.: 862611

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000002408

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

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

State of California)
County of San Diego)

On 8/10/20 before me, Heather Barnhill ~ Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared Nate Johnston
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 Heather Barnhill
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: Contract - MOC 5 Material Bins, City of San Diego
Document Date: 8/10/2016 Number of Pages: 1
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: _____

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 7-13.3, "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

AMERICAN 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 American With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, "American 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 7-13.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors whose subcontracts are greater than \$50,000 in value has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.

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:

(Name of Project or Task)

as particularly described in said contract and identified as Bid No. _____ ; SAP No. (WBS/IO/CC) _____; 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 _____, _____.

Contractor

by

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

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

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

- A. BID BOND – See Instructions to Bidders, Bidders Guarantee of Good Faith (Bid Security) for further instructions**

- B. CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS**

- C. EQUAL BENEFITS ORDINANCE - CERTIFICATION OF COMPLIANCE**

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

BID BOND

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

KNOW ALL MEN BY THESE PRESENTS,

That Vailston Company, Inc. as Principal, and
Financial Pacific Insurance Company as Surety, are

held and firmly bound unto The City of San Diego hereinafter called "OWNER," in the sum of 10% OF THE TOTAL BID AMOUNT for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

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

MOC 5 Material Bins

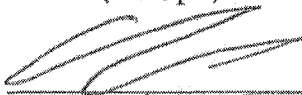
NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and in the manner required in the "Notice Inviting Bids" enters into a written Agreement on the form of agreement bound with said Contract Documents, furnishes the required certificates of insurance, and furnishes 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 19th day of July,
20 16

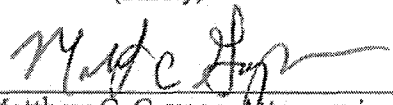
Vailston Company, Inc. (SEAL) Financial Pacific Insurance Company (SEAL)

(Principal)

(Surety)

By: 

Nate Johnston, President
(Signature)

By: 

Matthew C. Gaynor, Attorney-in-Fact
(Signature)

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)



(original on file at Home Office of Company - See Certification)

KNOW ALL PERSONS BY THESE PRESENTS, That UNITED FIRE & CASUALTY COMPANY, a corporation duly organized and existing under the laws of the State of Iowa; UNITED FIRE & INDEMNITY COMPANY, a corporation duly organized and existing under the laws of the State of Texas; and FINANCIAL PACIFIC INSURANCE COMPANY, a corporation duly organized and existing under the laws of the State of California (herein collectively called the Companies), and having their corporate headquarters in Cedar Rapids, State of Iowa, does make, constitute and appoint DANIEL FRAZEE, OR KIM VASQUEZ, OR MATTHEW C. GAYNOR, ALL INDIVIDUALLY OF SANTEE CA

their true and lawful Attorney(s)-in-Fact with power and authority hereby conferred to sign, seal and execute in its behalf all lawful bonds, undertakings and other obligatory instruments of similar nature provided that no single obligation shall exceed \$50,000,000.00 and to bind the Companies thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Companies and all of the acts of said Attorney, pursuant to the authority hereby given and hereby ratified and confirmed.

The Authority hereby granted shall expire the 12th day of December, 2016 unless sooner revoked by UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, AND FINANCIAL PACIFIC INSURANCE COMPANY.

This Power of Attorney is made and executed pursuant to and by authority of the following bylaw duly adopted on May 15, 2013, by the Boards of Directors of UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, and FINANCIAL PACIFIC INSURANCE COMPANY.

"Article VI - Surety Bonds and Undertakings"

Section 2, Appointment of Attorney-in-Fact. "The President or any Vice President, or any other officer of the Companies may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Companies in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. The signature of any officer authorized hereby, and the Corporate seal, may be affixed by facsimile to any power of attorney or special power of attorney or certification of either authorized hereby; such signature and seal, when so used, being adopted by the Companies as the original signature of such officer and the original seal of the Companies, to be valid and binding upon the Companies with the same force and effect as though manually affixed. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority shall have full power to bind the Companies by their signature and execution of any such instruments and to attach the seal of the Companies thereto. The President or any Vice President, the Board of Directors or any other officer of the Companies may at any time revoke all power and authority previously given to any attorney-in-fact.

IN WITNESS WHEREOF, the COMPANIES have each caused these presents to be signed by its vice president and its corporate seal to be hereto affixed this 12th day of December, 2014

UNITED FIRE & CASUALTY COMPANY
UNITED FIRE & INDEMNITY COMPANY
FINANCIAL PACIFIC INSURANCE COMPANY

By: *Dennis J. Richmann* Vice President



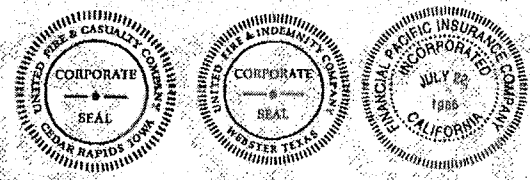
State of Iowa, County of Linn, ss:
On 12th day of December, 2014, before me personally came Dennis J. Richmann to me known, who being by me duly sworn, did depose and say, that he resides in Cedar Rapids, State of Iowa; that he is a Vice President of UNITED FIRE & CASUALTY COMPANY, a Vice President of UNITED FIRE & INDEMNITY COMPANY, and a Vice President of FINANCIAL PACIFIC INSURANCE COMPANY the corporations described in and which executed the above instrument; that he knows the seal of said corporations; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporations and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporations.



Judith A. Davis Notary Public
My commission expires: 04/23/2018

I, David A. Lange, Secretary of UNITED FIRE & CASUALTY COMPANY and Assistant Secretary of UNITED FIRE & INDEMNITY COMPANY, and Assistant Secretary of FINANCIAL PACIFIC INSURANCE COMPANY, do hereby certify that I have compared the foregoing copy of the Power of Attorney and affidavit, and the copy of the Section of the bylaws and resolutions of said Corporations as set forth in said Power of Attorney, with the ORIGINALS ON FILE IN THE HOME OFFICE OF SAID CORPORATIONS, and that the same are correct transcripts thereof, and of the whole of the said originals, and that the said Power of Attorney has not been revoked and is now in full force and effect.

In testimony whereof I have hereunto subscribed my name and affixed the corporate seal of the said Corporations this 19th day of July 20 16



By: *David A. Lange*
Secretary, UF&C
Assistant Secretary, UF&I/FPIC

ACKNOWLEDGMENT

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

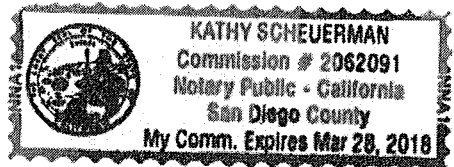
State of California
County of San Diego)

On July 19, 2016 before me, Kathy Scheuerman, Notary Public
(insert name and title of the officer)

personally appeared Matthew C. Gaynor,
who proved to me on the basis of satisfactory evidence to be the pers on(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 hi s/her/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the pers on(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 Kathy Scheuerman (Seal)

ACKNOWLEDGMENT

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

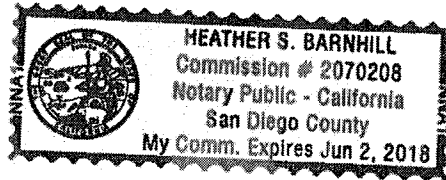
State of California
County of San Diego)

On July 20, 2016 before me, Heather Barnhill, Notary Public
(insert name and title of the officer)

personally appeared Nate Johnston
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 Heather Barnhill (Seal)

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 |
|---------------|----------|----------------------|------------------|--------|----------------------------------|
| | | | | | |
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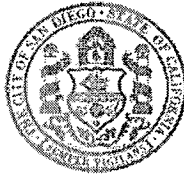
Contractor Name: Vailston Company Inc.

Certified By Nate Johnston Title President

 ^{Name}
 _____ Date 07/20/2016
 Signature

USE ADDITIONAL FORMS AS NECESSARY

**EQUAL BENEFITS ORDINANCE
CERTIFICATION OF COMPLIANCE**



For additional information, contact:
CITY OF SAN DIEGO

EQUAL BENEFITS PROGRAM

202 C Street, MS 9A, San Diego, CA 92101

| COMPANY INFORMATION | |
|---|---|
| Company Name: Vailston Company Inc. | Contact Name: Nate Johnston |
| Company Address: 774 N. Twin Oaks Valley Rd. Ste. C San Marcos, CA 92069 | Contact Phone: 760-757-3857 |
| | Contact Email: nate@vailstoncompany.com |

| CONTRACT INFORMATION | |
|--|-----------------|
| Contract Title: MOC 5 Material Bins | Start Date: TBD |
| Contract Number (if no number, state location): San Diego CA | End Date: TBD |

SUMMARY OF EQUAL BENEFITS ORDINANCE REQUIREMENTS

The Equal Benefits Ordinance [EBO] requires the City to enter into contracts only with contractors who certify they will provide and maintain equal benefits as defined in SDMC §22.4302 for the duration of the contract. To comply:

- Contractor shall offer equal benefits to employees with spouses and employees with domestic partners.
 - Benefits include health, dental, vision insurance; pension/401(k) plans; bereavement, family, parental leave; discounts, child care; travel/relocation expenses; employee assistance programs; credit union membership; or any other benefit.
 - Any benefit not offer an employee with a spouse, is not required to be offered to an employee with a domestic partner.
- Contractor shall post notice of firm's equal benefits policy in the workplace and notify employees at time of hire and during open enrollment periods.
- Contractor shall allow City access to records, when requested, to confirm compliance with EBO requirements.
- Contractor shall submit EBO Certification of Compliance, signed under penalty of perjury, prior to award of contract.

NOTE: This summary is provided for convenience. Full text of the EBO and Rules Implementing the EBO are available at www.sandiego.gov/administration.

CONTRACTOR EQUAL BENEFITS ORDINANCE CERTIFICATION

Please indicate your firm's compliance status with the EBO. The City may request supporting documentation.

- I affirm compliance with the EBO because my firm (*contractor must select one reason*):
- Provides equal benefits to spouses and domestic partners.
 - Provides no benefits to spouses or domestic partners.
 - Has no employees.
 - Has collective bargaining agreement(s) in place prior to January 1, 2011, that has not been renewed or expired.
- I request the City's approval to pay affected employees a cash equivalent in lieu of equal benefits and verify my firm made a reasonable effort but is not able to provide equal benefits upon contract award. I agree to notify employees of the availability of a cash equivalent for benefits available to spouses but not domestic partners and to continue to make every reasonable effort to extend all available benefits to domestic partners.

It is unlawful for any contractor to knowingly submit any false information to the City regarding equal benefits or cash equivalent associated with the execution, award, amendment, or administration of any contract. [San Diego Municipal Code §22.4307(a)] Under penalty of perjury under laws of the State of California, I certify the above information is true and correct. I further certify that my firm understands the requirements of the Equal Benefits Ordinance and will provide and maintain equal benefits for the duration of the contract or pay a cash equivalent if authorized by the City.

Nate Johnston  07/20/16

| | | |
|-------------------------|-----------|------|
| Name/Title of Signatory | Signature | Date |
|-------------------------|-----------|------|

| FOR OFFICIAL CITY USE ONLY | | |
|----------------------------|--------------|---|
| Receipt Date: | EBO Analyst: | <input type="checkbox"/> Approved <input type="checkbox"/> Not Approved - Reason: |

(Rev 02/15/2011)

| Bid Results for Project MOC 5 Material Bins (L-17-6405-DBB-2) | | | | | | | | | | | | |
|---|--|------------------------------------|---|----------------------|----------------------------|---------------|---------------|--------------|--------------|-----------------------------|-------------------------------|--|
| Issued on 07/07/2016 | | | | | | | | | | | | |
| Bid Due on August 3, 2016 1:30 PM (Pacific) | | | | | | | | | | | | |
| Exported on 08/04/2016 | | | | | | | | | | | | |
| VendorID | Company Name | Address | City | State | Zip Code | Country | Contact | Phone | Fax | Email | Vendor Type | |
| 332184 | Vallston Company, Inc. | 774 N Twin Oaks Valley Rd, Suite C | San Marcos | | 92069 | United States | Nate Johnston | 760-757-3857 | 760-757-3848 | Contact@vallstoncompany.com | CAU,MALE,ELB E,PQUAL,Local | |
| Responsee | Responsee Title | Responsee Phone | Responsee Email | | | | | | | | | |
| Rick Cameron | PM | 760-757-3857 | rick@vallstoncompany.com | | | | | | | | | |
| Bid Format | Submitted Date | Delivery Method | Responsive | Status | Confirmation | Ranking | | | | | | |
| | | | | | | | | | | | | |
| Attachments | | | | | | | | | | | | |
| File Name | File Name | File Type | | | | | | | | | | |
| Bid Bond | Bid Bond08032016.pdf | General Attachments | | | | | | | | | | |
| Contractors Certification of Pending Actions | Certificate of Pending Actions08032016.pdf | General Attachments | | | | | | | | | | |
| Equal Benefits Ordinance | Equal Benefits Ordinance08032016.pdf | General Attachments | | | | | | | | | | |
| Line Items | | | | | | | | | | | | |
| Item Num | Section | Item Code | Description | Unit of Measure | Quantity | Unit Price | Line Total | Comment | | | | |
| 1 | Main Bid | 524126 | Bonds (Payment and Performance) | LS | 1 | \$8,000.00 | \$8,000.00 | | | | | |
| 2 | Main Bid | 236220 | Building Permits - Type I | AL | 1 | \$3,500.00 | \$3,500.00 | | | | | |
| 3 | Main Bid | | Field Orders - Type II | AL | 1 | \$25,000.00 | \$25,000.00 | | | | | |
| 4 | Main Bid | 238910 | Demolition of Existing Structure Foundation, Asphalt Concrete, Concrete Improvements and Aggregate Base | LS | 1 | \$23,172.00 | \$23,172.00 | | | | | |
| 5 | Main Bid | 238110 | Structural Concrete | LS | 1 | \$203,000.00 | \$203,000.00 | | | | | |
| 6 | Main Bid | 238160 | Structural Canopy | LS | 1 | \$123,718.00 | \$123,718.00 | | | | | |
| 7 | Main Bid | 238220 | Mechanical Piping | LS | 1 | \$25,000.00 | \$25,000.00 | | | | | |
| 8 | Main Bid | 238210 | Asphaltic Concrete Pavement for Electrical & Instrumentation | LS | 1 | \$22,516.00 | \$22,516.00 | | | | | |
| 9 | Main Bid | 238210 | Electrical & Instrumentation System | LS | 1 | \$32,254.00 | \$32,254.00 | | | | | |
| 10 | Main Bid | 541330 | Water Pollution Control Program Development (WPCP) | LS | 1 | \$885.00 | \$885.00 | | | | | |
| 11 | Main Bid | 238110 | Water Pollution Control Program Implementation (WPCP) | LS | 1 | \$10,000.00 | \$10,000.00 | | | | | |
| | | | | | | | Subtotal | \$477,045.00 | | | | |
| | | | | | | | Total | \$477,045.00 | | | | |
| Subcontractors | | | | | | | | | | | | |
| Name | Description | License Num | Amount | Type | Address | Address2 | City | State | Zip Code | Country | | |
| SUPER WELDING OF SOUTHERN CALIFORNIA, INC. | Line Item #6 | 507855 | \$90,957.80 | LAT,FEM,DBE, MBE,SDB | 609 ANITA STREET | | CHULA VISTA | | 91911 | United States | | |
| McGrath Consulting | Line Item #10 | 20194 | \$795.00 | ELBE,SDB | PO BOX 2488 | | El Cajon | | 92021 | United States | | |
| Service Electric Inc. | Bid Item #9 | 821746 | \$27,800.00 | CAU,MALE | 300 Enterprise St. Suite H | | Escondido | | 92029 | United States | | |
| Self-Performance - 74.93% | | | | | | | | | | | | |