

CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT

353 Santa Monica Drive
Channel Islands Beach, CA 93035
Ventura County, California

Hollywood Beach Water Pipeline Improvement Project Design

CONTRACT DOCUMENTS | CONTRACT SPECIFICATIONS



Advertised: July 29, 2022

Pre-bid Conference: August 15, 2022

Bid due/Opening: August 29, 2022

July 2022



CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT

353 Santa Monica Drive
Oxnard, CA 93035

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Pete Martinez
General Manager

July 2022



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July 2022

INVITATION FOR BIDS

CONTRACT DOCUMENTS

FOR

HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT

Contract No. CI 101



July 2022

Channel Islands Beach Community Services District
353 Santa Monica Drive
Channel Islands Beach, CA 93035
(805) 985-6021

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PART 1

BIDDING

NOTICE OF MANDATORY PRE-BID MEETING AND SITE VISIT
FOR THE CONSTRUCTION OF
HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT
Contract No. CI 101

FOR THE

Channel Islands Beach Community Services District
Ventura County, California

Attendance at the pre-bid conference/site visit is mandatory. No other site visit will be provided. Bidders are responsible to understand the Project (Refer to Section 4 of the Instructions to Bidders).

Bidders must complete and upload to Public Purchase Bidding System all Bid Submittal Forms and Business Information Forms provided in this IFB. Bidders currently on the District's Pre-qualified Contractors List do not need to complete the Business Information Forms.

The pre-bid conference will be held at the time and place stated below:

Date & Time:

10:00 a.m. on Monday, August 15th, 2022

Location:

Channel Islands Beach Community Services District
353 Santa Monica Drive
Channel Islands, CA 93035

Tentative Itinerary:

Preliminary question and answer session will begin at **10:00 a.m.** with site visits to follow.

Questions and requests for substitution pertaining to this project must be submitted to the District electronically via the Public Purchase Bidding System on or before **5:00 p.m. on Wednesday, August 24, 2022.**

NOTICE INVITING ELECTRONIC PROPOSALS (BIDS)

FOR THE CONSTRUCTION OF HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT

Contract No. CI 101

FOR THE

Channel Islands Beach Community Services District
Ventura County, California

NOTICE IS HEREBY GIVEN that the Board of Directors of said District invites and will receive sealed proposals (Bids) via its electronic bidding system up to the hour of **2:00 p.m. on the August 29th, 2022**, for the furnishing to said District of all transportation, labor, materials, tools, equipment, services, permits, utilities, and other items necessary to construct said work. At said time, it will be the responsibility of the prospective bidder to log into the Public Purchase Bidding System for the Channel Islands Beach Community Services District to view the apparent lowest bidder for the project in question.

Contract Documents for the Project may be obtained through the District's Public Purchase Bidding System. Upon award of a Contract, Contractor will be furnished one (1) sets of plans and specifications.

Bids shall conform to and be responsive to the Contract Documents for the work.

Bidders must complete, and submit with bid, all information requested on the Bid Forms. District shall evaluate the apparent low bid to determine responsiveness and responsibility of bidder and determine if Bidder is qualified for successful performance of District construction projects in a timely manner and does not guarantee work with the District.

A contract may be awarded to the lowest, responsible bidder submitting a responsive bid for a specific project.

Each Bid shall be submitted through the Public Purchase Bidding System for the Channel Islands Beach Community Services District as part of the Contract Documents and must be accompanied by a scanned copy of the cashier's check, a certified check, or a Bidder's bond in an amount not less than ten percent (10%) of the amount of the Bid, made payable to the order of or for the benefit of the District. Each Bid shall be submitted electronically at or before the time in this notice provided. The check or bond shall be given as guarantee that the Bidder will enter into a contract with the District and furnish the required payment and performance bonds and certificates of insurance and endorsements if awarded the work, and will be declared forfeited if the Bidder refuses to timely enter into said contract or furnish the required bonds or certificates of insurance and endorsements if his Bid is accepted. A hardcopy of the Bidder's bond, cashier's check or certified check must be received at the District offices within two days of closing bid date.

The Board of Directors has obtained from the Director of the California Department of Industrial Relations a determination of the general prevailing rate of per diem wages and the

general prevailing rate for legal holiday and overtime work in the locality in which said work is to be performed for each craft, classification or type of worker needed. Not less than the determined rates shall be paid to all workers employed in the performance of the contract. Such rates of wages are on file with Department of Industrial Relations and in the Contracts office of the District and are available to any interested party upon request.

Pursuant to California Public Contracts Code Section 22300, the Contractor will be entitled to post approved securities with the District or an approved financial institution in order to have the District release funds retained by the District to insure performance of the Contract.

The District has endeavored to develop particularly fair and equitable provisions relating to indemnification, liability and related insurance for both the District and the Contractor. It is imperative that the Bidders carefully review this notice, and the accompanying forms, relating to the District's insurance requirements.

The successful Bidder will be held to comply with the insurance requirements as specified by the District herein, and in the event of Bidder's failure or inability to meet the insurance requirements after the award of Bid, the District shall have the right to consider such failure to be a material noncompliance by the successful Bidder and will look to exercise its right by (a) rejecting the Bid(s); or (b) declaring a forfeiture of the Bid bond.

It is recommended that Bidder carefully review District insurance requirements with its insurance agent/representative to determine Bidder's ability to comply with the insurance requirements, as specified.

Bidders are required to execute a certificate, which must be submitted with Bid indicating that Bidder has reviewed and understands the insurance requirements and that Bidder has the ability to provide insurance in accordance with Section 11 of the Construction Agreement.

This Project must be constructed and completed between specific calendar or working dates as specified in the contract. Liquidated Damages as specified in Section 6 of the Construction Agreement will be imposed if the Contractor fails to comply with the completion time specified in Section 4 of the Construction Agreement. Contractor is expected to begin work immediately upon receipt of District's Notice to Proceed.

The Board of Directors of the District reserves the right to select the schedule(s) under which the Bids are to be compared and contract(s) awarded, to reject any and all Bids, and to waive any and all irregularity in any Bid.

By the order of the Board of Directors of the Channel Islands Beach Community Services District.

Pete Martinez – General Manager

Date

PART 1 – BIDDING INSTRUCTIONS TO BIDDERS

1. GENERAL

1.1 Definitions for capitalized terms used in this Invitation for Bids (IFB) are located on Page 3 of the General Conditions.

1.2 No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code Section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

1.4 The Bid shall be for all the Work to be performed as shown and specified in the Contract Documents included hereto and generally described as supplying all labor, equipment, materials, and forces necessary to complete the Work.

1.5 Bids shall be submitted on the Bid Forms provided by District, and in the manner described in this IFB (via Public Purchase Bidding System).

1.6 A Bidder may withdraw its Bid by a signed written request any time prior to the date and time for receiving Bids designated in this IFB. The withdrawal of a Bid does not prejudice the right of a Bidder to file a new Bid so long as the new Bid is delivered prior to the closing time specified for all Bids.

1.7 A mandatory pre-bid conference, which includes a site visit/ job walk, will be held as noted in this IFB.

1.8 A Bid delivered to District at the time set for opening shall be deemed irrevocable, and Bidder may not withdraw this Bid for a period of ninety (90) calendar days after the date set for opening. Extensions to this 90-day period may be requested in writing by District prior to the expiration date and may be extended pursuant to agreement by Bidder.

1.9 The Contract Documents provided to Bidder shall be provided by District at its election and may consist of the Notice Inviting Bids, Instructions to Bidders, Bid forms, the Construction Agreement, any addenda, General Conditions, Supplemental Conditions, District Standard Specifications and Standard Plans (for Water, Sewer, and Recycled Water Facilities), Project Plans and Specifications, and/or Greenbook Standard Specifications for Public Works Construction.

1.10 The Contract Documents are divided into parts, divisions, sections, articles, paragraphs and drawings in keeping with accepted industry practice in order to separate categories of subject matter for convenient reference thereto. There has been no attempt to divide the Specifications, the Specification sections or the Plans/Drawings into work performed by the various building trades, work by separate Contractors, or work required for

separate facilities in the project. The Contract Documents are complementary and what is called for by one shall be as binding as if called for by all.

1.11 Specifications are bound into these documents in the same order as they appear in the Table of Contents pages. Specifications section names and the section page numbers are shown at the bottom of each page.

2. LICENSING REQUIREMENTS FOR CONTRACTORS

In accordance with the provisions of California law, the District has determined that, at the time a Bid is submitted, the Bidder is acting in the capacity of Contractor and is required to be properly licensed in accordance with the laws of this State. Accordingly, the Contractor shall possess a valid **Class A** license at the time that Contractor submits its Bid. Contractor's License Declaration is required as a part of the Contract documentation with the Bid submittal and failure to do so is grounds for declaring the Bid non-responsive. Failure of the Bidder to obtain proper and adequate licensing for an award of a Contract shall constitute a failure to execute the Contract and shall result in the forfeiture of the security of the Bidder.

3. DOCUMENT INTERPRETATION AND ADDENDA

3.1 INTERPRETATION. The Contract Documents are intended to fully inform the Bidder and to provide all details reasonably required for the execution of the proposed Work. Any person contemplating the submission of a Bid shall have thoroughly examined all of the various parts of these Contract Documents, and should there be any doubt as to the meaning or intent of said Contract Documents, the Bidder shall immediately request from the District, in writing an interpretation thereof.

3.2 ADDENDA. Any interpretation or change in said Contract Documents will be made only in writing in the form of an Addendum to the Contract Documents, which will be furnished to all Bidders receiving a set of the Contract Documents. Questions received less than three (3) business days prior to the Bid Opening date may not be answered. Only formal responses by Addenda will be binding. Bidders shall acknowledge the receipt of all Addenda by indicating in the appropriate place in the Bid that they have received all Addenda. The District shall not be responsible for any other explanation or interpretations of said documents.

4. BIDDER'S UNDERSTANDING

4.1 Each Bidder shall carefully inspect and examine the project site and shall be thoroughly familiar with all the Contract Documents. Failure to do so will not relieve the successful Bidder of its obligation to enter into a Contract and complete the contemplated work in strict accordance with the Contract Documents. The Bidder shall verify and completely satisfy itself with all information concerning site and subsurface conditions.

4.2 The submission of a Bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, the character, quality, and scope of work to be performed, the quantities of materials to be finished, and as to the requirements of the Contract Documents.

4.3 During the preparation of the Contract Documents, the District may have investigated the surface and subsurface conditions. Topographic maps, reports or other information relating to surface and subsurface conditions obtained by the District's investigations, if any,

are available for review by any interested party at the District's office located at 353 Santa Monica Drive, Oxnard, CA 93035, during normal working hours. Any and all documents relating to investigations of the surface and subsurface conditions including, but not limited to, logs of test borings, topographic maps, reports, or other information shall not be considered a part of the Contract Documents unless otherwise specified in the Supplemental Conditions or Project Plans and Specifications.

Any investigations conducted by the District of surface and subsurface conditions were made for the purpose of study and design. It is expressly understood and agreed that District assumes no responsibility whatsoever in respect to the sufficiency or accuracy of borings, or of the logs of test borings, topographic maps, reports, or of other investigations that have been made, or of the interpretations made thereof. There is no warranty or guarantee, either expressed or implied, that the conditions indicated by said documents and investigations are representative of those actually existing conditions or throughout such area, or any part thereof, or that unforeseen developments may not occur or that other materials or conditions may not be encountered.

Contractor is responsible for properly examining the site and making additional investigations as it may elect. Information derived from inspection of logs, test borings or topographic maps, or from drawings or other documents showing location of utilities and structures will not in any way relieve the Contractor from any risk or from properly fulfilling all the terms of the Contract Documents.

4.4 Each Bidder shall be aware of and, if awarded a Contract, shall comply with Federal, State, and local laws, statutes, and ordinances relative to the execution of the Work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, non-discrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, the burning and non-burning requirements, permits, fees, and similar subjects.

5. DRAWINGS

Where the Drawings are reduced in size from the original signed Mylar, a graphic scale will be provided. If a dimension is not clearly specified, it shall be obtained from the District.

No information derived from such inspection of records of investigations or compilation thereof made by the District or from the ENGINEER, or his assistants, will relieve the Bidder or Contractor in any way from its risk of properly fulfilling the terms of the Contract.

6 TYPE OF PROPOSAL

6.1 UNIT PRICE ITEMS

Unless specifically stated otherwise, if the quantity of a unit-priced item is designated on the Bid Forms as an estimated quantity, and the actual quantity of the unit-priced item varies by more than twenty-five percent (25%) of the estimated quantity, an equitable adjustment in the Contract Price shall be made upon demand of either party. The equitable adjustment shall be based upon increase or decrease in costs due solely to the variations exceeding twenty-five percent (25%) of the estimated quantity. If the variation in the estimated quantity is such as to cause an increase in the time necessary for completion, the Contractor may request in writing, an extension of time to be received by the District within ten (10) days from the

beginning of the delay. Upon the receipt of a written request for an extension, the ENGINEER will ascertain the facts and make an adjustment for extending the completion date as, in the judgment of the ENGINEER, is justified. Adjustments under this Section shall be made by Change Order.

6.2 LUMP SUM ITEMS

When the work is to be submitted on a lump sum basis, a lump sum price shall be submitted in the appropriate place. The total amount to be paid to the Contractor for the Bid items shall be the amount of the lump sum item as adjusted for additions or deletions resulting from changes in the scope by the District. Lump sum items are shown as "LS" under the unit column in the Schedule of Work Items section of the Bid Form. For example, a lump sum item such as potholing may involve a number of potholes, however, no matter how many are required, all the work is included in the submitted lump sum amount.

In accordance with the Plans and Specifications, a Schedule of Values, which is an itemized list of the value or cost of each Bid item of work, shall be submitted to the ENGINEER prior to or at the pre-construction meeting.

6.3 MOBILIZATION AND DEMOBILIZATION

The cost of mobilization and demobilization of the Work shall not exceed ten percent (10%) of the total amount of the Bid excluding the cost of bonds and insurance unless otherwise stated in the Supplemental Conditions.

7. SPECIAL BIDDING REQUIREMENTS

In the event there is a need for special bidding procedures and requirements for parts of the work under this Contract, such requirements will be set forth in the Supplemental Conditions.

8. PREPARATION OF BIDS

8.1 All blank spaces in the Bid form must be completed in ink, in both words and figures where required. No modifications shall be made to the forms. Any modification to the Bid forms not specifically called for in the Contract Documents may result in the District rejecting the Bid as non-responsive.

8.2 Any Bid may be deemed non-responsive which contains omissions, erasures, alterations, additions of any kind, prices uncalled for, obviously unbalanced prices, or which in any manner shall fail to conform to the conditions of the IFB.

8.3 An authorized signatory shall execute the Bid form.

If the Bidder is a joint venture/partnership, it shall submit with its Bid a duly notarized venture/partner-executed irrevocable Power of Attorney that designates one of the ventures as a Management Sponsor along with a signed copy of the Joint Venture/Partnership Agreement. The Management Sponsor shall be empowered to execute the Bid on behalf of the Bidder and to act for and bind the Bidder in all matters relating to the Bid. The Power of Attorney shall specifically state that each venture/partner shall be jointly and severally liable for any and all of the duties and obligations of the Bidder that is assumed under the Bid and

under any contract arising therefrom. The Management Sponsor shall execute the Bid on behalf of the joint venture/partnership in its legal name.

8.4 The Bidder shall submit with its Bid a notarized Non-collusion Affidavit executed by the Bidder by the person or persons set forth above, otherwise the Bid will be regarded as not properly filed.

9. STATE AND LOCAL SALES AND USE TAXES

The state and local sales and use taxes, as required by the laws and statutes of the state and its political subdivisions, shall be paid by the Contractor. Prices quoted in the Bid shall include sales tax, unless provision is made in the proposal form to itemize the tax separately.

10. SUBMISSION OF BIDS

All Bids must be submitted at the time and place and in the manner prescribed in the IFB. Bids must be made on the Bid forms provided herein. If the IFB requires a hardcopy, each Bid must be submitted in a sealed envelope, marked to indicate its contents without being opened, and addressed in conformance with the instructions in the Contract Documents. If the IFB requires use of the electronic bidding system, Bids must be made on the Bid forms provided in the system.

11. SUBSTITUTIONS "OR-EQUAL"

Except for District-selected equipment items and items where "no substitution" is clearly specified; materials, articles, devices, products, fixtures, form, type of construction, or process are indicated or specified for the purpose of establishing a standard of quality and facilitating the description of the material or process desired by District. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design, and shall be deemed to be followed by the words "Or Equal". Such requests shall be made in writing by the Contractor to the District stating in detail how the proposed product differs in composition and performance from the designated product and shall be accompanied by complete data on which the District may make a determination on the merits of the proposed substitution.

In accordance with Public Contract Code Section 3400, Contractor may, in such cases, submit requests substantiating the substitution of "equal" items within thirty-five (35) days after the award of the Contract unless otherwise stated in the Supplemental Conditions or Project Plans and Specifications. If the District rejects the substitution of an "Or Equal" item, the Contractor shall provide the specified item without extra cost to the District.

12. MODIFIED AND ALTERNATIVE BIDS

12.1 Bids must not deviate from what is requested in this IFB.

12.2 A Bid shall be rejected when the Bidder imposes conditions or exceptions that would modify requirements of the IFB.

13. NAMING OF SUBCONTRACTORS

The Bidder shall submit in the Bid the names and business addresses of each subcontractor that will perform work under this Contract in excess of one-half of one percent (½%) of the amount of the total Bid, and shall list the portion of the work that will be done by such subcontractor. If the Bidder fails to identify specifically any such subcontractor for any portion of the work to be performed under the Contract in excess of one-half of one percent (½%), the Bidder agrees to perform that portion of the work. No listed subcontractor shall be substituted without prior District approval in accordance with Public Contract Code section 4107. Any proposed subcontractors must be properly and currently licensed as required by the subletting and subcontracting Fair Practice Act, commencing with Section 4100 of the Public Contract Code.

14. DISCREPANCIES IN BID ITEMS

14.1 The Bidder shall furnish a price for each individual Bid item, unless otherwise stated in the Schedule of Work Items. Failure to do so may render the Bid(s) incomplete and non-responsive and may cause its rejection. The Bid shall state the Unit Prices, the total amount of each Bid item, and the "Total Bid Price" for which the Bidder proposes to supply the labor, goods, and completely perform the Contract. If the Unit Price and the total amount stated by a Bidder for any item do not agree, the Unit Price alone shall be considered as representing the Bidder's intention, and the total price for that item shall be corrected by District to conform thereto. District will correct the extended Unit Price and math errors to determine the Total Amount of Bid.

14.2 Should any Unit Price be left blank, out of balance, or not accurately reflect the cost, the Bid may be considered non-responsive.

14.3 Should any Unit Price or total price be left blank the Bid will be considered non-responsive unless the blank item can be calculated from the information available (i.e., total price can be determined by multiplying the Unit Price by the estimated quantity).

If any one line item is left blank, and the above situations do not apply, no attempt shall be made to reconcile the amounts. The Bid in this case shall be considered non-responsive.

14.4 If the cumulative total price for all the individual items and the Total Amount of Bid stated by a Bidder do not agree, the sum of the cumulative total price for each of the unit items shall be considered as representing the Bidder's intention and the Total Amount of Bid entered by the Bidder shall be corrected by District to conform thereto.

15. MISTAKES IN BIDS (AFTER OPENING)

15.1 Bidder, who seeks to rescind its Bid due to a mistake or error in preparation of its Bid, shall notify District in writing within five (5) days of public opening.

15.2 Bidders alleging mistakes in Bids may seek relief in accordance with Section 5100, et seq. of the California Public Contracts Code.

16. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm, or corporation shall be allowed to make or file, or be interested in more than one (1) Bid for the same work. A person, firm, or corporation submitting a sub-proposal to a Bidder, or that has quoted prices or material to a Bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other Bidders.

17. BID SECURITY (Bid Bond)

Bids must be accompanied by a certified check, cashier's check drawn on a bank in good standing and payable to the District, or a Bidder's bond in favor of the District issued by a Surety authorized to issue such bonds in the State of California, in an amount not less than ten percent (10%) of the total amount of the proposal submitted. This Bid security shall be given as a guarantee that the Bidder will not withdraw the Bid for a period of ninety (90) calendar days after Bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish the referenced documents within the time period specified in the Contract Documents. Failure of the Contractor who is awarded the Contract to sign the Contract or provide the District with all of the referenced documents within the time period specified by the Contract Documents shall result in the forfeiture of the Bid security to the District.

The Attorney-in-fact that executes a Bid bond on behalf of a Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond. If the Bidder elects to furnish a Bid bond, Bidder shall use the Bid bond form bound herewith, or one conforming substantially thereto in form and content.

18. AWARD OF CONTRACT

Within ninety (90) calendar days after the opening of Bids, the District may accept one of the Bids and issue a Notice of Intent to Award to the lowest responsive and responsible Bidder in accordance with Article 20, Basis of Award, below. The Notice of Intent to Award shall be sent by U.S. mail or by other commercial business delivery method to all Bidders. If the District receives no protest within five (5) business days of the date of Notice of Intent to Award, pursuant to Section 24.2 below, the District may issue a Notice of Award to the lowest responsive and responsible Bidder. The Notice of Award shall be mailed or delivered to the office designated in the Bid. In the event of failure of the lowest responsive and responsible Bidder to sign and return the Contract with an acceptable performance bond and labor and materials bond, certificates of insurance and policies, certificate regarding worker's compensation insurance, and other required documents within the time specified in the Contract Documents, the District may award the Contract to the next lowest responsive and responsible Bidder. Such award, if made, will be made within ninety (90) calendar days after the Bid opening date.

19. RETURN OF BID SECURITY

Within sixty (60) calendar days *after the award* of the Contract, the District will return the Bid securities, except Bidder bonds and guarantees that have been forfeited, to all Bidders whose Bids are not to be further considered in awarding the Contract. Retained Bid securities will be held until the Contract has been finally executed, but in no case longer than sixty (60) calendar days after award of the Contract, after which all Bid securities, other than Bid bonds

and guarantees which have been forfeited, will be returned to the respective Bidders whose proposals they accompanied.

20. BASIS OF AWARD

If awarded, the award will be made by the District on the basis of the Bid from the lowest responsive and responsible Bidder that, in the District's sole and absolute judgment, will best serve the interest of the District.

21. EXECUTION OF CONTRACT

The successful Bidder shall, within fifteen (15) calendar days after receiving the Notice of Award, sign and deliver the Contract to the District together with the acceptable bonds, certificates of insurance and policies, certificate of worker's compensation insurance, and other documents as required in the Contract Documents. Within twenty-one (21) calendar days after receiving the signed Contract and all other required documents that are found acceptable to the District, the District's authorized agents will sign the Contract. Signature by both parties constitutes execution of the Contract.

22. PERFORMANCE BOND

The successful Bidder shall file a Performance Bond with the District on the form bound herewith in the full amount of the Contract Price, as security for the faithful performance of the Contract for the construction of the work, and to cover all warranties against defective workmanship or materials, or both, for a period of one (1) year after the filing date of Notice of Completion. The Surety furnishing this bond shall have a sound financial standing, be a State of California admitted Surety insurer and either submit those documents set forth in California Code of Civil Procedures, section 995.660, items (1) through (4), so that the District may determine whether the bond is sufficient in accordance with California Code of Civil Procedure section 995.660, or have a Best rating of A VII or better.

23. LABOR AND MATERIALS BOND (Payment Bond)

The successful Bidder shall file with the District at the time of execution of the Contract, a Labor and Materials Bond on the form bound herewith in the amount of one-hundred percent (100%) of the Contract Price, as security for the payment of all persons supplying labor and materials for the construction of the work. The Surety furnishing this bond shall have a sound financial standing, be a State of California admitted Surety insurer and either submit those documents set forth in California Code of Civil Procedures, section 995.660, items (1) through (4), so that the District may determine whether the bond is sufficient in accordance with California Code of Civil Procedure section 995.660, or have a Best rating of A VII or better.

24. POWER-OF-ATTORNEY

The Attorney-in-fact (Resident Agent) that executes the Performance Bond or Labor and Materials Bond on behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bonds.

25. BID PROTESTS

25.1 IFB PROTESTS. The purpose of this IFB is to obtain competitive Bids and/or proposals from Bidders. Any Bidder that believes a particular specification or requirement is impractical, unduly restrictive, or ambiguous may advise District of its concerns, within ten (10) business days of issuance of this IFB, by filing a written protest with District's Contracts Officer. The protest will be evaluated, and, if deemed warranted, the IFB Documents may be revised by issuing an Addendum. Any Bidder, that has not filed its protest within ten (10) business days after issuance of this IFB, will be deemed, at the minimum, to have accepted this IFB as reasonable, not unduly restrictive, and unambiguous.

25.2 CONTRACT AWARD PROTEST. Bidders are permitted to protest District's decision to award a Contract. Unless otherwise specified in the IFB, the Bidder shall have five (5) business days from the date of issuance of the Notice of Intent to Award, or similar announcement, to file a protest.

The protest must be filed in writing with the Contracts Administrator and must specify, in detail, the grounds upon which the protest is based. A valid protest must:

1. Come from an actual Bidder for the Contract;
2. Come from a Bidder which has a lower Bid than the successful Bidder; and,
3. Contain the following information:
 - a. Name, address, and telephone number of the Protestor.
 - b. The title and Job/Contract number of the award being protested.
 - c. A detailed statement citing the provisions being protested, including the reasons for the protest.

If a protest is filed on the grounds that the (protesting) Bidder is the lowest responsive responsible Bidder, the Contract shall not be awarded until either the protest has been withdrawn or the District's Contract Officer has issued a Notice of Decision on the matter.

A protest shall not be considered valid if filed by a Bidder who cannot show that it should be awarded the Contract if its protest is accepted.

There is no basis for protest if the District in its sole discretion determines to reject all bids based on the best interests of the District.

The Contracts Officer will issue a written final decision by first-class mail and/or by electronic means, such as facsimile transmission or e-mail, within ten (10) business days of receiving the written protest and prior to Contract Award.

26. NOTICE TO PROCEED

Once the successful Bidder signs and returns the Contract with an acceptable performance bond and labor and materials bond, certificates of insurance and policies, certificate regarding worker's compensation insurance, and other required documents within the time specified in the Contract Documents (refer to Section 21 above), the District will fully execute the Contract

and issue a Notice to Proceed which states the date to proceed with construction. Bidders should be prepared to start work upon the Notice to Proceed.

27. RETENTION

Pursuant to Section 10261 (b) of the Public Contract Code, when the District has made a finding prior to bid that a specified project is substantially complex and therefore requires a higher retention amount than five percent (5%), the District shall include both this finding and the actual retention for the specified project amount in the Invitation for Bids. Any changes in retention shall be located in the Supplemental Conditions of the Construction Contract included in the Invitation for Bids.

28. DISTRICT RIGHTS

28.1 District may investigate the qualifications of any Bidder under consideration inclusive of, but not limited to, the information provided in the Bid form.

28.2 District may require confirmation of information furnished by the Bidder, and require additional evidence of qualifications to perform the work described in this IFB.

28.3 District reserves the right to:

1. Reject any or all of the Bids for any reason whatsoever, at its discretion, including multiple Bids, if multiple Bids are received;
2. Reject any Bids prejudicial to interests of the District or to other Bidders;
3. Reject any Bid that, in the opinion of District, is so unbalanced in comparison to other Bids received and/or to District's internal estimates that it does not accurately reflect the cost to perform the Work;
4. Cancel the entire Bid;
5. Issue subsequent Bids;
6. Seek the assistance of outside technical experts to evaluate Bids, disqualify the Bid(s) upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder(s);
7. Waive any errors or informalities in any Bid, to the extent permitted by law;
8. District may, prior to, or after Contract award, delete any Bid line item at the line item Bid price. If District elects to request additive or deductive item cost in Bidding, as stated in the Supplemental Conditions, then District shall follow Public Contract Code Section 20103.8. Further, if District chooses determining the lowest Bidder other than as in Public Contract Code Section 20103.8(a), it will specify the same in the Supplemental Conditions. If District elects to delete any Bid line item after award, it shall be done pursuant to a Change Order.

- 9, Investigate the qualifications on any Bidder under consideration, inclusive of, but not limited to, the information provide in the Bid Submittal Forms. The District may require confirmation or additional evidence of qualifications to perform the work.

END INSTRUCTIONS TO BIDDERS

PART 2

CONTRACT DOCUMENTS

**PROPOSAL TO
CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT
FOR THE CONSTRUCTION OF
HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT
Contract No. CI 101**

Name of Bidder: _____

Business Address: _____

Phone Number: _____

TO THE GOVERNING BODY OF THE
CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT:

Pursuant to and in compliance with the IFB and the other documents relating thereto, the undersigned Bidder, being fully familiar with the terms of the Contract Documents, local conditions affecting the performance of the Contract, the character, quality, quantities, and scope of the work, and the cost of the work at the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to furnish any and all of the labor, material, tools, equipment, transportation, services, permits, utilities, and all other items necessary to perform the contract and complete in a workmanlike manner, all of the work required in connection with the construction of said work all in strict conformity with the plans and specifications and other Contract Documents, including addenda Nos.: ____, ____, ____, and ____, on file in the office of the Owner for the prices hereinafter set forth.

The undersigned as Bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any person, firm, or corporation; and Bidder proposes and agrees, if the proposal is accepted, that Bidder will execute a contract with the Owner in the form set forth in the Contract Documents and that Bidder will accept in full payment thereof the following prices, to wit:

**SCHEDULE OF WORK ITEMS
(Exhibit A to Construction Agreement)**

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
1.	1	Mobilization, Permits, Cleanup, & Demobilization	Lump Sum	\$_____
2.	1	Record Documents	Lump Sum	\$_____
3.	17	Utility Potholing	E.A.	\$_____
4.	1	Sheeting, Shoring, Bracing and Excavation Safety Measures	Lump Sum	\$_____
5.	644	Install 6-inch PVC pipe	L.F.	\$_____
6.	98	Install 8-inch PVC pipe	L.F.	\$_____
7.	1	Pavement Removal and Restoration	Lump Sum	\$_____
8.	1	Pipe connection to Main line at Harbor Blvd.	Lump Sum	\$_____
9.	1	Pipe connection to Main line at Santa Cruz Ave.	Lump Sum	\$_____
10.	1	Pipe connection to Main line at San Clemente Ave.	Lump Sum	\$_____
11.	1	Pipe connection to Main line at Playa Ct. & Harbor Blvd.	Lump Sum	\$_____
12.	1	Cut, Plug, Abandon and Removal of Existing AC Pipeline	Lump Sum	\$_____
13.	1	Disinfection, Testing and Dewatering of piping	Lump Sum	\$_____
14.	8	Install New 1-inch water Service and Meter box	E.A.	\$_____
15.	1	Install New 4-inch Blow off Assembly	E.A.	\$_____
16.	1	Install New 2-inch Air-Vac Assembly	E.A.	\$_____
17.	1	Remove and Replace Landscape and Irrigation System in Kind	Lump Sum	\$_____
18.	1	Install New Fire Hydrant Assembly at Harbor Blvd.	E.A.	\$_____
19.	1	Relocate Existing Fire Hydrant at Santa Crus Ave.	E.A.	\$_____
TOTAL AMOUNT OF BID ITEMS 1 THROUGH 19				
			\$	

Contracting Firm: _____

Note: All items listed in the Schedule of Work Items described in detail in Specification Section 012000, Measurement and Payment.

Award of Contract, if awarded, will not be made for less than the sum of all the Base Bid Items **1 through 19**. Any additive or deductive work item on the Schedule of Work Items may be selected by District after evaluation of Bids or, if required, after start of construction.

Each individual Bid item shall be determined from visiting the work site, reviewing the Plans and Specifications, and all other portions of the Contract Documents, and shall include all items necessary to complete the Work, including the assumption of all obligations, duties, and responsibilities necessary to the successful completion of the Contract, and the furnishing of all materials and equipment required to be incorporated in and form a permanent part of the Work: tools, equipment, supplies, transportation, facilities, labor, superintendence, and services required to perform and complete the Work; and bonds, insurance and submittals; all as per the requirements of the Contract Documents, whether or not expressly listed or designated.

It is understood that the foregoing quantities are approximate only and are solely for the purpose of facilitating the comparison of Bids, and that the Contractor's compensation will be computed upon the basis of the actual quantities in the completed work whether they be more or less than those shown.

- A. The General Contractor (Contractor) must perform at least fifty-one percent (51%) of the total project work awarded and may sublet no more than forty-nine percent (49%) of the total project work awarded to any one subcontractor.

The name and location of place of business of each subcontractor who will perform work or labor or render service to the General Contractor in or about the construction of the work, or improvements, in an amount in excess of one-half of one percent (½%) of the General Contractor's total Bid, and the portion of the work that will be done by each subcontractor is set forth as follows:

<u>Name of Subcontractor</u>	<u>Location of Office</u>	<u>Work Subcontracted</u>
_____	_____	_____
<u>License #:</u> _____		

<u>Name of Subcontractor</u>	<u>Location of Office</u>	<u>Work Subcontracted</u>
_____	_____	_____
<u>License #</u> _____		

Except as hereinabove provided, Contractor acknowledges and agrees that Contractor will perform all required work in accordance with Section 4106 of the Public Contract Code.

- B. Person who inspected site of the proposed work for Bidder:

Name: _____ Date of Inspection: _____

- C. It is agreed that, if requested by the District, the Bidder shall furnish a notarized financial statement, references, and other information, sufficiently comprehensive to permit an appraisal of his current financial condition.
- D. ACCOMPANYING THIS BID IS _____ (Insert the words "cash", "Bidder's bond", or "certified check", as the case may be) in an amount equal to at least ten percent (10%) of the total amount of the Bid, payable to:

CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT

The undersigned deposits the above-named security as a proposal guarantee and agrees that it shall be forfeited to the District as liquidated damages in case this proposal is accepted by the District and the undersigned fails to execute a contract with the District as specified in the Contract Documents or fails to furnish the required payment and performance bonds and insurance certificates and endorsements. Should the District be required to engage the services of an attorney in connection with the enforcement of this Bid, Bidder promises to pay District's reasonable attorney's fees, incurred with or without suit.

- E. Bidders shall indicate opposite each item listed below the name of the manufacturer or Supplier proposed to be used under the Contract. Award of a Contract under this proposal (Bid) will not imply approval by the District of a manufacturer or Supplier listed by the Bidder. However, if a manufacturer or Supplier is acceptable to the District, the successful Bidder shall furnish the items from the manufacturer or Supplier indicated. Each contracting Bidder shall inform in writing each named manufacturer or Supplier that the so named is listed for information purposes only and may be substituted, changed, or omitted by the successful Bidder, subject to the approval of the Bidder, without subjecting the District to any liability for the substitution, change, or omission. The successful Bidder shall reimburse the District for any expenses incurred by the District as a result of the successful Bidder's failure to so notify each named manufacturer or Supplier. Lead time for delivery of equipment from date of ordering shall also be shown.

<u>Item</u>	<u>Manufacturer</u>	<u>Lead Time Calendar Days</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

F. The names of all persons interested in the foregoing proposals as principals are as follows: (NOTE – If Bidder or other interested is a corporation, state legal name of corporation, also names of the president, secretary, treasurer, and manager thereof; if a general partnership, state true name of firm also names of all individual partners composing firm; if a limited partnership, the names of all general partners and limited partners; if Bidder or other interested person is an individual, state first and last name in full; if the Bidder is a joint venture, state the complete name of each venturer.)

G. Licensed in accordance with the California State Contractor's License Law.

Contractor's License No. _____

Signature of Bidder: _____

Business Address, Complete: _____

Dated: _____, 2022 Telephone Number: _____

NOTE: If Bidder is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign Contracts on behalf of the corporation and the corporate seal; if Bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign Contracts on behalf of the partnership; if the Bidder is an individual, his signature shall be placed above; if the Bidder is a joint venture, the name of the joint venture shall be set forth above with the signature of an authorized representative of each venturer.

CONTRACTOR'S LICENSE DECLARATION

(Business and Professions Code Section 7028.15)

The undersigned declares that he or she is _____
of _____,
the party making the foregoing Bid (Hereinafter, the "Bidder").

- 1. Bidder's Contractor's License Number is as follows: _____,
- 2. The expiration date of Bidder's Contractor's License is: _____, 2022.
- 3. Bidder acknowledges that Section 7028.15(e) of the Business and Professions Code provides as follows:

"Unless one of the foregoing exceptions applies, a Bid submitted to a public agency by a Contractor who is not licensed in accordance with this chapter shall be considered non-responsive and shall be rejected by the public agency. Unless one of the foregoing exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the Contractor was properly licensed when the Contractor submitted the Bid.

Any contract awarded to, or any purchase order issued to, a Contractor who is not licensed pursuant to this chapter is void."

The undersigned declares under penalty of perjury that the foregoing is true and correct.

Executed on _____, 2022, at _____
_____ (Insert city and state where declaration signed)

Signature

Typed Name

Title

Name of Bidder

**ACKNOWLEDGMENT OF INSURANCE REQUIREMENTS
AND CERTIFICATION OF ABILITY TO
PROVIDE COVERAGES SPECIFIED**

I, _____, the _____,
(Name of Signer) (President, Secretary, Manager, Owner or Representative)

of _____

certify that Section 11 of the Construction Agreement has been read and understood,

and that _____
(Name of Company/Corporation/Owner)

is able to provide the coverages required by District on the forms required by District.

Company/Owner understands no changes will be made to requirements after award of Contract.

Signature of President, Secretary, Manager, Owner or Representative

Typed or Printed Name

Title

Date

THIS BOND FORM TO BE FULLY EXECUTED

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS,

That we, _____, as principal, and
_____, as Surety, are held and firmly
bound unto Channel Islands Beach Community Services District in the sum of

Dollars (\$), to be paid to the said District, its successors and assigns, for which
payment, will and truly be made, we bind ourselves, our heirs, executors and
administrators, successors or assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That if the certain proposal of the above bounden _____
_____ is accepted by Channel Islands Beach Community Services
District and if the above bounden

_____, his heirs, executors, administrators,
successors and assigns, shall duly enter into and execute a Contract for such
construction, and shall execute and deliver the Labor and Material, and the Faithful
Performance Bonds and other Contract Documents described, within fifteen (15) days
from the date of the award and notice of the above bounden _____
_____ and from said District, that said for Contract is ready execution,
then this obligation shall become null and void; otherwise, it shall be and remain in full
force and effect.

BIDDER

PRINCIPAL

SURETY

THIS AFFIDAVIT TO BE FULLY EXECUTED
NON-COLLUSION AFFIDAVIT

Affirmed in the STATE OF CALIFORNIA,

the COUNTY OF VENTURA,

and the CITY OF _____

on the _____ day of _____
(Day) (Month)

by _____, affiant, the
(Printed Name of Signatory)

(Title: President, Secretary, Manager, Owner or Representative of)

(Name of Company or Corporation or Owner)

as the person, corporation or company who makes the accompanying proposal,
having first been duly sworn, deposes and says:

That such proposal is genuine, and not sham or collusive, nor made in the interest or
behalf of any person not herein named, and that the Bidder has not directly or indirectly
induced or solicited any other Bidder to put in a sham Bid, or any other person, firm
or corporation to refrain from Bidding, and that the Bidder has not in any manner
sought by collusion to secure for itself an advantage over any other Bidder.

Signature of:

PROPOSER'S BUSINESS INFORMATION (PreQual)

Table of Contents

NOTE: If you are not currently on the District's Prequalified Contractors list, the following information must be completed and uploaded to Public Purchase Bidding System. The District will review Business Information to determine if the apparent low bidder is responsible. If the District finds the apparent low bidder to be non-responsible, the District will complete the process with the next lowest bidder.

- A. Business Information
- B. Business Requirements
- C. Financial Information
- D. Safety
- E. References/Relevant Projects

MINIMUM REQUIREMENTS FOR THIS SOLICITATION/CATEGORY:

- Minimum of 70 points in Section B – Business Requirements
- Minimum 5 years of relevant work history in Section E – References/Relevant Projects

A Business Information

Legal
Business

Name: _____ Date: _____

Address: _____

Street Address

Suite #

City

State

ZIP Code

Contact: _____ Title: _____

Phone: _____ Email: _____

Length of time in business: _____ Length of time at current location: _____ Federal Tax No. _____

In the last five years, has your firm changed names or license numbers? _____

If yes, provide prior names and licenses. _____

California State Contractor's License No.: _____

Department of Industrial Relations Registration No.: _____

Names and titles of officers of the Business:

Is your firm incorporated? YES NO

Name and remittance address that will appear on invoices:

Is your firm a sole proprietorship doing business under a different name? YES NO

If yes, please indicate sole proprietorship name and the name under which you are doing business:

B Business Requirements

5 points for either “No” or “Yes” indicating 1 such instance.

3 points for “Yes” indicating 2 such instance.

0 points for “Yes” or if more than 2 such instances.

Contractor may be immediately disqualified if answer to any of the questions 4-14 is “Yes”.

1. Contractor has submitted evidence of a liability insurance policy with a policy limit of at least \$5,000,000 per occurrence (refer to Section 11 of the Construction Agreement for specific insurance requirements).

Yes No

2. Contractor has submitted evidence of current workers’ compensation insurance policy as required by the Labor Code or is legally self-insured pursuant to Labor Code section 3700 et. seq.

Yes No

3. Contractor has carefully reviewed the insurance and indemnification requirements set forth in Section 4, and has signed the attached Acknowledgment of District Insurance and Indemnification Requirements (on Page 7).

Yes No

4. Has your contractor’s license been revoked at any time in the last five years?

Yes No

5. Has a surety firm completed a contract on your behalf, or paid for completion because your firm was default terminated by the project owner within the last five (5) years?

Yes No

6. At the time of submitting this proposal, is your firm ineligible to bid on or be awarded a public works contract, or perform as a subcontractor on a public works contract, pursuant to either Labor Code section 1777.1 or Labor Code section 1777.7?

Yes No

If the answer is “Yes,” state the beginning and ending dates of the period of debarment.

7. At any time during the last five years, has your firm or any of its owners or officers been convicted of a crime involving the awarding of a contract of a government construction project, or the bidding or performance of a government contract?

Yes No

(Contractor may be immediately disqualified if the answer to any of the questions in D through G above is “yes.”)

8. At any time in the last five years, has your firm been assessed and paid liquidated damages after completion of a project under a construction contract with either a public or private owner?

Yes No

If yes, explain on a separate sheet of paper, identifying all such projects by owner, owner's address, the date of completion of the project, amount of liquidated damages assessed and all other information necessary to fully explain the assessment of liquidated damages.

9. In the last five years has your firm, or any firm with which any of your company's owners, officers or partners was associated, been debarred, disqualified, removed or otherwise prevented from bidding on, or completing, any government agency or public works project for any reason?
- Yes No

If "yes," explain on a separate sheet of paper. State whether the firm involved was the firm applying for pre-qualification here or another firm. Identify by name of the company, the name of the person within your firm who was associated with that company, the year of the event, the owner of the project, the project and the basis for the action.

NOTE: "Associated with" refers to another construction firm in which an owner, partner or officer of your firm held a similar position, and which is listed in response to question 1 on page 8 of this form.

10. In the last five years, has your firm been denied an award of a public works contract based on a finding by a public agency that your company was not a responsible bidder?
- Yes No

If "yes," explain on a separate sheet of paper. Identify the year of the event, the owner, the project and the basis for the finding by the public agency.

11. In the past five years, has any claim against your firm concerning your firm's work on a construction project been filed in court or arbitration?
- Yes No

If "yes," on separate sheets of paper identify the claim(s) by providing the project name, date of the claim, name of the claimant, a brief description of the nature of the claim, the court in which the case was filed and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution).

12. In the past five years, has your firm made any claim against a project owner concerning work on a project or payment for a contract and filed that claim in court or arbitration?
- Yes No

If "yes," on separate sheets of paper identify the claim by providing the project name, date of the claim, name of the entity (or entities) against whom the claim was filed, a brief description of the nature of the claim, the court in which the case was filed and a brief description of the status of the claim (pending, or if resolved, a brief description of the resolution).

13. Within the last five years, has there ever been a period when your firm had employees but was without workers' compensation insurance or state-approved self-insurance?

Yes No

14. In the last five years, has any insurance carrier, for any form of insurance, refused to renew the insurance policy for your firm?

Yes No

C Financial Information

1. Attach to your Bid Form Submittal a complete set of current financial statements (as current as December 2018, if possible), including an accountant's opinion and footnotes, for two (2) preceding fiscal years.

Financial Statement include at a minimum: balance sheet, statement of income and retained earnings, and statement of cash flow.

2. Surety Company: _____
Name, address, and phone number

3. How many years has your organization been in business in California as a contractor under your present business name and license number? _____ years

4. Is your firm currently the debtor in a bankruptcy case?

Yes No

If "yes," please attach a copy of the bankruptcy petition, showing the case number, and the date on which the petition was filed.

5. Was your firm in bankruptcy at any time during the last five years? (This question refers only to a bankruptcy action that was not described in answer to question 7, above.)

Yes No

If "yes," please attach a copy of the bankruptcy petition, showing the case number and the date on which the petition was filed, and a copy of the Bankruptcy Court's discharge order, or of any other document that ended the case, if no discharge order was issued.

6. During the last five years, has a surety company ever denied your firm bond coverage, or has there ever been a period of time when your firm had no surety bond in place during a public construction project when one was required?

Yes No

If yes, provide details on a separate signed sheet indicating the date when your firm was denied coverage and the name of the company, or companies, which denied coverage; and the period during which you had no surety bond in place.

D Prevailing Wages

1. In the last 5 years, were there any occasion(s) in which your firm was required to pay either back wages or penalties for your own firm's failure to comply with the state's prevailing wage laws?

Yes No

2. In the last five years, has there been more than one occasion on which your own firm has been penalized or required to pay back wages for failure to comply with the Federal Davis-Bacon prevailing wage requirements?

Yes No

3. In the last five years, has your firm been found to have violated any provision of California apprenticeship laws or regulations, or the laws pertaining to use of apprentices on public works?

Yes No

If yes, provide the date(s) of such findings, and attach copies of the Department's final decision(s).

4. Provide the name, address and telephone number of the apprenticeship program sponsor(s) (approved by the California Division of Apprenticeship Standards) that will provide apprentices to your company for use on any public work project for which you are awarded a contract by Channel Islands Beach Community Services District

5. If your firm operates its own State-approved apprenticeship program:

a) Identify the craft or crafts in which your firm provided apprenticeship training in the past year.

b) State the year in which each such apprenticeship program was approved, and attach evidence of the most recent California Apprenticeship Council approval(s) of your apprenticeship program(s).

c) State the number of individuals who were employed by your firm as apprentices at any time during the past three years in each apprenticeship and the number of persons who, during the past three years, completed apprenticeships in each craft while employed by your firm.

E Safety

- Has any safety regulatory agency (examples: CalOSHA, Federal OSHA, MSHA, Department of Water Resources, Division of Dam Safety, etc.) cited and assessed penalties against your firm (company-wide) for any violations of its safety or health regulations in the past five years?

Yes No

If “yes,” attached a separate signed page describing the citations, including information about the dates of the citations, the nature of the violation, the project on which the citation(s) was or were issued, the amount of penalty paid, if any. If the citation was appealed to the Occupational Safety and Health Appeals Board and a decision has been issued, state the case number and the date of the decision.

- Has the EPA, Air Quality Management District, Regional Water Quality Control Board, Department of Water Resources, or any other regulatory agency for environmental laws cited either your firm or the owner of a project on which your firm was the contractor, in the past five years?

Yes No

If “yes,” attach a separate signed page describing each citation.

- How often do you require documented safety meetings to be held for construction employees and field supervisors during the course of a project? _____

- List your firm’s Experience Modification Rate (EMR) (California workers’ compensation insurance) for each of the past three premium years:

NOTE: Your workers’ compensation insurance carrier issues an Experience Modification Rate to your firm annually.

Current year: _____

Previous year: _____

Year prior to previous year: _____

If your EMR for any of these three years is or was 1.00 or higher you may, if you wish, attach a letter of explanation.

- Provide the following OSHA Recordable Injury and Illness Statistics for the current year and previous 3 years:

	2022	2021	2020	2019
Fatalities				
Lost Work Days Cases				
Lost and Restricted Day Cases				
Other Reportable Injury Cases				
Total Lost and Restricted Days				
OSHA Recordable Incident Rate				
OSHA Lost Time Incident Rate				
Total Hours Worked				

6. Submit the following items:
 - a) Table of Contents of Contractor's current Safety Plan or Program
 - b) Table of Contents of Contractor's Injury and Illness Prevention Program (IIPP)
 - c) OSHA 300 and 400 logs for the Current year and previous 5 years
 - d) If a fatality has been recorded on the firm's OSHA logs in the last 5 years, please provide a separate signed page describing the circumstances of each fatality and what corrective actions were implemented.

Contractor further acknowledges that it shall be required to submit its full Injury and Illness Prevention Plan for review and acceptance by District, upon award of a contract with the District.

CONFIDENTIAL – INFORMATION PROVIDED HEREIN NOT SUBJECT TO DISCLOSURE

5. Performance History / Relevant Projects

This information provided in determining bidder responsibility, and is considered a confidential document not subject to public disclosure under California law.

PROJECT NAME AND LOCATION	ROLE	DESCRIPTION OF WORK	OWNER'S NAME, ADDRESS, PHONE NO., AND CONTACT PERSON	CONTRACT VALUE	ESTIMATED COMPLETION DATE
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	

	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	
	<input type="checkbox"/> Prime <input type="checkbox"/> Sub			\$	

Please list at least three references for projects of similar size and scope, including governmental agencies if available.

1) AGENCY/COMPANY: _____
PROJECT NAME: _____
ADDRESS: _____

CONTACT PERSON: _____ EMAIL: _____
PHONE NUMBER: _____ LENGTH OF CONTRACT: _____
WORK PERFORMED: _____
INITIAL COST/CHANGE ORDERS: _____

2) AGENCY/COMPANY: _____
PROJECT NAME: _____
ADDRESS: _____

CONTACT PERSON: _____ EMAIL: _____
PHONE NUMBER: _____ LENGTH OF CONTRACT: _____
WORK PERFORMED: _____
INITIAL COST/CHANGE ORDERS: _____

3) AGENCY/COMPANY: _____
PROJECT NAME: _____
ADDRESS: _____

CONTACT PERSON: _____ EMAIL: _____
PHONE NUMBER: _____ LENGTH OF CONTRACT: _____
WORK PERFORMED: _____
INITIAL COST/CHANGE ORDERS: _____

CONSTRUCTION AGREEMENT FOR CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT

HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT

THIS AGREEMENT, Contract No. CI 101, is made and entered into, to be effective, this ____ day of _____, 2022, by and between [company name], hereinafter referred to as "Contractor", and CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT, Ventura County, California, by and through its Board of Directors, hereinafter referred to as "District".

SECTION 1

GENERAL CONDITIONS

Contractor certifies and agrees that it is fully familiar with all the terms, conditions and obligations of the Contract Documents as hereinafter defined, the location of the job site, and the conditions under which the work is to be performed, and that it enters into this Contract based upon its investigation of all such matters and is in no way relying upon any opinions or representations of District. It is agreed that this Contract represents the entire agreement. It is further agreed that the Contract Documents, which include the Notice Inviting Bids, Instructions to Bidders, Bid forms/Contractor's Bid, the Construction Agreement, any Change Orders or Addenda, General Conditions, Supplemental Conditions, Project Plans and Specifications, District Standard Specifications and Standard Plans (for Water, Sewer, and Recycled Water Facilities), and/or Greenbook Standard Specifications for Public Works Construction are incorporated into this Contract by reference, with the same force and effect as if the same were set forth at length herein, and that Contractor and its subcontractors, if any, will be and are bound by any and all of said Contract Documents, insofar as they relate in any part or in any way, directly or indirectly, to the work covered by this Contract.

The Contractor's signing of the Contract signifies its acceptance of the time of completion as being sufficient for completion of the Work, as well as acceptance of all of the other terms and conditions of the Contract Documents.

SECTION 2
PROJECT

The project is described as:

HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT

The scope of this project involves abandonment of approximately construction of 641 LF of 6" PVC and 98 LF of 8" PVC (AWWA C-900 DR-14) waterlines including valves and fittings complete in place. The project also included abandoning an existing 8-inch water line in-place in private easements, removal of existing 8-inch AC pipeline in streets (curb-curb), construction of 8 new water services. Construction of new AIR-VAC and Blow Off in Harbor Blvd, construction of new fire hydrant in Harbor Blvd., and relocation of existing fire hydrant in Santa Cruz Ave. Contractor shall pothole utilities in conflict to locate exact depth and locations.

SECTION 3
PLANS AND SPECIFICATIONS

Project shall be performed in accordance with the attached Plans and Specifications. Said Plans and Specifications including Project Plans and Specifications, District Standard Plans, and/or Greenbook Standard Specifications for Public Works Construction and any revision, amendments, or addenda thereto are attached hereto and incorporated herein as part of this Contract and referred to by reference. The work to be done must also be in accordance with the Contract Documents, which are incorporated herein and referred to by references.

SECTION 4
TIME OF COMMENCEMENT AND COMPLETION

Contractor agrees to commence the Project on the date set forth in the "Notice to Proceed" sent by the District. Upon receipt of the "Notice to Proceed", the Contractor may begin submittals, permitting, potholing and procurement of materials, but shall not commence construction until **January 3rd, 2023**. From January 3rd, 2023, the Contractor shall diligently prosecute the work to Final Completion within **seventy (70) business days**, excluding delays caused or authorized by the District as set forth in Section 5.3.3 of the General Conditions included in these Contract Documents. The time for completion includes five (5) days determined by District likely to be inclement weather when Contractor will be unable to work.

SECTION 5
TIME IS OF THE ESSENCE

Time is of the essence on this Contract. As required by the Contract Documents, Contractor shall prepare and obtain approval of all shop drawings, details and samples, and do all other things necessary and incidental to the prosecution of Contractor's work in conformance with an approved construction progress schedule. Contractor shall coordinate the work covered by this Contract with that of all other Contractors, subcontractors and of the District, in a manner that will facilitate the efficient completion of the entire work in accordance with Section 4 herein of this Construction Agreement. District shall have complete control of the premises on which the work is to be performed and shall have the right to decide the time or order in which the various portions of the work shall be installed or the priority of the work of other subcontractors, and in general, all matters representing the timely and orderly conduct of the work of Contractor on the premises.

SECTION 6
LIQUIDATED DAMAGES FOR DELAY

The parties agree that if the total work called for under this Contract, in all parts and requirements, is not completed within the time specified in Section 4 above, plus the allowance made for delays or extensions authorized under Section 5 of the General Conditions, the District will sustain damage that would be extremely difficult and impracticable to ascertain. The parties therefore agree that Contractor will pay to District the sum of **One Thousand Dollars (\$1000)** per day for each and every calendar day during which completion of the project is so delayed.

Contractor agrees to pay such Liquidated Damages and further agrees that District may offset the amount of Liquidated Damages from any monies due or that may become due Contractor under this Contract.

SECTION 7
CONTRACT PRICE

District agrees to pay and the Contractor agrees to accept as full consideration for the faithful performance of this Contract, subject to any subsequent additions or deductions as provided in approved Change Orders, the sum of **[Bid price] (\$XXX,XXX)** as itemized on the attached Exhibit "A". Payments shall be made in accordance with provisions in Section 7 of the General Conditions.

SECTION 8

SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION OF FUNDS

Pursuant to California Public Contracts Code Section 22300, the Contractor will be entitled to post approved securities with the District or an approved financial institution in order to have the District release funds retained by the District to insure performance of the Contract. Contractor shall be required to execute an addendum to this Contract in a form required by District, together with escrow instructions and any other documents in order to effect this substitution.

SECTION 9

COMPLETION

Within ten (10) days after the contract completion date of the Project, Contractor shall file with the District's ENGINEER its affidavit stating that all workers and persons have been paid in full, and that there are no claims outstanding against the Project for either labor or material, except those certain items, if any, to be set forth in an affidavit covering disputed claims, or items in connection with Stop Notices that have been filed under the provisions of the statutes of the State of California. District may require affidavits or certificates of payment and/or releases from any subcontractor, laborer or material Supplier.

SECTION 10

SURETY BONDS

Contractor shall, before entering upon the performance of this Agreement, furnish bonds approved by the District Counsel; one in the amount of one-hundred percent (100%) of the Contract price Bid, to guarantee the faithful performance of the work and one-year warranties required under Section 13 of this Construction Agreement, and the other in the amount of one-hundred percent (100%) of the Contract Price to guarantee payment of all claims for labor and materials furnished. This Contract shall not become effective until such Bonds are supplied to and approved by the District. The amount of said Bonds shall be adjusted to include any increases in the value of the Contract Price and any time extensions granted under this Contract.

SECTION 11

INSURANCE

Minimum Scope and Limits of Insurance: Contractor shall procure and maintain for the duration of the contract, *and for five (5) years thereafter*, insurance against claims for injuries or death to persons or damages to property that may arise from, or in connection with, the performance of the work hereunder by the Contractor, his agents, representatives, employees, or subcontractors.

Coverage – Coverage shall be at least as broad as the following:

1. **General Liability – Commercial General Liability (CGL)** – Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least five million dollars (\$5,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to Channel Islands Beach Community Services District or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability** – Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01), covering Symbol 1 (any auto) with limit of one million dollars (\$1,000,000) for bodily injury and property damage each accident.
3. **Workers' Compensation Insurance** – The Contractor shall provide workers' compensation coverage as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than one million dollars (\$1,000,000) per accident for bodily injury or disease. **Waiver of Subrogation** (also known as Transfer of Rights of Recovery Against Others to Us): The Contractor hereby agrees to waive rights of subrogation to obtain endorsement necessary to affect this waiver of subrogation in favor of the Channel Islands Beach Community Services District, its directors, officers, employees, and authorized volunteers, for losses paid under the terms of this coverage which arise from work performed by the Named Insured for the Channel Islands Beach Community Services District; this provision applies regardless of whether or not the Channel Islands Beach Community Services District has received a waiver of subrogation from the insurer.
4. **Contractor's Pollution Liability** – (optional: if project involves environmental hazards) with limits no less than five million dollars (\$5,000,000) per occurrence or claim, and ten million dollars (\$10,000,000) policy aggregate.

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

Other Required Provisions – The Commercial General Liability policy and Contractors Pollution (if necessary) are to contain, or be endorsed to contain, the following provisions:

1. **Additional Insured Status:** Channel Islands Beach Community Services District, its directors, officers, employees, and authorized volunteers are to be given insured status (at least as broad as ISO Form CG 20 10 11 85 or, if not available, through the addition of **both** CG 20 10 10 01 and CG 20 37 10 01, with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance.
2. **Primary Coverage:** For any claims related to this project, the Contractor's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the Channel Islands Beach Community Services District, its directors, officers, employees, and authorized volunteers. Any insurance or self-insurance maintained by the Channel Islands Beach Community Services District, its directors, officers, employees, and authorized volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

Contractor shall name the following entities as additional insured:

Contractor shall name the City of [insert City if applicable], its directors, council members, officers, engineers, employees, and agents as additional insured on Contractor's general liability insurance as described above.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Channel Islands Beach Community Services District.

Acceptability of Insurers – Insurance is to be placed with insurers having a current A.M. Best rating of no less than A: VII or equivalent, or as otherwise approved by Channel Islands Beach Community Services District.

The Contractor agrees and he/she will comply with such provisions before commencing work. All of the insurance shall be provided on policy forms and through companies satisfactory to Channel Islands Beach Community Services District. The Channel Islands Beach Community Services District reserves the right to obtain complete, certified copies of all required insurance policies, including the policy declarations page with endorsement number. Failure to continually satisfy the Insurance requirements is a material breach of contract.

Responsibility for Work – Until the completion and final acceptance by Channel Islands Beach Community Services District of all the work under and implied by this agreement, the work shall be under the Contractor's responsible care and charge. The Contractor shall rebuild, repair, restore and make good all injuries, damages, re-erectations, and repairs occasioned or rendered necessary by causes of any nature whatsoever.

Deductibles and Self-Insured Retentions – Insurance deductibles or self-insured retentions must be declared by the Contractor, and approved by the Channel Islands

Beach Community Services District. At the election of Channel Islands Beach Community Services District, the Contractor shall either cause the insurer to reduce or eliminate such self-insured retentions as respects the Channel Islands Beach Community Services District, its directors, officers, employees, and authorized volunteers or the Contractor shall provide a financial guarantee satisfactory to the Channel Islands Beach Community Services District guaranteeing payment of losses and related investigations, claim administration, and defense expenses. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or the Channel Islands Beach Community Services District.

Verification of Coverage – Evidences of Insurance – Contractor shall furnish the Channel Islands Beach Community Services District with copies of certificates and amendatory endorsements effecting coverage required by this contract. All certificates and endorsements are to be received and approved by the Channel Islands Beach Community Services District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor’s obligation to provide them. The Channel Islands Beach Community Services District reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration pages and Endorsement pages, required by these specifications, at any time. Failure to continually satisfy the Insurance requirements is a material breach of contract.

Continuation of Coverage – The Contractor shall, upon demand of Channel Islands Beach Community Services District deliver evidence of coverage showing continuation of coverage for at least five (5) years after completion of the project. Contractor further waives all rights of subrogation under this agreement. When any of the required coverages expire during the term of this agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement and evidence of waiver of rights of subrogation against Channel Islands Beach Community Services District (if builder’s risk insurance is applicable) to Channel Islands Beach Community Services District at least ten (10) days prior to the expiration date.

Sub-Contractors – In the event that the Contractor employs other Contractors (sub-contractors) as part of the work covered by this agreement, it shall be the Contractor’s responsibility to require and confirm that each sub-contractor meets the minimum insurance requirements specified above (via as broad as ISO CG 20 38 04 13). The Contractor shall, upon demand of Channel Islands Beach Community Services District, deliver to Channel Islands Beach Community Services District copies such policy or policies of insurance and the receipts for payment of premiums thereon.

SECTION 12

RISK AND INDEMNIFICATION

Indemnification and Agreement to Defend and Hold Harmless

To the extent permitted by law, Contractor shall defend, indemnify, and hold harmless Channel Islands Beach Community Services District, its directors, officers, employees, and authorized agents from and against all claims, damages, losses and expenses, including reasonable attorneys' fees and costs to defend arising out of the performance of the work described herein, and caused in whole or in part by any negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone whose acts any of them may be liable except where caused by the active negligence, sole negligence, or willful misconduct of the Channel Islands Beach Community Services District, its directors, officers, employees and authorized agents.

SECTION 13

WARRANTY

The Contractor agrees to perform all work under this Contract in accordance with the Contract Documents.

Contractor warrants to make, at its own expense, all repairs or replacements necessitated by defects in materials or workmanship, supplied under terms of this Contract, and pay for any damage to other works resulting from such defects, which become evident within one (1) year after the date of Final Acceptance of the work by the Board of Directors (and filing the Notice of Completion) as described in Section 6.4 of the General Conditions or within such longer period of time as described in District Standard Specification 01 78 36 or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents. This warranty period shall apply to the entire Work completed under this Contract with the exception of those portions of Work occupied and used by the District pursuant to Section 6.2.3 of the General Conditions, Use Prior to Completion.

Contractor further assumes responsibility for a guarantee for all work and materials provided by any subcontractor or manufacturers of packaged equipment components. The Contractor also agrees to hold the District harmless from liability of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written demand for the same from the District. If the Contractor fails to make the repairs and replacements promptly, the District may do the work, and the Contractor and its labor and materials bond insurer per Section 10 of the Construction Agreement shall be liable for the cost thereof.

All repairs and replacements by the Contractor during the warranty period shall carry a one (1) year warranty on those items from the date the defective materials or workmanship was corrected. District may, at its election, require extension of the material bond to cover the additional warranty period. This obligation is in addition to any liability imposed by law and is not intended to waive any other rights the District may have.

The Contractor's warranty shall cover and include any work installed on property not owned by the District, whether public or private, and shall include the repair of damage to improvements and existing conditions on such other property caused by the settlement or otherwise resulting from the Contractor's operations unless the owner of such other property shall in writing release the District from liability and responsibility for work or damage on such other property.

As a precedent to final inspection, the Contractor shall deliver to the District all the manufacturers' warranties for equipment, materials and machinery installed as required by the Contract, with the District named as a beneficiary. In addition, for all equipment, materials and machinery bearing a manufacturer's warranty that extends for a longer period of time than the Contractor's warranty, the Contractor shall secure and deliver the warranties to the District in the same manner and shall ensure that the District is named as a beneficiary.

The Contractor's obligations under this clause are in addition to the Contractor's other express or implied assurances under this Contract or state law and in no way diminish any other basis of responsibility for faulty materials, equipment or work.

SECTION 14

SAFETY

In the performance of this contract, the Contractor shall comply with all applicable federal, state and local statutory and regulatory requirements including, but not limited to California Department of Industrial Relations (Cal/OSHA) regulations; and the U.S. Department of Transportation Omnibus Transportation Employee Testing Act, related to their scope of work and operations. In case of conflict in regulations, the most stringent shall apply. The Contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. Safety precautions shall include, but shall not be limited to: adequate life protection and life-saving equipment; adequate illumination; instructions in accident prevention for all employees, such as the use of machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, fall protection, and other safety devices; equipment and wearing apparel as are necessary, or lawfully required, to prevent accidents, injuries, or illnesses (including, but not limited to, exposure to the *Coccidioides* fungus and Valley Fever); and adequate facilities for the proper inspection and maintenance of all safety measures.

Contractor must obtain all applicable Division of Occupational Safety and Health (CAL-OSHA) permit(s) and others required by California Labor Code and California Government Code, prior to the initiation of any practices, work, method, operation, or process related to the work covered in the contract. Permits required by governmental authorities will be obtained at Contractor's expense.

It is a condition of this contract, and shall be made a condition of each subcontract which the Contractor enters into pursuant to this contract, that the Contractor, and any subcontractor, shall not permit any employee in performance of the contract to work in surroundings or under conditions that are unsanitary, hazardous or dangerous to his/her health or safety, as determined under Cal/OSHA health and safety standards.

The Contractor shall be responsible for the safeguarding of all utilities. At least two (2) working days before beginning work, the Contractor shall call the Underground Service Alert (USA) in order to determine the location of sub-structures. The Contractor shall immediately notify Channel Islands Beach Community Services District and the utility owner if he/she disturbs, disconnects, or damages any utility.

In accordance with Section 6705 of the California Labor Code, the Contractor shall submit to Channel Islands Beach Community Services District specific plans to show details of provisions for worker protection from caving ground during excavations of trenches of five feet (5') or more in depth. The excavation/trench safety plan shall be submitted to, and accepted by, Channel Islands Beach Community Services District prior to starting excavation. The trench safety plan shall have details showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground. If such a plan varies from the shoring system standards established by the Construction Safety Orders of the California Department of Industrial Relations (Cal/OSHA), the plan shall be prepared by a California registered civil, or structural, engineer. As part of the plan, a note shall be included stating that the registered civil or structural engineer certifies that the plan complies with the Cal/OSHA Construction Safety Orders, or that the registered civil or structural engineer certifies that the plan is not less effective than the shoring, bracing, sloping or other provisions of the Safety Orders. In no event shall the Contractor use a shoring, sloping, or protective system less effective than that required by said Construction Safety Orders. Submission of this plan in no way relieves the Contractor of the requirement to maintain safety in all areas. If excavations or trench work requiring a Cal/OSHA permit are to be undertaken, the Contractor shall submit his/her permit with the excavation/trench work safety plan to Channel Islands Beach Community Services District before work begins.

SECTION 15 ASSIGNMENT

No assignment by the Contractor of this Contract or any part hereof, or of funds to be received hereunder, will be recognized by the District unless such assignment has had prior written approval and consent of the District and the Surety.

SECTION 16
ATTORNEYS' FEES

If any action at law or in equity is necessary to enforce or interpret the terms of this Contract, the prevailing party shall be entitled to reasonable attorneys' fees, costs and necessary disbursements in addition to any other relief to which it may be entitled. If any action is brought against the Contractor or any subcontractor to enforce a Stop Notice or Notice to Withhold, which names the District as a party to said action, the District shall be entitled to reasonable attorneys' fees, costs and necessary disbursements arising out of the defense of such action by the District. The District shall be entitled to deduct its costs for any Stop Notice filed, whether court action is involved or not.

SECTION 17
COUNTERPARTS

This Agreement may be executed in counterparts, including by facsimile or electronic transmission, each of which so executed shall, irrespective of the date of its execution and delivery, be deemed an original, and all such counterparts together shall constitute one and the same instrument.

SECTION 18
NOTICES

Any notice required or permitted under this Contract may be given by ordinary mail at the address set forth below. Any party whose address changes shall notify the other party in writing.

TO DISTRICT:

Street and Mailing Address:

Channel Islands Beach Community Services District
353 Santa Monica Drive
Channel Islands Beach, CA 93035

TO CONTRACTOR:

[Contractor]
[address]
[city, state zip]

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the date first hereinabove written.

CONTRACTOR: _____

By _____

Its _____

Print Name _____

Contractor's State License No. _____

DISTRICT:

CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT

By _____
General Manager

**SUPPLEMENTAL AGREEMENT FOR SUBSTITUTION OF
SECURITIES FOR FUNDS WITHHELD
PURSUANT TO CONSTRUCTION CONTRACT**

THIS SUPPLEMENTAL AGREEMENT is made and entered into, to be effective, this _____ day of _____, 2022, by and between: CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT, (hereinafter referred to as "District"), AND _____, (hereinafter referred to as "Contractor"). The parties have heretofore entered into a contract dated _____, for the construction of _____ by the Contractor (hereinafter "Contract"), and this Supplemental Agreement shall be deemed part of said Contract as of the date hereof.

This Supplemental Agreement is made and entered into pursuant to the provisions of California Public Contracts Code Section 22300. Its purpose is to provide for the release to Contractor of funds that District would otherwise withhold from progress payments due to the Contractor.

District and Contractor agree as follows:

1. The funds that District has withheld or is to withhold from progress payments to Contractor under the terms of the Contract if the Contractor deposits with District or with a state or federally-chartered bank, as Escrow Agent, securities as described in California Government Code Section 16430, or certificates of deposit (hereinafter "CDs"), under the following conditions:
 - A. Any CDs deposited with District or with an escrow agent must be issued by banks authorized to do business in California that have its accounts insured by the Federal Deposit Insurance Corporation, or by Savings and Loan Associations authorized to transact business in California that have its accounts insured by the Savings Association Insurance Fund. Securities or CDs shall be in bearer form or be unconditionally endorsed to District.
 - B. District shall have thirty (30) days from the receipt of this Supplemental Agreement, properly completed and executed by Contractor, and if applicable, accompanied by a fully executed Escrow Agreement satisfactory to District, to approve the Supplemental Agreement and Escrow Agreement and to determine the value of the securities and/or CDs to be deposited.

- C. District shall release to Contractor, at the time of each progress payment, funds equivalent to the amount that would otherwise have been withheld therefrom ("retention funds") until the total of the "retention funds" released equals the value, as established by District, of the securities and/or CDs then on deposit. In the event that District determines that the value of the securities and/or CDs is less than the sum of the "retention funds" that would have been withheld previously, together with the amounts that would otherwise be retained from the next progress payment, District shall so notify Contractor, and Contractor shall have five (5) days from the date of such notice to deposit additional securities and/or CDs so that the amounts on deposit equal or exceed the total "retention funds" previously withheld and to be withheld under the Contract. During said five-day period, no progress payments shall be made. If Contractor deposits such additional securities and/or CDs, no funds shall be withheld from the next progress payment pursuant to the terms of this Supplemental Agreement. If Contractor fails to deposit such additional securities and/or CDs, funds shall be withheld pursuant to the Contract.
- D. District may, at any time, sell or otherwise convert to cash such portions or all of the securities and/or CDs as in District's discretion may be necessary to cover any of the purposes set forth in the Contract relative to fulfillment of the Contract, and defaults by the Contractor, including but not limited to, termination of the Contractor's control over the work, stop notices filed pursuant to law and assessment of liquidated damages. The rights of District to the securities and/or CDs shall be superior to any other lien or claim of lien. In addition, any Escrow Agreements entered into by Contractor pursuant to this Supplemental Agreement must provide for the conversion to cash upon District's demand, as described in this Subsection.
- E. Contractor shall pay all costs and expenses, including reasonable attorneys' fees incurred by District, related to or arising out of this Supplemental Agreement or any Escrow Agreement, and Contractor shall also pay any expenses or penalties incurred in the conversion or sale of any securities and/or CDs.
- F. Except as otherwise provided, Contractor shall be the beneficial owner of the securities and/or CDs, and Contractor is entitled to any and all interest that may be paid thereon.

BOND NO. _____

FAITHFUL PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Channel Islands Beach Community Services District, has awarded to

_____, (hereinafter designated as the "Principal"),
a Contract for construction of:

HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT

Contract No.: CI 101; and

WHEREAS, said Principal is required under the terms of said Contract to furnish a bond for the faithful performance of said Contract.

NOW, THEREFORE, we, _____, as
Principal, and _____, as Surety, are held and firmly
bound unto the Channel Islands Beach Community Services District (hereinafter
called "Owner"), in the sum of _____

DOLLARS (\$_____) this amount being not less than one-
hundred percent (100%) of the total bid price of the Contract awarded by Owner to the
Principal, lawful money of the United States of America, for payment of which sum
well and truly to be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents. In addition to the total sum
of the Faithful Performance Bond provided above, Surety agrees to pay all reasonable
attorneys' fees incurred by Owner in any action to enforce Surety's obligations under
this Faithful Performance Bond.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby
bonded Principal, its heirs, executors, administrators, successors, or assigns, shall in
all things stand to and abide by and well and truly keep and perform all the
undertakings, terms, covenants, conditions and agreements in the said Contract and
any alteration thereof, made as therein provided, including, but not limited to, the
provisions regarding Contract duration and liquidated damages, all within the time and
in the manner therein designated in all respects according to their true intent and
meaning, then this obligation shall become null and void; otherwise it shall be and
remain in full force and effect.

As a condition precedent to the satisfactory completion of the Contract, the
above obligation shall hold good for a period of one (1) year after the completion of

the Work and its acceptance by Owner, during which time if Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect the Owner from loss or damage made evident during the period of one (1) year from the date of acceptance of the Work, and resulting from or caused by defective materials or faulty workmanship, the above obligation in penal sum thereof shall remain in full force and effect. Notwithstanding anything in this paragraph to the contrary, the obligation of Surety hereunder shall continue so long as any obligation of Principal remains.

FURTHER, the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the Contract Documents, or of the work to be performed thereunder, shall in any way affect its obligations on this bond; and it does hereby waive notice of any change, extension of time, alteration or modification of the Contract Documents or of work to be performed thereunder.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety named therein, on the _____ day of _____, 2022, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Name) _____
Principal
(Seal)
Name: _____
Title: _____
Signature: _____
(Must be Notarized – Attach Original Acknowledgment)

(Name) _____
Surety
(Seal)
Name: _____
Title: _____
Signature: _____
(Must be Notarized – Attach Original Acknowledgment)

BOND NO. _____

**PAYMENT BOND
(Labor and Materials)**

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Channel Islands Beach Community Services District, has awarded to

_____, (hereinafter designated as the "Principal"),
a Contract for construction of:

HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT

Contract No.: CI 101; and

WHEREAS, said Principal is required under the terms of said Contract to furnish a bond for the payment of labor and materials, equipment or other supplies in connection with the performance of said Contract,

NOW, THEREFORE, we, _____, as
Principal, and _____, as Surety, are held and firmly
bound unto the Channel Islands beach Community Services District (hereinafter called
"Owner"), in the sum of _____

DOLLARS(\$ _____) this amount being not less than one-
hundred percent (100%) of the total bid price of the Contract awarded by Owner to the
Principal), lawful money of the United States of America, for payment of which sum
well and truly to be made, we bind ourselves, our heirs, executors, administrators and
successors, jointly and severally, firmly by these presents.

If said Principal, or any subcontractor of said Principal, fails to pay for any materials, equipment, or other supplies, or for rental of same, used in connection with the performance of Work contracted to be done, or for amounts due under applicable State law for any work or labor thereon, or for amounts due under the Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the State of California Employment Development Department pursuant to § 13020 of the Unemployment Insurance Code, said Surety will pay the same in the amount not exceeding the sum specified above, and, in the event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond is conditioned for the payment in full of the claims of all claimants and shall inure to the benefit of Owner and of any persons, companies or corporations, or their respective assigns, entitled to file claims under applicable State law, including, but not limited to, California Civil Code § 9100.

PROVIDED, that no alterations in the work to be done or the materials to be furnished, or changes in the time of completion, which may be made pursuant to the terms of said Contract, shall in any way release either said Principal or said Surety thereunder, and no extensions of time granted under the provision of said Contract shall release either said Principal or said Surety, and notice of any non-material alterations or extension of the Contract is hereby waived by said Surety. As used herein, the word "material" shall mean any change in excess of twenty percent (20%) of the Contract Price or Contract Time.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety named therein, on the _____ day of _____, 2022, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Name) _____
Principal
(Seal)
Name: _____
Title: _____
Signature: _____
(Must be Notarized – Attach Original Acknowledgment)

(Name) _____
Surety
(Seal)
Name: _____
Title: _____
Signature: _____
(Must be Notarized – Attach Original Acknowledgment)

PART 3

CONDITIONS OF CONTRACT

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GENERAL CONDITIONS

DEFINITIONS

The following capitalized terms are used in the General Conditions or other Contract Documents. Their intent and meaning shall be as follows. Certain other capitalized terms are included in this IFB and are defined within the Section of the document to which they refer to.

Addenda/Addendum – means additional information not included in the original IFB which may contain additional specifications, provisions, standard forms or other information, especially pricing information.

As-Builts – A copy of the Plans used by the Contractor to record changes to the Work as specified in the Contract Documents issued by District for the Project. As-Builts shall be used to create Record Drawings.

Bid – A form, or forms, completed in their entirety stating the Bidder's offer to both furnish all materials and to perform all Work required under the Contract. Bid may also be referred to as a Proposal.

Bidder – Any individual, firm, corporation, partnership, joint venture, or other combination thereof submitting a Bid for Work contemplated. A Bidder may act directly or through a duly authorized representative.

Bid Bond – The cash, certified check or Bidder's Surety bond executed by an admitted Surety insurer accompanying the Bid as a guaranty that the Bidder, if awarded a Contract, will enter into a Contract with District for the performance of the Work required under the Contracts Documents.

Board of Directors (Board) – The Board of Directors of the Channel Islands Beach Community Services District.

Bond – Bid Bond, Faithful Performance Bond, or Payment Bond or other instrument of security.

Business Days – District business days are Monday through Friday, 8 am to 4:30 pm or business hours as specified in related City, County or other agency permits required to perform Work.

Change Order – A written order by the District's ENGINEER, made bilaterally by District and Contractor or unilaterally by District, which covers alterations, changes, additions, or deletions to the Contract Documents or the Work in any manner which are necessary for the proper completion of the Work and which may result in adjustments to the Contract price, period of performance, or both.

Claim – A written statement by the Contractor requesting additional time and/or money from District arising out of acts or omissions of District and/or differing conditions during the performance of the Contract which the Contractor could not have reasonably anticipated at the time of entering into the Contract, and which is submitted in response to District's rejection of, or failure to approve, Contractor's Request for Change, or otherwise issue a Change Order modifying the Contract, adjusting the Contract price and/or period of performance in a manner consistent with that which the Contractor believes is appropriate. The Claim shall be submitted in the manner and in the time consistent with the requirements set forth in detail herein.

Code – Codes of the State of California as well as any other federal or local law, statute, ordinance, rule or regulation.

Consultant – Any consultant retained by District or its (sub)consultant(s) that provides design or construction phase services for support of this Project.

Contract / Contract Documents – The following documents constitute a part of and comprise the Contract/Contract Documents: Notice Inviting Bids, Instructions to Bidders, Bid Form/Contractor's Bid, the Construction Agreement, any Change Orders or addenda, General Conditions, Supplemental Conditions, Project Plans and Specifications, District Standard Specifications and Standard Plans (for Water, Sewer, and Recycled Water Facilities), and/or Greenbook Standard Specifications for Public Works Construction.

Contractor – The individual, partnership, joint venture, corporation, or other combination thereof, identified as such in the Contract, and referred to throughout the Contract Documents as if singular in number and who directly Contracts with District. The term "Contractor" means the Contractor or its authorized representative.

Contract Price – The total amount of money for which the Contract is awarded, as modified by any Change Orders.

Days – Unless otherwise specifically stated, the term "days" will be understood to mean consecutive calendar days.

Drawings – See Plans.

District – Channel Islands Beach Community Services District

ENGINEER – District's Director of Engineering or his designee or District's appointed representative for the Project.

Extra Work – New or unforeseen work, or added work of a different character or function and for which no basis for payment is prescribed in the Contract Documents; or that involves revisions of the details of the Work in such manner as to render inequitable payment under items upon which the Contractor Bid in its Bid; or that work to be done under "stipulated prices" as given in the Schedule of Work Items in the Bid Form.

Faithful Performance Bond – A bond required from the Contractor at the time of execution of a contract which guarantees faithful performance of the Contract by the Contractor.

Field Order – Written notice by District to Contractor of immediate correction of the Work.

Final Acceptance – Action taken by District Board of Directors accepting the Work as fully completed as evidenced by Board authorization to ENGINEER to file a Notice of Completion for the Project.

Final Completion – Action taken by ENGINEER certifying that the Work is fully completed under the Contract Documents prior to District's Final Acceptance of the Work.

Final Inspection – ENGINEER will inspect Work for the purposes of ascertaining that the Work has been fully completed in accordance with the requirements of the Contract Documents.

General Conditions – Legal and contractual instructions to the Contractor setting forth both the Contractor and District responsibilities for business related activities pertaining to the contract. The term "General Conditions" used in the Specifications shall be interpreted to refer to the General Conditions of the Contract Documents.

General Manager – The individual designated by District as its Chief Executive Officer and agent.

Inspector – The individual(s) designated by the District as the field project representative with delegated authority to enforce the requirements of the Contract Documents, subject to the approval of the General Manager.

Invitation to Bid – The following documents constitute the Invitation to Bid: Also referred to as Contract Documents including the Notice Inviting Bids, Instructions to Bidders, Bid Form/Contractor's Bid, the Construction Agreement, any Change Orders or addenda, General Conditions, Supplemental General Conditions, Project Plans and Specifications, District Standard Specifications and Standard Plans (for Water, Sewer, and Recycled Water Facilities), and/or Greenbook Standard Specifications for Public Works Construction.

Law – Any federal, state or local law, statute, ordinance, rule, regulation or code.

Liquidated Damages – The amount the Contractor shall pay to District, as determined by rates and amounts as fixed and agreed in the Contract Documents, due to the Contractor's failure to complete the Work as scheduled or to submit and/or update the schedule within the time specified, or for non-compliance with other specified requirements.

Notice Inviting Bids – A public notice fixing the date and location for the receipt of Bids that is part of the IFB/Contract Documents.

Notice to Proceed – A written notice given by District to the Contractor fixing the date on which the time for performance under the Contract will commence.

Or Equal – Any product, equipment, material, supply, or service which is proposed by the Contractor for use in the Work, which is equal to or better than, and is as suitable as the product, material, equipment, supply or service specified in the Contract Documents as to function, performance, reliability, quality, and general configuration.

Owner – Channel Islands Beach Community Services District

Payment Bond – A bond required from a Contractor to secure payment to Subcontractors, laborers, mechanics and Suppliers employed on the Work of the Contract.

Plans – The part of the Contract Documents consisting of the illustrative plans, profiles, typical and general cross-sections, working drawings, or exact reproductions thereof, which show the location, character, dimensions and details of the Work to be done. Refers to all plans relating to the Project including Project Plans and Specifications which are prepared specifically for the Project and the District's Standard Specifications and Standard Plans for Water Sewer, Recycled Water Facilities.

Plans and Specifications – Refers to **all** plans and specifications relating to the Project including Project Plans and Specifications which are prepared specifically for the Project and the District's Standard Specifications and Standard Plans for Water, Sewer, Recycled Water Facilities, and/or Greenbook Standard Specifications for Public Works Construction.

Project(s) – The entire scope of Work covered by all Contract Documents.

Project Plans and Specifications – Refers to plans, specifications and technical requirements prepared specifically for the Project that are **either different than, more stringent than,** or are **not** addressed in, the District's Standard Specifications and Standard Plans for Water, Sewer, and Recycled Facilities, and/or Greenbook Standard Specifications for Public Works Construction.

Proposal – A standard form supplied by District, which when completed in its entirety and executed, shall constitute a Bid from Contractor.

Record Drawings – Construction drawings from completed past projects maintained by District as a record of how facilities were actually constructed. These are generally created from the original Plans, addendum and Change Order drawings, and the Contractor's As-Built copy of the construction plans.

Schedule of Work Items – A list of Bid item(s) included in the Bid Form submitted by Contractor including the approximate quantities, item descriptions, total price per item, and total amount of Bid.

Specifications – Elements of the Contract Documents which describe in writing the commercial and technical requirements and technical specifications necessary to construct the Project. Refers to all specifications related to the Project including the Project Plans and Specifications, Standard Specifications and Standard Plans for Water, Sewer, and Recycled Water Facilities, and/or Greenbook Standard Specifications for Public Works Construction.

Subcontractor – One who is licensed pursuant to California Business and Professions Code, Section 7000 et. seq., and who Contracts directly with the prime Contractor or with another Subcontractor to perform some part of the Work. A Subcontractor does not have any direct contract with District related to the Work.

Supplemental Agreements – Written agreements between District and the Contractor, covering schedules, drawings, instructions, alterations, amendments and extensions to the Contract including addenda and Change Orders.

Supplier – An individual, organization, or firm who is not required for the purposes of the Work to be licensed pursuant to California Business and Professions Code as a Contractor or Subcontractor, within the meanings of those terms as defined herein above, who provides equipment and/or materials for the Work to the Contractor or a Subcontractor, including that fabricated to a special design, but who does not perform labor at the site except for labor or labor supervision required by some manufacturers as part of their equipment installation for warranty or other purposes or for operation of rented equipment, and only to the extent such labor or labor supervision is exempted from licensing requirements under the California Business and Professions Code, including but not limited to Section 7040 et seq. The term “Supplier” also includes fabricator, manufacturer, or vendor.

Surety or Sureties – The bondsmen or party or parties who guarantee the fulfillment of the Contract, or a portion of the Contract including payments issued by Contractor, by bond and whose signatures are affixed to the bond.

Terms – The terms “Approved”, “Directed”, “Satisfactory”, “Accepted”, “Acceptable”, “Proper”, “Required”, “Necessary”, and “Or Equal” mean as approved, directed, satisfactory, accepted, acceptable, proper, required, necessary, and Or Equal, in the opinion of the ENGINEER.

Unit Price – The amount stated in the Contractor’s Bid for a single unit of an element of the Work.

Work – All the Work specified in the Contract Documents necessary to complete the requirements of the Contract, including the furnishing of all labor and materials. Also, the completed construction or parts thereof required to be provided under the Contract Documents, including all materials, equipment, and supplies incorporated or to be incorporated in the construction.

Work Days – Work Days include the District’s Business Days and excludes Saturday, Sunday, and National Holidays.

SECTION 1. CONTRACT

1.1 CONTRACT PROVISIONS

1.1.1 The Contract Documents, as defined above, form the Contract between the District and the Contractor. The Contract represents the entire integrated agreement between the parties and supersedes all prior negotiations, representations or agreements, either written or oral. These General Conditions are a part of the Contract Documents. The Contract may be amended or modified only as set forth in the Contract Documents. The Contract Documents shall not be construed to create a contractual relationship of any kind between the District and any other Contractor or subcontractor or Supplier of any tier other than the District and Contractor.

1.1.2 Contractor acknowledges that it has read every clause in the Contract Documents, has examined the location where the Work is to be done; has made all inquiries and investigations necessary to enable it to understand thoroughly the intent of all parts of the Contract Documents, and the nature of the Work; and agrees that it will not make any claim for compensation, extension of time or other allowance of any sort, based upon or arising out of any alleged misunderstanding by it of any part of the Contract Documents.

1.1.3 Contractor shall, for the price Bid, furnish all supervision, labor, materials, transportation and equipment necessary to execute the Work in every respect in a thorough, skillful, workmanlike manner in accordance with the Contract Documents and to the satisfaction of the District. All work shall, during its progress and until its completion, conform to the lines, elevations and grades shown on said plans and profiles.

1.1.4 Whenever a reference is made to any portion of this Contract or any other applicable law or ordinance, the reference applies to all existing and future amendments and additions.

1.1.5 The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all. The intent of the Contract Documents is to include all work necessary for the completion of the Contract. The Contractor shall perform all work in conformance to the Contract Documents unless otherwise directed in writing by the ENGINEER per the General Conditions, Section 5.3 – Change Orders.

1.2 ORDER OF PRECEDENCE

If there is a conflict between any of the documents referenced in or required under this Contract, the order of precedence in controlling the Work shall be:

1. Permits from outside agencies required by law and applicable codes or laws
2. Change Orders
3. Addenda
4. Construction Agreement
5. Supplemental Conditions
6. Project Plans and Specifications
7. General Conditions
8. District's Standard Specifications and Standard Drawings (for Water, Sewer, and Recycled Water Facilities)

9. Greenbook Standard Specifications for Public Works Construction (most recent edition and supplements adopted as of the date of the advertisement of the bid)

Any combination of the Contract and other of above mentioned documents may be provided to Contractor as Contract Documents.

1.3 PLANS AND SPECIFICATIONS

1.3.1 All sections of the Specifications shall be read and interpreted as constituting a whole and whatever is specified in one section shall be construed as applying to all sections.

1.3.2 The division of the Specifications into a number of sections, paragraphs, or articles is for convenience only, and no other construction or interpretations shall be made. In this respect, no section of the Specifications is written for an individualized trade, occupation or profession.

1.3.3 The Plans, together with the Specifications, will govern the Work to be done. Anything mentioned in these Specifications and not shown on the Plans, or shown on the Plans and not mentioned in these Specifications, shall be of like effect as though shown or mentioned in both. The Contractor shall perform all activities at no extra cost to the District that are reasonably inferable from the Contract Documents as being necessary to produce and/or achieve the intended results.

1.3.4 The District may furnish from time to time such plans, detail, profiles and information as may be considered necessary for the Contractor's guidance or clarification in addition to those provided in the Contract Documents and shall become a portion of the Plans and Specifications. In cases where the Work or any portion thereof is to be performed in accordance with drawings, specifications or lists of data submitted by the Contractor and approved by the District, such approved drawings, submittals, etc., shall become portions of the Plans and Specifications regarding the specific matters to which such approval applies. The Contractor shall be solely responsible for the correctness of the measurements and other essential information submitted by it and for the correlation of the various portions and features of the Work which are or may be affected by such measurements and information.

1.3.5 Any change required by the District in the drawings, submittals, etc., submitted for approval by the Contractor, shall be considered as necessary in order to comply with the requirements of the Plans and Specifications, and shall not be the basis of any claim for extra compensation over and above the Bid price for the Work, except where changes involving Extra Work are expressly authorized and ordered in accordance with the section of the Contract Documents relating to Change Orders.

1.3.6 A copy of the Plans and Specifications shall be kept upon the Work site at all times during its progress and access shall at all times be accorded the ENGINEER.

1.4 OWNERSHIP OF PLANS, SPECIFICATIONS, SHOP DRAWINGS. The Contract Documents including shop drawings and submittals were prepared for the Work of this Contract only and are the sole property of the District. No part of the Contract Documents shall be used by the Contractor for any other construction or for any other purpose except with the written consent of the District. Any unauthorized use of the Contract Documents is at the sole risk and liability of the user.

1.5 INSURANCE. The Contractor shall purchase and maintain insurance, in amounts equal to the requirements in the form and manner provided for in Section 11 of the Construction Agreement.

1.6 BONDS. The Contractor shall purchase and maintain Bonds, in amounts equal to the requirements in the form and manner provided for in Section 10 of the Construction Agreement and Sections 21, 22, and 23 of the Instructions to Bidders.

SECTION 2. DISTRICT

2.1 ADMINISTRATION OF THE CONTRACT

2.1.1 The District will administer the Contract, unless notice is given to the Contractor that a Construction Manager or like entity has been retained to administer the Contract.

2.1.2 The ENGINEER shall serve as the agent of District and will observe the accomplishment of the Work in accordance with the provisions of the Contract. The ENGINEER will decide any and all questions which may arise as to the interpretations of the Contract Documents, as to the quality and acceptability of materials furnished and Work performed, as to the manner of performance, and as to the rate of progress of the Work. All questions as to the acceptable performance of the Contract on the part of the Contractor shall be decided by the ENGINEER.

2.1.3 All instructions, rulings, and decisions of the ENGINEER shall be in writing, and shall be final and binding on the Contractor unless formal written objection is made as specified herein.

2.1.4 It is expressly agreed that the ENGINEER shall not have the power to waive any of the obligations of the Contract Documents for the furnishing by the Contractor of good and suitable material, and for performing the Work as herein described. Failure or omission on the part of the ENGINEER to reject defective or inferior work or materials, or the Engineer's release of the Contractor from obligations to remedy the defective or inferior work, shall not imply acceptance of the Work. Upon discovery of said defective work, the Contractor shall immediately tear out, remove, and properly replace the defective work without additional compensation. Neither shall such failure or omission, nor any acceptance by the ENGINEER, or by the Board be construed as relieving the responsibilities of the Contractor or its sureties, for a sum of money as may be needed to remove and replace, or to repair, any or all work or materials which is found to be defective or inferior. In such instance, in lieu of the recovery of said sum of money, the ENGINEER may permit the Contractor to perform, at the Contractor's own expense, the work of removing and replacing or repairing work or materials found to be defective or inferior.

2.1.5 If, in the opinion of the ENGINEER, Work is not being done in accordance with any applicable codes or laws or any portion of the Contract Documents, written notice as provided in Section 18 of the Construction Agreement shall be given to the Contractor or its authorized agent. Written notice to any foreman or agent in charge of any portion of the Work in the absence of the Contractor shall be considered as notice to the Contractor.

2.1.6 If in the judgment of the ENGINEER, it is undesirable or impracticable to replace any defective or nonconforming Work, the compensation to be paid to the Contractor shall be reduced by Change Order by such amount as in the judgment of the District shall deem equitable.

2.2 **ACCESS TO SITE.** The ENGINEER and other District officers, employees and agents, shall at all times have reasonable access to the jobsite and the Work. The Contractor shall be responsible for the safety of the District's representatives while at the job site. The ENGINEER and other District officers, employees, and agents shall at all times have reasonable access to all places of manufacture where materials are being manufactured, produced, or fabricated for use under this Contract.

2.3 **ACCESS TO RECORDS.** The ENGINEER and other District officers, employees, and agents, shall have reasonable access during normal business hours to Contractor's records such as payrolls, vouchers, purchase orders, etc. as the District may deem appropriate to monitor compliance with the Contract Documents.

2.4 OBSERVATION OF THE WORK

2.4.1 Inspectors employed by or on behalf of the District shall be authorized to observe all work done and all materials furnished. Such observation may extend to all or any part of the Work and to the preparation, fabrication or manufacture of the materials to be used. The Inspector is not authorized to revoke, alter or waive any requirements of the Contract Documents. The Inspector is authorized to call to the attention of the Contractor any failure of the Work or materials to conform to the Contract Documents. Inspector shall have the authority to reject materials or suspend the Work until any questions at issue can be referred to and decided by the ENGINEER.

2.4.2 The Inspector shall, in no case, act as foreman or perform other duties for the Contractor, nor interfere with the management of the Work by the latter. Any advice that the Inspector may give the Contractor shall not be construed as binding to the ENGINEER or in any way as releasing the Contractor from fulfilling all the terms of the Contract.

2.4.3 ENGINEER'S observation of a method of procedure, process or system of operations of the Contractor, or failure of the ENGINEER to warn the Contractor that the method or methods of construction adopted by it are hazardous to persons or to property, shall not relieve the Contractor of its obligations hereunder, including the obligations of indemnification of the District, nor give rise to any claims against the District.

2.5 RIGHT TO STOP WORK. If the Contractor fails to correct Work which is not in accordance with the Contract Documents or for any cause whatsoever, the District may order the Contractor to stop the Work, or any portion of the Work, until the cause for such order has been eliminated; however, the District's right to exercise this provision shall not be for the benefit of the Contractor or any other person or entity. If the District stops the Work because of conduct by the Contractor, its agents, representatives or subcontractors, no compensation in time or money shall be owed to the Contractor for such stoppage.

2.6 RIGHT TO CARRY OUT THE WORK. If the Contractor defaults or neglects to carry out Work in accordance with the Contract Documents and fails within ten (10) days or within the time specified, whichever is less, after receipt of written notice from the District to commence and continue correction of such default or neglect with diligence and promptness, the District may by any means acceptable to it, without prejudice to other remedies the District may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost or estimated cost of correcting such deficiencies, including compensation for additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor and/or its Surety shall pay the difference to the District.

SECTION 3. CONTRACTOR RESPONSIBILITIES

3.1 SUPERVISION

3.1.1 The Contractor shall supervise and direct the Work, using its best skill and attention, and shall determine, subject to applicable law, the means and methods to be implemented. The Contractor is at all times responsible for the Work site until Final Acceptance of the Project. The Contractor shall at all times during the performance of the Contract prosecute the Work with such labor and equipment as, in the opinion of the ENGINEER, are appropriate to complete the different portions of the Work in the order required and within the specified time, and to secure a satisfactory quality of Work.

3.1.2 Representation on Work site. The Contractor shall at all times, while the Work is in progress, be represented at the Work site in person, or by superintendents, foremen, managers, or other duly designated and authorized representatives or agents. The work of such

representatives shall be limited to supervisory duties only. The Contractor shall not designate a subcontractor as its representative. In the event the Contractor's representative's authority is limited in any way, the Contractor shall notify the District within ten (10) days after entering into the Contract of such limitation.

3.1.3 Contractor's Representative. When a Contractor cannot be in person on the Work site during its progress, it shall designate in writing to the ENGINEER the name of its authorized representative in charge of the Work. When a Contractor consists of a multiple entity such as, but not limited to, two or more persons, partnerships, corporations, firms or other entities, such Contractor shall designate in writing to the ENGINEER the name of the authorized representative in charge of the Work and the Work site.

3.2 MATERIALS

3.2.1 All materials shall be new and of the specified quality and fully equal to samples, where samples are required or requested. The Contractor shall furnish to the ENGINEER for review or test, whenever requested and free of charge, samples of all materials proposed to be used in the Work. It shall also submit any required detailed drawings of articles or equipment for District approval. Rejected materials must be immediately removed from the Work site and shall not be brought again upon the Work site or used in the Work.

3.2.2 Except for District-selected equipment items and items where "no substitution" is clearly specified; materials, articles, devices, products, fixtures, form, type of construction, or process are indicated or specified for the purpose of establishing a standard of quality and facilitating the description of the material or process desired by District. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design, and shall be deemed to be followed by the words "Or Equal". Such requests shall be made in writing by the Contractor to the District stating in detail how the proposed product differs in composition and performance from the designated product and shall be accompanied by complete data on which the District may make a determination on the merits of the proposed substitution.

In accordance with Public Contract Code Section 3400, Contractor may, in such cases, submit requests substantiating the substitution of "equal" items within thirty-five (35) days after the award of the Contract unless otherwise stated in the Supplemental Conditions or Project Plans and Specifications. If the District rejects the substitution of an "Or Equal" item, the Contractor shall provide the specified item without extra cost to the District.

3.2.3 Contractor shall be responsible for the materials including proper storage and handling from the time it receives materials until Final Acceptance of the Work and Contractor shall replace or repair, at its own cost in a manner satisfactory to ENGINEER, any of the materials which are lost or damaged after the Contractor's receipt of same.

3.2.4 Materials furnished by District. In cases where the District furnishes all or a portion of the equipment or materials to be used in the Work ("materials"), the Contractor shall accept delivery of such materials as may be provided. If the Contractor is required to haul such materials under this Contract to the Work site, it shall pick them up promptly after notification by the ENGINEER, and shall pay at its own cost any demurrage or other charges which have accrued due to its failure to pick up the materials promptly.

3.2.5 Any District furnished materials which remain unused at the completion of the Work shall be delivered by the Contractor to the District storage yard designated by the ENGINEER.

3.2.6 All compensation to be received by the Contractor for handling and protecting District furnished material is included in the Contract Price, and no extra compensation will be paid to the Contractor for complying with the provisions of this section.

SECTION 4. LEGAL RESPONSIBILITIES

4.1 **COMPLIANCE WITH THE LAW.** The Contractor shall, at its own cost and expense, observe and keep fully informed regarding all existing and future federal, state, city, county, local agency or special District laws and regulations which may in any manner affect those engaged or employed on the Project, or the materials to be used or furnished, or which may in any respect govern, control or otherwise affect the Project or the conduct of the Work or any part thereof. The Contractor shall, at its own cost and expense, furnish all materials and facilities required to comply with such laws and regulations. The Contractor shall furnish copies of all valid licenses and certifications required of Suppliers, subcontractors, or employees for the Work upon the request of the ENGINEER.

4.2 **PERMITS AND LICENSES.** The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

4.3 LABORERS AND SUBCONTRACTORS

4.3.1 **SKILLED WORKERS.** Only skilled and properly licensed and/or certified workers shall be employed on work requiring special qualification. When required in writing by the District, the Contractor or any subcontractor shall discharge any person who is, in the opinion of the District, incompetent, unfaithful, disorderly or otherwise not qualified, and shall not again employ such discharged person on the Work except with the consent of the District. This includes, but is not limited to the discharge or discipline of any employee of the Contractor or its subcontractors or agents who harass or otherwise engage in inappropriate behavior towards District personnel or the public or other workers. Such discharge shall not be the basis of any claim for compensation or damages from the Contractor to the District.

4.3.2 **DAVIS-BACON ACT.** Contractor will pay and will require all subcontractors to pay all employees on said Project a salary or wage at least equal to the prevailing rate of per diem wages as determined by the Secretary of Labor in accordance with the Davis-Bacon Act for each craft or type of worker needed to perform the Contract. The provisions of the Davis-Bacon Act shall apply only if the Contract is in excess of One Thousand Dollars (\$1,000.00) or when twenty-five percent (25%) or more of the Contract is funded by federal assistance. If the aforesaid conditions are met, a copy of the provisions of the Davis-Bacon Act to be complied with are incorporated herein as a part of this Contract and referred to by reference.

4.3.3 **GENERAL PREVAILING RATE.** District has ascertained from the State of California Director of Industrial Relations, the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which the work is to be performed for each craft or type of work needed to execute this Contract, and copies of the same are on file in the Office of the ENGINEER of District. The Contractor agrees that no less than said prevailing rates shall be paid to workers employed on this public works contract as required by Labor Code Section 1774 of the State of California.

4.3.4 **DEPARTMENT OF INDUSTRIAL REGULATIONS.** Contractor must comply with the requirements set forth in California Senate Bill (SB) 854 (Ch. 28, 2014). SB 854's requirements include, but are not limited to, the following:

4.3.4.1 No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial

Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

4.3.4.2 No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

4.3.4.3 This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

4.3.4.4 The Contractor must post job site notices prescribed by regulation.

4.3.4.5 The Contractor must submit a certified payroll records at least monthly to the Labor Commissioner in a format prescribed by the Labor Commissioner.

4.3.5 FORFEITURE FOR VIOLATION. Contractor shall, as penalty to the District, forfeit Two Hundred Dollars (\$200.00) for each calendar day or portion thereof for each worker paid (either by it or any subcontractor under it), less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Section 1770 of the Labor Code for the work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.

4.3.6 APPRENTICES. Section 1777.5 of the Labor Code of the State of California, regarding the employment of apprentices is applicable to this Contract if the prime contract involves Thirty Thousand Dollars (\$30,000.00) or more.

4.3.7 WORKDAY. In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and Contractor shall not require more than eight (8) hours of labor in a day from any person employed by him hereunder except as provided in Section 4.3.2 and 4.3.3 above. Contractor shall conform to Article 3, Chapter 1, Part 7 (Sections 1810 et seq. and including Section 1815) of the Labor Code of the State of California and shall forfeit to the District as a penalty, the sum of Twenty-Five Dollars (\$25.00) for each worker employed in the execution of this Contract by Contractor or any subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one (1) calendar day and forty (40) hours in any one (1) week in violation of said Article. Contractor shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the Project.

4.3.8 EMPLOYER PAYMENTS. Per diem wages shall be deemed to include, per Labor Code Section 1773.1, travel and subsistence among other employer payments.

4.3.9 RECORD OF WAGES; INSPECTION. Contractor agrees to maintain accurate payroll records showing the name, address, social security number, work classification, straight-time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by it in connection with the Project and agrees to require that each of its subcontractors does the same. The applicable Contractor or subcontractor or its agent having authority over such matters shall certify all payroll records as accurate. Contractor further agrees that its payroll records and those of its subcontractors shall be available to the employee or his representative, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards, and shall comply with all of the provisions of Labor Code Section 1776, in general.

4.3.10 NON-DISCRIMINATION IN EMPLOYMENT. Projects under this Contract will obligate the Contractor and Subcontractors not to discriminate in employment practices. Bidders must, if requested, submit a compliance report concerning their employment practices and policies in order

to maintain their eligibility to receive the award of Contract. The Contractor must be prepared to comply in all respects with the requirements regarding nondiscrimination including but not limited to California Labor Code Section 1735.

4.3.11 SUBCONTRACTORS

4.3.11.1 The Contractor shall perform not less than the percentage of the Work specified by the Contract Documents using the Contractor's own employees. At all times throughout the course of the Project, all subcontractors shall be licensed as required by California law. Contractor is responsible for the performance of all work done by each Subcontractor. The District reserves the right to require discharge or replacement of a Subcontractor that is not qualified to perform the work or violates any provision of the Contract Documents. The contract between the Contractor and Subcontractor shall include a copy of Labor Code Sections 1771, 1775, 1776, 1777.5, 1813 and 1815. The Contractor shall comply with the Subletting and Subcontracting Fair Practices Act (Public Contract Code § 4100 et seq.).

4.3.11.2 The Contractor agrees to be fully responsible to the District for the acts and omissions of any Subcontractor, and for the acts and omissions of persons directly or indirectly employed by the Contractor. Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and the District.

4.3.11.3 The Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Contract Documents, assumes toward the District. Each subcontract agreement shall preserve and protect the rights of the District under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with its subcontractors.

4.3.12 CONTRACTING AND ASSIGNMENT. Subcontractors not specifically listed in the Bid proposal will not be recognized as such and will not be allowed to work on the Project unless the value of said Work is less than one-half of one percent ($\frac{1}{2}\%$) of the total Contract Price. All persons engaged in the Work of construction will be considered as employees of the Contractor, and not as independent Contractors. No assignment of any portion of the Work or of any obligation or duty under the Contract is permitted without the express prior written consent of District, and as otherwise authorized by the Contract Documents.

4.4 JOINT AND SEVERAL LIABILITY. If the Contractor is a joint venture or partnership, each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of the Contractor that are assumed under or arise out of the Contract. Each of such venturers or partners waives notice of the breach or non-performance of any undertaking or obligation of the Contractor contained in, resulting from or assumed under the Contract, and the failure to give any such notice shall not affect or impair such venturer's or partner's joint and several liability hereunder.

4.5 PATENTS. The Contractor shall assume all costs arising from the use of any patented article, material, device, equipment, product design or process used or furnished by the Contractor in connection with, or incorporated in, the Work to be done. The Contractor shall be responsible for and indemnify and defend and hold harmless District, its Subcontractors, the ENGINEER, the Consultant, if any, and each of their directors, officers, engineers, employees and agents from all damages, costs and expenses (including attorney's fees, expert witness fees, court costs, and other costs and expenses of, litigation) that may, at any time arise or be set up by reason of any infringement or alleged infringement of any patent rights as a consequence of the installation or use of any such article, material, device, equipment or process in or about any Work under the Contract Documents. The Contractor's bond for faithful performance shall be deemed to apply expressly to this provision of these General Conditions.

4.6 PERSONAL LIABILITY. No director, officer, engineer, employee, or agent of District, its Consultant, or its ENGINEER shall be personally responsible for any liability arising under or by virtue of the Contract.

4.7 TERMINATION.

4.7.1 This Contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party, provided that no termination may be effected unless the other party is given: (1) not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination.

4.7.2 This Contract may be terminated in whole or in part in writing by the District for its convenience, provided that the Contractor is given (1) not less than ten (10) calendar days' notice (delivered by certified mail, return receipt requested) of the intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination.

4.7.3 If termination for default or convenience is effected by the District, an equitable adjustment in the price provided for in this Contract shall be made, but (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and (2) any payment due to the Contractor at the time of termination may be adjusted to cover any additional costs to the District because of the Contractor's default. If the Contractor effects termination for default, the equitable adjustment shall include a reasonable profit for services or other work performed, but no adjustment will be allowed for anticipated profits. The equitable adjustment for any termination shall provide for payment to the Contractor for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the Contractor relating to commitments that had become firm prior to the termination.

4.7.4 Upon receipt of a termination action under Sections 4.7.1 or 4.7.2 above, the Contractor shall (1) promptly discontinue all affected work (unless the notice directs otherwise), and (2) deliver or otherwise make available to the District all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the Contractor in performing this Contract whether completed or in process.

4.7.5 Upon termination under Sections 4.7.1 or 4.7.2 above, the District may take over the work and may award another party an agreement to complete the work under this Contract.

4.8 PARTIAL INVALIDITY. In the event any article, section, sub article, Sections, sentence, clause, or phrase (collectively referred to hereinafter as "Contract Elements" or singularly as "Contract element") contained in the Contract Documents shall be determined, declared, or adjudged invalid, illegal, unconstitutional, or otherwise unenforceable, such determination, declaration, or adjudication shall in no manner affect the other Contract Elements, which shall remain in full force and effect as if the Contract element declared, determined, or adjudged invalid, illegal, unconstitutional, or otherwise unenforceable, was not originally contained in the Contract Documents.

4.9 WAIVER OF RIGHTS. Except as otherwise specifically provided in the Contract Documents, no action or failure to act by District, Consultant, ENGINEER, Contractor or its Subcontractor shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such actions or failure to act constitute an approval of or acquiescence in any breach thereunder.

4.10 TAXES. The Contractor shall pay all sales, consumer, use and other taxes.

4.11 WARRANTY OF TITLE. No materials, supplies, or equipment for the Work under this Contract shall be purchased subject to a chattel mortgage or under a conditional sale contract or other

agreement by which an interest therein or any part thereof is retained by the seller or Supplier. The Contractor warrants clear and good title to all materials, supplies, and equipment installed and incorporated in the Work and agrees upon completion of the Work to deliver the premises together with all improvements and appurtenances constructed or placed thereon by Contractor to District free from any claims liens, encumbrances or charges and further agrees that neither he nor any person, firm or corporation furnishing any material or labor for any work covered by the Contract shall have any right to a lien upon the premises or any improvement or appurtenance thereon, provided that this shall not preclude the Contractor from installing metering devices or other equipment of utility companies or of municipalities, the title of which is commonly retained by the utility company or the municipality. Nothing contained in this article, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the Contractor for its protection, or any right under any law permitting such persons to look to funds due the Contractor in the hands of the District. The provisions of this section shall be inserted in all subcontracts and materials contracts, and notices of its provisions shall be given to all persons furnishing materials for the Work when no formal contract is entered into for such materials.

4.12 LANDS AND RIGHTS-OF-WAY. The lands and rights-of-way for the facility to be constructed will be provided by District. The Contractor shall make its own arrangements and pay all expenses for additional area required outside the limits of District's land and rights-of-way.

Work in public right-of-way shall be done in accordance with the requirements of the permit issued by the public agency in whose right-of-way the Work is located in addition to conforming to the Contract Documents. If a project-specific permit is not required, the Work shall conform to the standards of the public agency that has jurisdiction over the area where work is performed in addition to conforming to the Contract Documents.

SECTION 5. SCOPE OF WORK

5.1 GENERAL. Contractor shall complete the Work in accordance with the Contract Documents and by the completion date set within the Contract Documents at the Contract Price fixed in the Contract. Contractor at Contractor's sole cost and expense shall perform all labor and services and furnish all the materials, tools, and appliances necessary or proper for performing and completing the Work in accordance with the Contract Documents. All the labor, services and materials shall be performed and furnished strictly pursuant to, and in conformity with the Contract Documents, and the directions of the ENGINEER as given from time to time during the progress of the work under the terms of the Contract, and also in accordance with the Contract Documents and the submittals to be furnished from time to time as provided herein.

5.2 INTERPRETATION OF CONTRACT DOCUMENTS. Should it appear to Contractor that the Work to be performed or that the Contract Documents are not sufficiently detailed or explained, or should any questions or doubts arise as to the true meaning of any part of the Contract Documents, or shall an error, conflict, ambiguity or mistake be apparent or discovered in the Contract Documents, including the quantity estimates, the Contractor shall make a written request to the District immediately or no later than five (5) days upon discovery of need for correction, clarification or interpretation of the point(s) in question. Upon receipt of such request, the ENGINEER shall provide the Contractor a written interpretation correcting, clarifying or interpreting the point(s) in question, which interpretation shall be final and become a part of the Contract.

Should any interpretation, in the opinion of the Contractor, exceed the scope of the Contract Documents, written notice shall be given to the District within seven (7) calendar days of the receipt of the District's interpretation and prior to proceeding with the Work in question unless directed otherwise by the District. The District may amend its original interpretation, authorize Extra Work as a Change Order and authorize an extension of time, if applicable, in accordance with SECTION 5.3, Change Orders herein or the District may direct the Contractor to proceed with the original interpretation.

If the Contractor proceeds with the work without receiving an interpretation from the District, the District shall be relieved of any liability and Contractor shall be responsible for all resulting damage and defects.

Any Work or material not herein specified or shown on the Contract Documents, but which by fair implication in the judgment of the ENGINEER, should be included therein, shall be accomplished or furnished by the Contractor as part of the Contract requirements.

5.3 CHANGE ORDERS

5.3.1 GENERAL

5.3.1.1 The ENGINEER on the ENGINEER'S own initiative (District Initiated Change Order) or in response to a written request from the Contractor (Contractor Initiated Change Order) or by unilateral direction (Unilateral Change Order) may by written Change Order require additions to, deletions of or modifications of the requirements of the Work. For example, Change Orders may modify the design, line, grade, form, location, dimensions, plan, component, equipment or quantity of the Work.

5.3.1.2 Change Orders that diminish the quantity or amount of work to be done, shall entitle the District to a reasonable credit and shall not constitute the basis for a claim for damages or anticipated profits by the Contractor on the diminished work; provided that, if a change renders useless any work already done or materials already furnished or used in the Work, the ENGINEER, shall make reasonable allowance therefore, which allowance shall be binding upon both parties.

5.3.1.3 A Change Order shall specify the adjustment in Contract time, if any, for the changed Work. If Extra Work cannot be completed by the completion date, the Contractor shall be entitled to an adjustment in Contract time according to proof provided by the Contractor to the ENGINEER including, but not limited to, a detailed schedule analysis, including the appropriate and required schedule fragnets, evidencing the justification of and need for the adjustment.

5.3.1.4 A Change Order shall specify the adjustment of the Contract Price, if any, for the changed Work.

5.3.1.5 DISTRICT INITIATED CHANGE ORDERS. The ENGINEER may require additions to, deletions of, or modifications to the requirements of the Work that may involve an adjustment in the Contract Price or the Contract Time via a Change Order issued by the District. The District shall provide the Contractor with prompt notice of its desire to issue said Change Order and shall consult with the Contractor in an attempt to mutually agree upon the estimated cost and time impacts, if any, as a result of said change. If District and Contractor fail to reach an agreement, the District shall be entitled to issue a Unilateral Change Order pursuant to Section 5.3.1.12.

5.3.1.6 The ENGINEER may authorize minor variations from the requirements of the Contract Documents that do not involve an adjustment in the Contract Price or the Contract time and are consistent with the overall intent of the Contract Documents. These variations may be accomplished by a Field Order and will require the Contractor to promptly perform the work involved. If the Contractor believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract time the Contractor shall request a Change Order pursuant to Section 5.3.1.9.

5.3.1.7 Contractor shall not proceed with any changed work unless and until the ENGINEER issues a Change Order, unless expressly instructed in writing to proceed with the Extra Work pending resolution of the Change Order.

5.3.1.8 During construction and prior to performing any of the Work at the jobsite, the Contractor shall verify the dimensions and quantities specified by the Contract Documents, and shall immediately notify the ENGINEER of all discrepancies that are discovered. If the ENGINEER determines that instructions to address a discrepancy are necessary, the instructions will be given by Field Order or Change Order.

5.3.1.9 CONTRACTOR INITIATED CHANGE ORDERS. If the Contractor determines that an event, circumstance or condition gives rise to a change in the Contract Price or the Contract Time, Contractor shall submit to the ENGINEER a written request for change order within fourteen (14) calendar days of the date of the event or fourteen (14) calendar days from the date the Contractor first discovered (or should have discovered in the exercise of reasonable prudence) that the event, circumstance or condition would give rise to a change in the Contract Price or Contract Time. If Contractor fails to provide said written notice within fourteen (14) calendar days, Contractor agrees that it waives its right to collect any and all costs incurred as a result of said event, circumstance or condition, and further agrees that it waives the right to seek any extension of the Contract Time as a result of the event, circumstance or condition. Contractor further agrees that the failure to provide said timely notice (14 calendar days) of an alleged change shall preclude Contractor from submitting or pursuing any and all claims or protests arising from said event, circumstance or condition.

5.3.1.10 The Contractor may request a Change Order pursuant to Section 5.3.1.9 because of the availability of an improved technology or design that would meet or exceed the requirements of the Contract Documents.

5.3.1.11 Contractor shall not proceed with any changed work unless and until the ENGINEER issues a Change Order, unless expressly instructed in writing to proceed with the Extra Work pending resolution of the Change Order.

5.3.1.12 UNILATERAL CHANGE ORDERS. If at any time the District and the Contractor cannot reach agreement as to a Change Order, the District may, at its sole discretion, issue a Unilateral Change Order to Contractor directing contractor to perform the ordered Extra Work and furnish the labor, materials and equipment required for its completion. Contractor agrees that upon issuance of a Unilateral Change Order that it shall diligently prosecute the required Work to completion. The District shall in its sole discretion determine a fair and reasonable adjustment to the Contract Price and Contract Time. If Contractor disagrees with the time or price adjustment set forth in the Unilateral Change Order, it shall pursue a Protest pursuant to Section 5.4.

5.3.1.13 Work performed pursuant to a Change Order is subject to all of the provisions of the Contract Documents and the Contractor's bonds and insurance shall be bound with reference thereto as under the original Contract. If required, the Contractor shall provide the ENGINEER with new bonds and certificates of insurance and endorsements reflecting the Change Order. The cost to the Contractor or the credit to the District for revised bonds and insurance premiums shall be included in the revised Contract Price.

5.3.1.14 The Contractor shall pursuant to the requirements of Section 5.3.1.9, and before the following conditions are disturbed, notify the District of any differing site conditions including but not limited to: (1) material that the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with provisions of existing law; (2) subsurface or latent physical conditions at the site differing from those indicated; or (3) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work provided for in the Contract Documents.

The District shall promptly investigate the conditions and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work, the District shall issue a Change Order in accordance with this Section 5.

5.3.2 PROCESS FOR ISSUING CHANGE ORDERS

5.3.2.1 The ENGINEER may issue a Change Order designating the changed Work, adjustment to the completion time, if any, and adjustment to the Contractor's payment or credit, if any. Within three (3) work days of the receipt of the Change Order, the Contractor shall either (1) sign the Change Order indicating the Contractor's acceptance of the terms of the Change Order, or (2) return the Change Order without signing it and propose modifications. If the Contractor returns the Change Order without signing it, the ENGINEER may issue a revised Change Order, or reissue the original Change Order or issue a Unilateral Change Order pursuant to Section 5.3.1.12 and direct the Contractor to perform the ordered Work subject to the Contractor's rights of protest and dispute resolution.

5.3.2.2 Alternatively, the ENGINEER may submit a Change Order designating the changed work and requesting an estimate of the cost or credit and schedule for the work. Within ten (10) business days, the Contractor shall prepare and submit to the ENGINEER a written estimate of cost and schedule for the work. The ENGINEER may thereafter issue a Change Order as provided in 5.3.1.5 above.

5.3.2.3 Adjustment in the price paid for a Change Order due the Contractor shall be determined by one or more of the following methods in the following order of precedence:

1. Unit Prices contained in the Contract Documents.
2. Mutually agreed lump-sum or Unit Prices, based upon current prevailing fair prices for equipment, materials, labor, overhead, and profit. If requested by the ENGINEER, the Contractor shall furnish an itemized breakdown of the quantities and prices used in computing proposed lump-sum and Unit Prices for the Extra Work.
3. Mutually agreed prices for labor, materials, and equipment actually used based on the following (time and materials):
 - (a) Cost of labor plus fifteen percent (15%) for workers directly engaged in the performance of the Work. Cost of labor shall include actual wages paid including employer payments to or on behalf of the workers for health and welfare, pension, vacation, and similar purposes plus payments imposed on payroll amounts by applicable laws and regulations, plus subsistence and travel (other employer payments to employees.)
 - (b) Cost of material plus fifteen percent (15%). Cost of material shall include sales tax, freight, and delivery charges. The District reserves the right to furnish such material as it deems advisable and the Contractor shall not be paid the fifteen percent (15%) markup on such materials.
 - (c) Cost of equipment plus fifteen percent (15%) for tools and equipment actually engaged in the performance of the Work. Equipment rates shall be the lesser of the actual rental rates or those listed for such equipment in the California Department of Transportation publication entitled Labor Surcharge and Equipment Rental Rates, which is in effect on the date the Work is performed, regardless of ownership and any rental or other agreement, if such may exist, for use of such equipment entered into by the Contractor. If it is deemed necessary by the ENGINEER to use equipment not listed in that publication, a suitable rental rate for such equipment will be established by the ENGINEER. The Contractor shall furnish any cost data that might assist the ENGINEER in the establishment of such rental rate.

No rental charge shall be made for use of tools or equipment having a replacement cost of five hundred dollars (\$500) or less. No payment will be made for equipment on standby or idle time. Payment for equipment will only be made for actual time of use as verified by the ENGINEER. The equipment rental rates shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. The cost of labor for operators of equipment shall be separately paid for as provided herein. Small tools are part of the Contractor's markup.

(d) Subcontractor invoices to the Contractor plus five percent (5%). Subcontractor invoices shall be based upon the above described cost of labor plus fifteen percent (15%), cost of material plus fifteen percent (15%), and tool and equipment rental rates plus fifteen percent (15%). The five percent (5%) markup to the Subcontractor's invoice shall be applied only one time for each separate Extra Work transaction, regardless of the number of tiers of Subcontractors performing the Extra Work.

(e) The Contractor shall submit to the ENGINEER for verification, on a daily basis, work sheets showing an itemized breakdown of labor, materials, tools, and equipment used in Extra Work. No labor, materials, or equipment will be determined to be actually used unless it has been verified daily by the ENGINEER. Payment shall be made solely for labor, materials or equipment actually used.

(f) No separate payment shall be made for any item not set forth specifically above, including without limitation, Contractor's overhead, profit, general administrative expense, supervision, bonds and insurance premiums, or damages claimed for delay in prosecuting the remainder of the Work; as such items are deemed included in the percentage markups described previously. The total payment made as provided above shall constitute full compensation for the changed Work.

5.3.3 UNCONTROLLABLE CIRCUMSTANCES/EXCUSABLE DELAYS

5.3.3.1 Upon Contractor's written request and submission of substantiating documentation of a delay caused by an Uncontrollable Circumstance (as defined in this Section 5.3.3 below), the ENGINEER shall extend the time fixed in Section 4 of the Construction Agreement for completion of the Project by the number of days Contractor has thus been delayed, if District finds that the delay is justified. Contractor shall submit the written request to District for such time extension pursuant to Section 5.3.1.9 above. District's decision will be conclusive on the parties to this Contract. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor.

Documentation and determination of delays shall be handled in the same manner as Change Orders, Protests and Claims as set forth in these General Conditions. Uncontrollable Circumstances means any act, event or condition that (1) is beyond the reasonable control of the Contractor that justifies not timely performing an obligation or complying with any condition required under the Contract Documents and (2) materially expands the scope of, interferes with, or delays the Contractor's performance obligations under the Contract Documents, but only if such act, event or condition is not the result of the willful or negligent act, error or omission, failure to exercise reasonable diligence, or breach of the Contract Documents on the part of the Contractor.

Examples of acts, events or conditions that qualify as Uncontrollable Circumstances are naturally occurring events (except inclement weather normal for the area where the Work is being performed) such as earthquakes, fires, tornadoes, hurricanes and other acts of God; terrorism, sabotage, and other acts of a declared public enemy; and labor disputes, except labor disputes involving employees of the Contractor. Acts, events, and conditions that are not considered Uncontrollable Circumstances include but are not limited to Contractor's inability to obtain timely materials or equipment; work related injuries, safety violations; errors, neglect or

omission by the Contractor or its Subcontractors in performance of the Work, inclement weather conditions normal for the Work area; any mechanical failure of equipment; or any electrical power outages except as a direct result of an independent uncontrollable circumstance.

5.3.3.2 No requests by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies District that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took available measures to mitigate such damages. Extensions of time and extra compensation as a result of differing site conditions will be determined in accordance with Section 5.3.2 of the General Conditions. The District's decision will be conclusive on all parties to this Contract.

5.4. PROTESTS

5.4.1 If the Contractor considers any Work required of it to be outside the requirements of the Contract, or if it considers any instruction, meaning, requirement, ruling or decision of the District or its representative to be unauthorized pursuant to the Contract, it shall within seven (7) calendar days after such demand is made, or instruction given, or receipt of a decision, file a written protest with the District stating clearly and in detail its objections and reasons therefore. The Contractor shall not proceed with any protested work unless and until the ENGINEER gives written notice directing the Contractor to proceed with the Work, once directed to proceed with the Work, the Contractor shall do so without delay. ENGINEER shall have right to request information necessary to determine protest.

5.4.2 If a written protest is not issued within seven (7) calendar days, said protest shall be time barred and the Contractor's failure to provide such notice or the installation of any such Work without authorization shall be construed as relieving the District of any claim either for added costs or for extensions of time.

5.4.3 The District will review the Contractor's timely written protest and provide a decision within thirty (30) days, but if a decision is not issued within thirty (30) days, the protest will be deemed denied. If after reviewing the District's decision or the passage of thirty (30) days without receiving a decision, the Contractor shall have seven (7) days to notify the ENGINEER, in writing, that the Contractor disagrees with the decision and that a claim will be submitted pursuant to Section 5.5 below.

5.4.4 The Contractor's claim shall be in writing and include all documentation necessary to substantiate the claim as set forth in Section 5.4.4.1 below. Resolution of the claim shall proceed in accordance with Section 5.5. The failure of the Contractor to either fail to file the notice of claim or, thereafter, a claim, in a timely manner is a waiver of the protest and claim.

5.4.4.1 Written documentation necessary to substantiate the claim shall include at a minimum, the following:

1. Statement of claim and the basis for it.
2. List of documentation relating to claim, including specifications, plans, reports, schedules, Field Orders, requests for clarification, etc.
3. Chronology of events and correspondence.
4. Cost analysis, including all backup financial records supporting the costs analysis and any extended overhead claim analysis.
5. Detailed critical path schedule analysis and backup source documents supporting a delay claim.

Information submitted shall be sufficient to justify the claim.

5.4.5 Claims submitted pursuant to this Section shall include the following certification statement. Failure to include and sign the certification statement shall result in the Contractor waiving all rights to the subject claim. The Contractor shall submit under penalty of perjury with each claim its and each Subcontractor's written certification that:

1. The claim is made in good faith.
2. Supporting data are accurate and complete to the best of the Contractor's knowledge and belief.
3. The amount requested accurately reflects the Contract adjustment for which the Contractor believes the District is liable.
4. The Contractor understands that if a false claim is submitted, it will be considered fraud and the Contractor may be subject to criminal prosecution and any other available relief pursuant to Governmental Code section 12650, et seq.

5.5 PROCEDURES FOR RESOLVING CLAIMS (PCC SECTION 9204)

- A The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.
- B Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.
- C For purposes of this section:
 1. "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
 - a) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.
 - b) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
 - c) Payment of an amount that is disputed by the public entity.
 2. "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.
 3.
 - a) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.
 - b) "Public entity" shall not include the following:
 - i. The Department of Water Resources as to any project under the jurisdiction of that department.

- ii. The Department of Transportation as to any project under the jurisdiction of that department.
 - iii. The Department of Parks and Recreation as to any project under the jurisdiction of that department.
 - iv. The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.
 - v. The Military Department as to any project under the jurisdiction of that department.
 - vi. The Department of General Services as to all other projects.
 - vii. The High-Speed Rail Authority.
4. "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.
5. "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.
- D 1. a) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.
- b) The claimant shall furnish reasonable documentation to support the claim.
- c) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.
- d) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.
2. a) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.
- b) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim,

as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

- c) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
 - d) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
 - e) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.
3. Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
4. Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
5. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.
- E The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.
- F A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of

this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

- G This section applies to contracts entered into on or after January 1, 2017.
- H Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.
- I This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

(Added by Stats. 2016, Ch. 810, Sec. 1. (AB 626) Effective January 1, 2017. Repealed as of January 1, 2020, by its own provisions.)

SECTION 6. PROSECUTION AND PROGRESS OF THE WORK

6.1 PROGRESS OF WORK

6.1.1 Unless otherwise specified, the Contractor shall commence the Work upon the issuance of the Notice to Proceed or the date specified within the Notice to Proceed (the "Notice to Proceed Date") and shall diligently prosecute the Work to its completion. A Notice of Completion shall be recorded for the Work, but the District's failure to do so, timely or otherwise, shall not be raised as a defense to the untimely assertion of any rights by Contractor, its Subcontractors or Suppliers of any tier.

6.1.2 The continuous prosecution of the Work by the Contractor shall be subject only to the delays defined in this Contract. The start of Work shall include attendance at preconstruction conferences, preparation and submittal of submittals, equipment lists, and schedule of values, schedules, requests for substitutions and other similar activities. Submittals shall be prepared in accordance with the Contract Documents and shall be made in the time limits indicated. Except as specifically authorized by the District, no Work shall commence on site before the Notice to Proceed Date or after the Notice to Proceed Date but before all applicable Contract requirements have been satisfied.

Notwithstanding this Section 6.1.2, under no circumstances shall the Contractor proceed to work under any verbal authorization or issuance of Notice to Proceed by District where the Contractor is not in receipt of the Contract Documents full executed by Contractor and District authorizing the Project, including but not limited to the Construction Agreement.

6.1.3 The Work shall be brought to completion, as determined by the District, in the manner provided in the Contract Documents and in the number of calendar days set forth in the Section 4 of the Construction Agreement.

6.1.4 Failure to reach completion as determined by the District within the Contract time and in the manner required by the Contract Documents shall subject the Contractor to liquidated damages as stipulated in Section 6 of the Construction Agreement unless extensions of time are granted in accordance with the Contract Documents.

6.1.5 The Contractor shall at all times keep on the premises sufficient material and employ sufficient supervision and workers to prosecute the Work at a rate necessary to reach completion of the Work as required within the Contract Documents. Work shall not start, nor shall the Work be left in an incomplete state for an indeterminate period of time, while equipment and materials are in transit.

6.1.6 It shall be the responsibility of the Contractor to maintain its schedule so as not to delay the progress of the Work or the schedules of other contractors and workers who may be employed by the District on any Work in the vicinity of the Work to be done pursuant to this Contract, and it shall conduct its operations so as not to interfere with the Work of such contractors or workers. The Contractor is required by virtue of this Contract to cooperate in every way possible with other contractors or workers in order to complete the Work within the Contract time. No additional compensation will be paid to Contractor for such cooperation, except as otherwise provided. If the Contractor delays the progress of the Work or the progress of other Contractors or workers, it shall be the responsibility of the Contractor to take some or all of the steps outlined below to improve its progress.

6.1.7 If, in the opinion of the District, the Contractor falls behind with the Work or current update of the Contract schedule and is not entitled to an extension of time, the Contractor shall take some or all of the steps outlined below to improve its progress at no additional charge to the District, and shall submit operation plans to demonstrate the manner in which the desired rate of progress may be regained.

6.1.7.1 Increase construction personnel in such quantities and crafts as will substantially eliminate the backlog of Work and allow the Contractor to complete the Work within the Contract time.

6.1.7.2 Increase, when permitted, the number of working hours per shift, shifts per working day, working days per week or the amount of construction equipment or any combination of the foregoing, sufficient to substantially eliminate the backlog of Work.

6.1.7.3 Reschedule activities to achieve maximum practical concurrence of accomplishment of activities; and/or

6.1.7.4 Expedite delivery of materials and equipment.

6.1.8 Should the Contractor at any time during the progress of the Work, refuse, neglect or be unable for avoidable reasons to supply sufficient material, supervision or workers to prosecute the Work at a rate necessary to complete the Work within the Contract time or in accordance with the currently accepted updated construction schedule, the District shall have the right to terminate the Contract as provided in Section 4.7 of the General Conditions. If the Contractor does not comply with a notice to correct default from the District within the time specified in the notice, the District shall have the right to provide the materials and workers to finish the Work and/or terminate the Contract. The expenses incurred by the District to complete such Work shall be deducted from any monies due or which may become due under the Contract and/or the construction fund for the Work. In the event the expenses incurred exceed the amounts due to the Contractor of the construction fund for the Work, the Contractor or its Surety shall reimburse the District for any such shortage in funds.

6.2 USE PRIOR TO FINAL COMPLETION

6.2.1 District shall have the right to use all or a portion of the Work at no additional cost to District, even if Substantial Completion of the Work, as more particularly described in Section 6.3 – Substantial Completion, has not occurred and even if the Work has not been finally accepted.

6.2.2 If District elects to take possession of and to use any completed or partially completed portions of the Work prior to Substantial Completion of the Work, the ENGINEER shall document in writing to the Contractor the scope of Work it wishes to take possession of and an inspection shall be made by the Contractor and ENGINEER of said scope of Work. Based on such inspection, the ENGINEER will attempt to list all incomplete and/or deficient items of Work observed, and provide the Contractor with such a list. However, the absence of an item from the list shall not

relieve the Contractor of responsibility to perform all of the Work in accordance with the Contract Documents, and any and all areas so occupied will be subject to Final Inspection after the Contractor achieves Substantial Completion. If the use of these portions of the Work by District delays the progress of the Work or causes additional expense to the Contractor, the Contractor shall file a written request for extension of time and/or Extra Work as specified in Section 5.3.1.9.

6.2.3 The warranty period for portions of the Work placed into service prior to Final Acceptance of the Work shall be one (1) year commencing on the date of the District's written notification to the Contractor that all incomplete and/or deficient items of Work observed by the ENGINEER as described in 6.2.2 above, have been completed and/or corrected by the Contractor. However, if during Final Inspection any incomplete and/or deficient items are observed in any portions of Work placed into service prior to Final Completion, and such incomplete and/or deficient items are not the result of or caused by District's occupancy, the guarantee period for any such portions of Work shall not be deemed to have commenced at any time prior, and shall commence on the date of Final Acceptance once any such incomplete and/or deficient Work is completed and/or corrected in connection therewith.

6.3 SUBSTANTIAL COMPLETION

6.3.1 Substantial Completion of the Work means the Work has progressed to the point that District can beneficially occupy or utilize the Work as a whole for the purpose for which it is intended, and the Work complies with applicable codes and regulations, including if required, issuance of certificates of occupancy, or certificate of suitability for use from the appropriate governmental agencies, as determined by the ENGINEER at ENGINEER'S sole discretion.

6.3.2 When the Contractor considers that Substantial Completion has been achieved, the Contractor shall notify the ENGINEER, formally, in writing [Notice of Substantial Completion of the Work] that the Work is substantially complete to the required stage and is ready for inspection. The Contractor shall include with its Notice of Substantial Completion of the Work a list of minor items, (including the Contractor's punchlist) to be completed or corrected that would not affect beneficial occupancy or suitability for use.

6.3.3 After receipt of the Contractor's Notice of Substantial Completion of Work, the ENGINEER and Contractor, and any other representative as the ENGINEER deems appropriate, shall make an inspection of the Work to determine whether the Work has been completed in accordance with the Contract Documents and to review the Contractor's punchlist.

6.3.3.1 If, in the ENGINEER'S sole opinion, the Work has not achieved Substantial Completion, the parties shall cease the inspection and all costs incurred by District as a result of the premature inspection shall be deducted from the payments due the Contractor. Contractor shall thereafter perform all remaining Work to reach Substantial Completion, and re-submit its Notice of Substantial Completion of Work. The inspection of the Work will recommence as set forth above.

6.3.3.2 If the Work has achieved Substantial Completion, a punchlist shall be prepared by the ENGINEER and shall include those items listed by the Contractor to be completed or corrected as well as those items observed during the inspection. Failure to include any items on the punchlist shall not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents, nor shall the punchlist amend the Contract Documents. All deficiencies and/or items identified on the punchlist must be corrected within thirty (30) days of said initial inspection conducted at the Substantial Completion phase, unless otherwise specified in writing by the ENGINEER.

6.4 FINAL INSPECTION, FINAL COMPLETION AND FINAL ACCEPTANCE

6.4.1 FINAL INSPECTION. The Contractor shall notify the ENGINEER in writing when all punchlist items have been completed, all Work is completed in accordance with the Contract Documents and all clean-up has been done. Clean-up shall be completed when all waste, materials, excess materials, tools, and equipment such as scaffolding, temporary structures, and unneeded facilities such as fencing and sanitary facilities are removed from the Project. The ENGINEER will then make Final Inspection for the purposes of ascertaining that the Work has been fully completed in accordance with the requirements of the Contract Documents.

6.4.2 FINAL COMPLETION. After the ENGINEER has made the Final Inspection and is satisfied that the Work has been completed in accordance with the Contract Documents, including all punch list items, and is satisfied that all submittals have been made and accepted, including but not limited to all materials required by the Contract Documents and all As-Builts, record drawings by the Contractor, if required by the Contract, and any other required record documents have been completed and accepted, all Change Orders have been executed, all final quantities agreed to, and all other requirements of the Contract Documents, except for possible future warranty and guarantee Work have been accomplished, the ENGINEER shall certify, in writing, the full completion of the Work and the date thereon.

6.4.3 FINAL ACCEPTANCE. Final Acceptance of the Work shall occur upon the District's Board of Directors' approval of the Final Completion of the Work and upon recordation of a Notice of Completion with the County Recorder.

SECTION 7. PAYMENT FOR WORK

7.1 PROGRESS PAYMENTS

7.1.1 Each month Contractor shall be paid a sum (less retention) equal to the value of the Work (based on the Schedule of Values) performed up to the last day of the previous calendar month, less the aggregate of the previous payments. The monthly payments shall be made on the basis of monthly progress estimates that shall be submitted by the Contractor and approved by the ENGINEER. Quantities used in computing partial payments shall be considered as estimates only and shall be subject to revision in subsequent estimates. Work completed as estimated shall be an estimate only and no inaccuracy or error in said estimate shall operate to release the Contractor or any Surety from damages arising from such work or from the enforcement of each and every provision of this Contract and the District shall have the right subsequently to correct any error made in any estimate for payment. Materials delivered but not incorporated or installed in the Work will not be included in progress payments unless allowed by Supplemental Conditions or Project Plans and Specifications.

7.1.2 If a progress payment received from the Contractor is undisputed and properly submitted, payment shall be made within thirty (30) days after receipt of progress payment, and if not so paid, Public Contract Code section 20104.50 may apply. If, however, the progress payment is determined not to be proper or correct, the District may, at its option, correct the progress payment and pay the amended amount or return the progress payment no later than seven (7) days after receipt, accompanied by a document setting forth in writing the reasons it is not proper.

7.1.3 A deduction of five percent (5%) will be made and held as retention from each progress payment; however, if Contractor has, in the judgment of the District, satisfactorily completed ninety-five percent (95%) of the work as determined from the Construction schedule, the General Manager may recommend a reduction of the withholding rate to an amount not less than 125 percent of the work yet to be completed, as determined by the General Manager, if the reduction has been approved, in writing, by the surety on the performance bond and by the surety on the payment bond.

7.1.4 Notwithstanding any other provision in this Contract, as provided in Public Contract Code section 22300 and subject to the requirements thereof, Contractor may substitute securities for monies withheld by the District to ensure proper performance under this Contract. The substitution of securities or the deposit of the amount retained shall be at the sole expense of and request of Contractor.

7.1.5 The Contractor shall pay each Subcontractor and/or Supplier in the time periods required by law.

7.2 APPLICATIONS FOR PAYMENT

7.2.1 In Contracts with a duration of sixty (60) days or longer, on or before the seventh (7th) day of each calendar month, the Contractor shall submit to the ENGINEER a progress payment for the value of work done and materials used to the last day of the previous calendar month. Progress payments shall be made in the format provided by the District.

7.2.2 Unless modified in the Supplemental Conditions or Project Plans and Specifications, payment for materials delivered, but not yet incorporated into the Work shall be paid as follows: materials accepted to the Work site or to an acceptable location by District shall be paid at the actual cost of materials. Labor for installation of such materials will be paid upon installation of materials.

7.2.3 Contractor warrants that upon submittal of the progress payment that all work for which previous progress payments have been made and payments received from the District shall, to the best of the Contractor's knowledge, information and belief, be free and clear of claims, security interests or encumbrances in favor of the Contractor, Subcontractors, Suppliers or other persons, or entities making a claim by reason of having provided labor, materials and equipment related to the Work and that all work for which payment is demanded has been performed in accordance with the Contract and that the amount claimed is due. With each progress payment, Contractor shall certify that the As-Built drawings have been updated and jointly reviewed with the District for the month that payment is requested.

7.2.4 Contractor agrees to furnish, if and when required by District, receipts, vouchers, releases and/or waivers of claims for labor, material, equipment and services performed by Contractor and any and all subcontractors performing Work or furnishing materials under this Contract or any subcontract with Contractor, all in a form satisfactory to District, and it is agreed that no payment shall be made except at District's option until and unless such receipts, vouchers or releases and/or waivers, or any and all of them, have been furnished. Any progress payment made prior to acceptance of the Work by District shall not be construed as evidence of acceptance of any part of Contractor's Work.

7.3 FINAL ACCEPTANCE AND PAYMENT. Within five (5) calendar days following the Board of Director's Final Acceptance of the Work, the District shall file a Notice of Completion with the County Recorder's office. Thirty (30) days after the filing of the Notice of Completion, and subject to the Contractor's evidence of compliance with Section 7.5 below, the District will pay or release to the Contractor all retention funds due him under the provisions of the Contract Documents.

7.4 STOP NOTICES

7.4.1 For each properly filed and unreleased stop notice, the District shall withhold from current progress payments an amount equal to one-hundred-twenty-five percent (125%) of each stop notice amount.

7.4.2 Upon request by the Contractor, payments may be made jointly to the Contractor and a stop notice claimant. Any such payment shall be deemed to be a payment to the Contractor.

7.5 RELEASE OF CLAIMS. Before the District pays or releases to the Contractor his retention for the work, the Contractor shall submit unconditional lien releases from all Subcontractors and/or Suppliers who have submitted a preliminary notice or stop notice. The release shall state that the Contractor has satisfied all claims and indebtedness of every nature in any way connected with the work, including (but not limiting the generality of the foregoing) all payrolls, amounts due to subcontractors', accounts for labor performed and materials furnished, incidental services, liens, and judgments. If any lien or claim remains unsatisfied after all retention has been released or payments made to the Contractor, the Contractor shall refund to the District all monies that the latter may be compelled to pay in discharging such a lien or claim, including all costs and a reasonable attorney's fee.

7.6 RIGHT TO AUDIT. District shall have the right to audit, during the Contractor's normal business hours at the office of the Contractor, any of the Contractor's books and records to the extent they are relevant or calculated to lead to relevant evidence relating to any claim submitted by the Contractor or the Contractor's performance under the Contract. This right shall include, without limitation, the right to examine the books, records, documents, Bid records, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs, including claimed unabsorbed overhead costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The Contractor further agrees that the right to audit encompasses all subcontracts and is binding upon Subcontractors. Additionally, the Contractor shall make available within ten (10) days to the District's auditing, all requested schedules, plans, accounting records and documents and other financial data, and upon request, shall submit true copies of requested records to the District.

7.7 ASSIGNMENT OF ANTI-TRUST CLAIMS. Contractor agrees to assign District all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (U.S.C Sec. 15) or under the Cartwright Act [Chapter 2, commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code], arising from purchases of goods, services or materials pursuant to the Contract. This assignment becomes effective at the time the District tenders final payment to the Contractor, without further acknowledgment by the parties. The Contractor shall have the rights set forth in Section 4553 and 4554 of the Government Code.

7.8 BANKRUPTCY. The Contractor shall immediately notify the District of its own or of any of its subcontractor's filing for bankruptcy protection and provide the District with a copy of the Bankruptcy Case Number and title of the Court in which the petition for bankruptcy was filed. Filing for bankruptcy protection shall be a default of this Contract and grounds for termination as provided by Section 4.7, Termination of the General Conditions.

SECTION 8. MISCELLANEOUS

8.1 GOVERNING LAW. The Contract Documents have been negotiated between District and the Contractor and shall be subject to and interpreted under the laws of the State of California.

By entering into the Contract, the Contractor consents and submits to the jurisdiction of the Courts of the State of California, County of Ventura, over any action at law, suit in equity, and/or other proceeding that may arise out of the Contract Documents.

SUPPLEMENTAL CONDITIONS

PART 4

STANDARD PLANS AND SPECIFICATIONS

District's Standard Plans
Incorporated by Reference

APPENDIX A

Hollywood Beach Water Pipeline Improvement Project Design Plans and Details

TECHNICAL SPECIFICATIONS
FOR
Hollywood Beach Water Pipeline Improvement
Project

CONTRACT NO. CI 101

July 2022



CHANNEL ISLANDS BEACH
COMMUNITY SERVICES DISTRICT

353 Santa Monica Drive
Oxnard, CA 93035

Approved by:

Prepared by:

A handwritten signature in black ink, appearing to read 'Parasto Azami', written over a horizontal line.



Pete Martinez
General Manager
Channel Islands Beach
Community Services District

Parasto Azami, PE
C91468
MICHAEL K. NUNLEY & ASSOCIATES, INC.
16310 Bake Parkway
Irvine, California 92618

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Improvement Project
Contract No. CI 101**

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DESIGN PLANS AND DETAIL**

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SECTION 011100 COORDINATION OF WORK, PERMITS, AND REGULATIONS

1.01 DESCRIPTION

This section generally describes the project and includes work sequence and schedule.

1.02 GENERAL NATURE OF WORK

The work involves construction of 641 LF of 6-inch and 98 LF of 8-inch AWWA C-900 PVC (DR-14) water pipeline including valves, fittings complete in place, abandoning an existing 8-inch water line in-place in private easements, removal of existing 8-inch AC pipeline in streets (curb-curb), construction of 8 new water services in Harbor Blvd, San Clemente Ave. and Santa Cruz Ave., construction of new AIR-VAC and Blow Off in Harbor Blvd, construction of new fire hydrant in Harbor Blvd., and relocation of existing fire hydrant in Santa Cruz Ave.

The work shall include that which is shown on the drawings and as described in the specifications.

1.03 LOCATION OF PROJECT SITE

The project sites include the following locations:

- Santa Cruz Avenue
- San Clemente Avenue
- Harbor Boulevard between Ocean Drive and S Harbor Boulevard
- Harbor Blvd. between Santa Ana Avenue and Playa Court

1.04 WORK SEQUENCE

- Installing of new 6-inch PVC water line, new meter boxes and service lines in Harbor Blvd., Santa Cruz Ave. and San Clemente Ave.
- Installing new 8-inch PVC water line in Harbor Blvd. and Playa Ct. as shown on the plans.
- Transfer existing meters to new meter boxes and extend house connections (By Others). Contractor shall coordinate work with the District prior to any construction.

- Abandoning-in-place and removing of interfering portion of existing 8” AC waterline as shown on the plans.

1.05 CONTRACTOR'S USE OF PREMISES

Contractor will confirm that customer water meters have been relocated and are online before abandoning pipeline in place.

1.06 ASBESTOS CEMENT PIPE

The contractor will encounter existing asbestos materials (i.e. asbestos cement pipe) during the work. The Contractor is warned that asbestos is a known human carcinogen when inhaled and poses serious health risks. Removal of existing asbestos material shall be performed by a contractor or subcontractor registered by CAL/OSHA and certified by the State of California. Comply with all laws and regulations regarding handling, cutting, shaping, installation, disposal and removal of asbestos materials.

In the specific instance of making connections to existing asbestos cement pipe, disconnect, at the nearest joints, the length of asbestos cement pipe to be connected to the new pipe. This length of existing asbestos cement pipe will be replaced by the new pipe making the tie-in.

Contractor shall perform cutting and handling of asbestos cement pipe in strict conformance with all applicable CAL/OSHA, USEPA and governing agency requirements. Provide sufficient supervision and monitoring to assure conformance.

1.07 NOTIFICATION TO RESIDENTS

Contractor shall hand deliver two notices to residents. The two notices shall include the public notification 7 days prior to start of construction, and a 24-hour notice to residents with water service disruption.

1.08 PERMITS

- A. The following permits for the permanent work will be obtained by the Contractor.

Name or Type of Permit	Name, Address, Telephone Number of Permitting Agency
County of Ventura Encroachment Permit	County of Ventura 800 S. Victoria Ave. Ventura, CA 93009 Matthew Litvinas (805) 794-2268 Luis Gonzales (805) 654-2055 (Permit Tech)
City of Oxnard Encroachment Permit	City of Oxnard Building and Engineering 214 S C St Oxnard, CA 93030

Contact the permitting agencies listed above for current fees associated with each permit.

- B. The permits contain requirements that affect the cost of project work, and some permanent permits require supplementary work permits and fees to execute construction. Comply with the permit requirements and obtain and pay the fees involved with the supplementary work permits.

END OF SECTION

SECTION 012000

MEASUREMENT AND PAYMENT

1.01 WORK LISTED IN THE SCHEDULE OF WORK ITEMS

- A. Measurement and payment descriptions are included in the numbered sections of the specifications.
- B. The unit prices and lump-sum prices include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work included in the contract documents.
- C. The application for payment will be for a specific item based on the percentage completed or quantity installed. The percentage complete will be based on the value of the partially completed work relative to the value of the item when entirely completed and ready for service.

1.02 WORK NOT LISTED IN THE SCHEDULE OF WORK ITEMS

- A. The General Conditions and items in the Special Provisions, general requirements, and specifications which are not listed in the schedule of work items of the Bid Form are, in general, applicable to more than one listed work item, and no separate work item is provided therefor. Include the cost of work not listed but necessary to complete the project designated in the contract documents in the various listed work items of the Bid Form.
- B. The bids for the work are intended to establish a total cost for the work in its entirety. Should the Contractor feel that the cost for the work has not been established by specific items in the Bid Form, include the cost for that work in some related bid item so that the Proposal for the project reflects the total cost for completing the work in its entirety.

1.03 MEASUREMENT AND PAYMENT FOR PIPELINES

- A. Payment will be by the linear foot for each diameter and for each pipe size designation (including fittings and other pipe sections) measured horizontally over the pipe centerline.
- B. Measurement of the design laying length includes the design joint or creep space within the pipe bell between the mortar linings of adjoining pipes.
- C. The unit price paid for pipe includes full compensation for furnishing the labor, materials, tools, and equipment and doing all work involved to provide the pipe.
- D. The unit price paid for pipe includes full compensation for pressure or leakage testing and disinfection.

1.04 FURNISHING AND MAINTAINING DEWATERING AND UNWATERING FACILITIES

Furnishing and maintaining dewatering and unwatering facilities for diversion and control of water during the contract period will not be paid as a separate item. The costs of furnishing and maintaining such facilities shall be included in the various listed work items of the Bid Schedule for which the dewatering and unwatering facilities are required.

1.05 MOBILIZATION, PERMITS, CLEANUP AND DEMOBILIZATION--BID ITEM #1

Payment for mobilization shall be made at the time of the first progress payment after the Contractor has purchased bonds and insurance and established a Contractor's site office with telephone service and a temporary field office for the Resident Project Representative.

Payment for demobilization shall be made with the final payment estimate. Amount bid for mobilization, permits, cleanup and demobilization shall not exceed 5% of Contractor's bid.

The work to be paid for under this item shall also include furnishing, setting up, and removing Contractor's operations at project site including temporary offices, utilities, staging areas, security, etc. Work shall also include furnishing any temporary construction facilities and trailers required by Contract Documents.

Work to be paid for under this item shall also include protecting existing survey monuments in place and, if Contractor's operations disturb any such monuments, hiring a registered land surveyor to reestablish and reset disturbed monuments.

Payment for this item will be made at lump sum price named in Bid Schedule under Item Number 1, which price shall constitute full compensation for all Work and expenditures required to mobilize, provide bonds and insurance, obtain required permits and approved traffic control plans, prepare project schedule, provide project sign, construct temporary traffic control facilities, perform required surveys, testing, site maintenance and cleanup, remove and reinstall existing site facilities as required, comply with all General conditions, demobilize, and provide cleanup of construction site complete in place, as required by Contract Documents with sole exclusion of payments to be made as defined herein for other items in Bid Schedule. This item also includes any required resubmittals.

1.06 RECORD DOCUMENTS – BID ITEM #2

Payment for record documents shall be made at the contract lump-sum bid price at the time of the first progress payment after the Contractor has purchased bonds and insurance and established a Contractor's site office with telephone service and a temporary field office for the Resident Project Representative.

See Section 013300 for details on record documents and submittals.

1.07 UTILITY POTHOLING – BID ITEM#3

- A. Measurement for payment for pothole verification will be based upon excavation and expose alignments of the existing utilities at the location of the new pipelines, to confirm actual depth and location of the utilities, will be based on completion of all planning, design, engineering, furnishing, installing, excavating, trenching, shoring, removing, disposing and all other needs to complete the Scope of Work in accordance with Contract. This item also includes preparation and submission of a markup layout plans with all necessary pothole locations for successfully completion of the work as shown on the plans if any conflict or discrepancy of proposed construction drawings to obtain District's additional instructions and approval for any modifications to Contract drawings prior to ordering of any such material or equipment.
- B. Payment for utility potholing shall be made at the unit price named in the Bid Sheets, which price shall constitute full compensation for completion of all such work as required herein.

1.08 SHEETING, SHORING, BRACING, AND EXCAVATION SAFETY MEASURES--BID ITEM #4

- A. Measurement for payment for temporary sheeting, shoring, and bracing or equivalent method, will be based upon the completion of all planning, design, engineering, furnishing, and construction and the removal and disposal of all such temporary sheeting, shoring, and bracing as a lump sum item, complete, as required under the provisions of any permits, and in accordance with the requirements of OSHA and the Construction Safety Orders of the State of California, pursuant to the provisions of Section 6707 of the California Labor Code as well as specification Section 312316.
- B. Payment for sheeting, shoring, bracing, and excavation safety measures for the protection of life and limb, in conformance with the applicable safety orders, shall be made at the contract lump-sum bid price.

1.09 INSTALL 6-INCH PVC PIPE--BID ITEM #5

- A. Measurement for payment will be made in linear feet of 6-inch AWWA C900 PVC pipe, pipe fittings and appurtenances placed to lines and grades shown in drawings and in accordance with the specifications. This work includes but it's not limited to pipe, fittings, valves (including valve box and riser), trench excavation, erosion control, pipe bedding, trench backfill and compaction, thrust blocks, slurry backfill, disposal of trench materials, protecting existing facilities, installation of temporary service line and furnishing all labor, materials, tools and equipment associated with the installation of PVC (AWWA C900) water pipe.
- B. Payment will be made at the unit price per linear foot bid, which price shall include costs for materials, labor, equipment, incidentals, and installation of 6-inch AWWA C900 PVC pipe.

1.10 INSTALL 8-INCH PVC PIPE--BID ITEM #6

- A. Measurement for payment will be made in linear feet of 8-inch AWWA C900 PVC pipe, pipe fittings and appurtenances placed to lines and grades shown in drawings and in accordance with the specifications. This work includes but it's not limited to pipe, fittings, valves (including valve box and riser), trench excavation, erosion control, pipe bedding, trench backfill and compaction, thrust blocks, slurry backfill, disposal of trench materials, protecting existing facilities, and furnishing all labor, materials, tools and equipment associated with the installation of PVC (AWWA C900) water pipe.
- B. Payment will be made at the unit price per linear foot bid, which price shall include costs for materials, labor, equipment, incidentals, and installation of 8-inch AWWA C900 PVC pipe.

1.11 PAVEMENT REMOVAL AND RESTORATION--BID ITEM #7

- A. Measurement for payment will be made as a lump sum for pavement removal and restoration. This work includes but is not limited to asphalt concrete saw cutting, disposal of materials, and installation of asphalt concrete pavement, aggregate base course, herbicide, prime coat, tack coat, seal coat, striping paint, and pavement markers.
- B. Payment will be made at the lump-sum bid, which price shall include costs for materials, labor, equipment, incidentals for pavement removal and restoration.

1.12 PIPE CONNECTION TO MAIN LINE AT HARBOR BLVD.--BID ITEM #8

- A. Measurement for payment will be made as a lump sum for connection to existing pipeline at **STA 1+00 and STA 4+92.81** with piping, fitting and appurtenances at the location in the drawings and in accordance with the specifications.
- B. Payment will be made at the lump-sum bid price upon completion of pipe connection, which price shall include materials, labor, equipment, construction, shutdown of main Pipeline, coordination with the District for pipe disinfection, and including the following:
 - 1. Excavation and backfilling for connection.
 - 2. Valves, tees, fittings, thrust blocks and piping appurtenances.
 - 3. Removal and disposal of interfering portions of existing piping.
 - 4. Removal and replacement of concrete sidewalk, driveway, curb and gutters.

1.13 PIPE CONNECTION TO MAIN LINE AT SANTA CRUZ AVE.--BID ITEM #9

- A. Measurement for payment will be made as a lump sum for connection to existing pipeline at **STA 15+00 and STA 16+26.29** with piping, fitting and appurtenances at the location in the drawings and in accordance with the specifications.

- B. Payment will be made at the lump-sum bid price upon completion of pipe connection, which price shall include materials, labor, equipment, construction, shutdown of main Pipeline, coordination with the District for pipe disinfection, and including the following:
 - 1. Excavation and backfilling for connection.
 - 2. Valves, tees, fittings, thrust blocks and piping appurtenances.
 - 3. Removal and disposal of interfering portions of existing piping.
 - 4. Removal and replacement of concrete sidewalk, driveway, curb and gutters.
- 1.14 PIPE CONNECTION TO MAIN LINE AT SAN CLEMENTE AVE.--BID ITEM #10
- A. Measurement for payment will be made as a lump sum for connection to existing pipeline at **STA 11+00 and STA 12+24.60** with piping, fitting and appurtenances at the location in the drawings and in accordance with the specifications.
 - B. Payment will be made at the lump-sum bid price upon completion of pipe connection, which price shall include materials, labor, equipment, construction, shutdown of main Pipeline, coordination with the District for pipe disinfection, and including the following:
 - 1. Excavation and backfilling for connection.
 - 2. Valves, tees, fittings, thrust blocks and piping appurtenances.
 - 3. Removal and disposal of interfering portions of existing piping.
 - 4. Removal and replacement of concrete sidewalk, driveway, curb and gutters.
- 1.15 PIPE CONNECTION TO MAIN LINE AT PLAYA CT. & HARBOR BLVD.--BID ITEM #11
- A. Measurement for payment will be made as a lump sum for connection to existing pipeline at **STA 8+00 and STA 8+97.92** with piping, fitting and appurtenances at the location in the drawings and in accordance with the specifications.
 - B. Payment will be made at the lump-sum bid price upon completion of pipe connection, which price shall include materials, labor, equipment, construction, shutdown of main Pipeline, coordination with the District for pipe disinfection, and including the following:
 - 1. Excavation and backfilling for connection.
 - 2. Valves, tees, fittings, thrust blocks and piping appurtenances.
 - 3. Removal and disposal of interfering portions of existing piping.

4. Removal and replacement of concrete sidewalk, driveway, curb and gutters.

1.16 CUT, PLUG, REMOVE AND ABANDON EXISTING AC PIPELINE – BID ITEM #12

- A. Work under this item shall include, but not be limited to, furnishing all labor, equipment, and materials to abandon-in-place of the existing 8-inch AC water line as shown in the Plans, including plugs, and removal and disposal of pipe portion in the street; excavation, backfill, and trench compaction; permanent pavement restoration and repairs; and all other work necessary for a complete abandonment of the AC water line.
- B. Payment will be made at lump sum, which shall include cost for labor, materials, tools, equipment and incidentals for AC pipe removal and abandonment, as per plans and specifications.

1.17 DISINFECTION, TESTING AND DEWATERING OF PIPING – BID ITEM #13

- A. Measurement for payment for completion of work specified as lump sum which shall include full compensation for all labor, materials, tools, equipment and incidentals for disinfection, pressure testing and dewatering pipelines, as per plans and specifications.
- B. Payment will be made at lump sum, which shall include cost for labor, materials, tools, equipment and incidentals for disinfection, testing and dewatering pipelines, as per plans and specifications.

1.18 INSTALL NEW 1-INCH WATER SERVICE AND METER BOX – BID ITEM #14

- A. Measurement for payment for completion of work specified as each (EA) which shall include full compensation for all labor, materials, tools and equipment and all work involve with installation of new 1-inch water service and new meter box as per plans and specifications. This includes but is not limited to construction of new 1-inch water service pipe, fittings, valves, meter box, trench excavation and backfill, additional utility investigation, protecting existing facilities and pressure testing and Removal and replacement of concrete sidewalk, driveway, curb and gutters.
- B. Payment will be made for each (EA), which shall include cost for labor, materials, tools, equipment for construction of new 1-inch water service and meter, as per plans and specifications.

1.19 INSTALL NEW 4-INCH BLOW OFF ASSEMBLY – BID ITEM #15

- A. Measurement for payment for completion of work specified as each (EA) which shall include full compensation for all labor, materials, tools and equipment and all work involve furnishing and installing new 4-inch blow off assembly at Harbor Blvd. as per plans and specifications. This includes but is not limited to blowoff, pipes, fittings, valves, trench excavation, erosion control, pipe bedding, trench backfill and compaction, thrust blocks, disposal of trench materials, protecting existing facilities and pressure testing.

- B. Payment will be made for each (EA), which shall include cost for labor, materials, tools, equipment for installation of new 4-inch blow off assembly, as per plans and specifications.
- 1.20 INSTALL NEW 2-INCH AIR-VAC ASSEMBLY – BID ITEM #16
- A. Measurement for payment for completion of work specified as each (EA) which shall include full compensation for all labor, materials, tools and equipment and all work involve furnishing and installing new 2-inch Air-Vac assembly at Harbor Blvd. as per plans and specifications. This includes but is not limited to air valve, pipes, fittings, valves, trench excavation, erosion control, pipe bedding, trench backfill and compaction, thrust blocks, disposal of trench materials, protecting existing facilities and pressure testing.
 - B. Payment will be made for each (EA), which shall include cost for labor, materials, tools, equipment for installation of new 2-inch Air-Vac assembly, as per plans and specifications.
- 1.21 REMOVE AND REPLACE LANDSCAPE AND IRRIGATION SYSTEM IN KIND – BID ITEM #17
- A. Measurement for payment for completion of work specified as lump sum which shall include full compensation for all labor, materials, tools and equipment and all work involve removing and replacing landscape and irrigation system in kind at Harbor Blvd. and Playa Ct. as per plans and specifications.
 - B. Payment will be made at lump sum, which shall include cost for labor, materials, tools, equipment for landscape and irrigation system removal and replacement, as per plans and specifications.
- 1.22 INSTALL NEW FIRE HYDRANT ASSEMBLY AT HARBOR BLVD. – BID ITEM #18
- A. Measurement for payment for completion of work specified as each (EA) which shall include full compensation for all labor, materials, tools and equipment and all work involve furnishing and installing new fire hydrant assembly at Harbor Blvd. as per plans and specifications. This includes but is not limited to fire hydrant, pipes, fittings, valves, trench excavation, erosion control, pipe bedding, trench backfill and compaction, thrust blocks, disposal of trench materials, protecting existing facilities and pressure testing.
 - B. Payment will be made for each (EA), which shall include cost for labor, materials, tools, equipment for installation of new fire hydrants assembly, as per plans and specifications.
- 1.23 RELOCATE EXISTING FIRE HYDRANT ASSEMBLY AT SANTA CRUZ AVE. – BID ITEM #19
- A. Measurement for payment for completion of work specified as each (EA) which shall include full compensation for all labor, materials, tools and equipment and all work

involving removing and relocating existing fire hydrant at Santa Cruz Ave., installation of new fire hydrant connection to main water line at Santa Cruz Av., abandonment, and disposal of existing fire hydrant connections as per plans and specifications. This includes but is not limited to pipes, fittings, valves, trench excavation, erosion control, cutting, removing, and disposing of fire hydrant assembly up to the connection at the existing 8-inch AC pipeline, trench backfill and compaction, blind flange, thrust blocks, disposal of trench materials, additional utility investigation, and protecting existing facilities.

- B. Payment will be made for each (EA), which shall include cost for labor, materials, tools, equipment for relocation of existing fire hydrant assembly at Santa Cruz Ave., as per plans and specifications.

END OF SECTION

SECTION 013300 SUBMITTALS

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. General Piping Requirements: 400500
- B. Pressure Testing of Piping: 400515
- C. Manual. Check and Process Valves: 400520
- D. Flexible Pipe Couplings and Expansion Joints: 400722
- E. PVC Distribution Pipe: 402092

1.02 SHOP DRAWINGS

- A. Submit shop drawings in accordance with the General Conditions.
- B. The use of contract drawing reproductions for shop drawings is subject to rejection.
- C. Submit one (1) digital copy of shop drawings using one of the following methods:
 - 1. Email: Send submittal as PDF attachment to Owner and Owner's Representative.
 - 2. Provide PDF copy of shop drawings through email or on flash drive delivered to Owner in labeled plastic case.
 - 3. Multiple hard copies of submittals will not be accepted in lieu of digital submittal unless otherwise authorized or directed by the Owner.
 - 4. One digital copy of submittal with cover letter will be returned to Contractor by email or Data Tracking System (DTS) as appropriate.
 - 5. Contractor shall verify emails sent with large attachments have been successfully received by Owner and Owner's Representative. Files in excess of 10 MB in size shall not be sent as attachments to emails due to size restrictions associated with users' email systems. Clearly indicate the equipment tag or identification number, specification section, and drawing number to which each shop drawing is referenced.
- D. If the Contractor submits shop drawings of equipment by manufacturers other than those listed in the specifications, provide the following information with the submittal:
 - 1. The name and address of at least three companies or agencies that are currently using the equipment.
 - 2. The name and telephone number of at least one person at each of the above companies or agencies whom the Owner's Representative may contact.

3. A description of the equipment that was installed at the above locations. The description shall be in sufficient detail to allow the Owner's Representative to compare it with the equipment that is proposed to be installed in this project.

E. For materials originating outside of the United States for which tests are required, provide recertification and retesting by an independent domestic testing laboratory.

1.03 SAMPLES

A. Furnish samples of the various materials, together with the finish thereon, as specified for and intended to be used on or in the work. Send samples to the office of the Owner's Representative, carriage prepaid.

B. Submit samples before purchasing, fabricating, applying, or installing such materials and finishes.

C. Submit samples, other than field samples, in duplicate. A cover letter shall accompany the sample and shall list all items being transmitted, designating their particular usage and location in the project. One sample marked "Resubmittal Not Required" will be returned to the Contractor; rejected samples will not be returned.

D. Samples shall be submitted and resubmitted until acceptable. Materials, finishes, and workmanship in the completed project shall be equal in every respect to that of the samples so submitted and accepted.

E. Samples shall conform to materials, fixtures, equipment, surface textures, colors, etc., as required by drawings and specifications or as requested by the Owner's Representative.

F. Identify sample as to product, color, manufacturer, trade name, lot, style, model, etc., location of use, and contract document reference, as well as the names of the Contractor, supplier, project, and Owner's Representative.

G. Samples shall be 8 inches by 10 inches in size and shall be limited in thickness to a minimum consistent with sample presentation. In lieu thereof, submit the actual full-size item.

H. Samples of value may be returned to the Contractor for use in the project after review, analysis, comparison, and/or testing as may be required by the Owner's Representative.

I. Furnish one 8-inch by 10-inch sample of the finally reviewed materials, colors, or textures to the Owner's Representative for final record. Such material samples shall carry on the back all identification as previously described including, if paint sample, manufacturer, mix, proportion, name of color, building, Contractor, subcontractor, and surfaces to which applied.

1.04 SUBMITTAL REQUIREMENTS

- A. Make submittals promptly in such sequence as to cause no delay in the work. Schedule submission a minimum of 30 calendar days before reviewed submittals will be needed.
- B. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The project title and number.
 - 3. Contract identification.
 - 4. The names of:
 - a. Contractor.
 - b. Supplier.
 - c. Manufacturer.
 - 5. Identification of the product, with the specification section number.
 - 6. Field dimensions clearly identified as such.
 - 7. Relationship to adjacent or critical features of the work or materials.
 - 8. Identification of deviations from contract documents.
 - 9. Identification of revisions on resubmittals.
 - 10. A 5-inch by 5-inch blank space for stamps of the Owner's Representative.
 - 11. Contractor's stamp, initialed or signed, shall certify Contractor's review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal that the product meets the requirements of the work and of the contract documents.

1.05 SUBMITTAL FORMAT

- A. Each submittal shall have a transmittal form. A sample transmittal form is included at the end of this section. Every page in a submittal shall be numbered in sequence. Each copy of a submittal shall be collated and stapled or bound, as appropriate. Copies not collated will be rejected.
- B. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with all pertinent data, capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports. Present a sufficient level of detail for assessment of compliance with the contract documents.

- C. Each submittal shall be assigned a unique number. Submittals shall be numbered sequentially. The submittal numbers shall be clearly noted on the transmittal. Original submittals shall be assigned a numeric submittal number. Resubmittals shall bear an alphanumeric system which consists of the specification section number assigned to the original submittal for that item followed by a letter of the alphabet to represent that it is a subsequent submittal of the original. For example, if Submittal 25 requires a resubmittal, the first resubmittal will bear the designation "25-A" and the second resubmittal will bear the designation "25-B" and so on.
- D. Disorganized submittals that do not meet the requirements above will be returned without review.

1.06 RESUBMITTALS

Resubmittal of submittals will be reviewed and returned in the same review period as for the original submittal. It is considered reasonable that the Contractor shall make a complete and acceptable submittal by the second submission of a submittal item. The Owner's Representative reserves the right to withhold monies due to the Contractor to cover additional costs of any review beyond the second submittal.

1.07 CONTRACTOR'S JOBSITE DRAWINGS

Provide and maintain on the jobsite one complete set of prints of all drawings which form a part of the contract. Immediately after each portion of the work is installed, indicate all deviations from the original design shown in the drawings either by additional sketches or ink thereon. Upon completion of the job, deliver this record set to the Owner's Representative.

SHOP DRAWING SUBMITTAL NO. _____

Michael K. Nunley and Associates, Inc.

ATTN: _____

ATTN: _____

PROJECT
PROJECT NO. OWNER PROJECT NO. CONTRACTOR PROJECT NO.

ITEM NO.	COPIES	DESCRIPTION	PREVIOUS SUBMITTAL NO.	SPEC. SECTION NO.	PLAN SHEET NO.

SUBMITTED BY: _____ _____
CONTRACTOR DATE

SUBMITTAL RETURN (TO BE COMPLETED BY ENGINEER)

ITEM NO.	COPIES	RESUBMIT		COMMENTS
		YES	NO	

COPY: RETURNED BY: _____ _____
ENGINEER DATE

END OF SECTION

SECTION 015526 TRAFFIC REGULATION

1.01 DESCRIPTION

This section describes procedures for traffic regulation during construction in public streets.

1.02 STANDARD SPECIFICATIONS

Wherever reference is made to the State Specifications and Plans, such reference shall mean the State of California, Business, Transportation, and Housing Agency, Department of Transportation the latest edition Standard Specifications and the latest Standard Plans edition.

1.03 SUBMITTALS

Contractor shall submit a Traffic Control Plan, conforming with the latest version of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

1.04 GENERAL

- A. Provide safe and continuous passage for pedestrian and vehicular traffic at all times.
- B. Control traffic at those locations indicated and in conformance with the approved traffic control plans and specifications.
- C. The project sites are located within areas comprising of or near residential, commercial, and general public use. The Contractor shall familiarize itself with the project site conditions and shall perform its operations to minimize disruptions to the daily activities of the adjacent properties. The Contractor shall coordinate traffic control and provide safe access to persons whose daily activities, business deliveries, parking or storage may be impacted by the Contractor's operation.
- D. Contractor shall follow the latest edition of California Manual on Uniform Traffic Control Devices (California MUTCD) and the WATCH Manual for all temporary Traffic Control Devices.
- E. Furnish, construct, maintain, and remove detours, road closures, traffic signal equipment, lights, signs, barricades, fences, K-rail, flares, solar-powered flashing arrow signs, miscellaneous traffic devices, flagmen, drainage facilities, paving, and such other items and services as are necessary to adequately safeguard the public from hazard and inconvenience. All such work shall comply with the ordinances, directives, and regulations of authorities with jurisdiction over the public roads in which the construction takes place and over which detoured traffic is routed by the Contractor. After devices have been installed, maintain and keep them in good repair and working order until no longer required. Replace such devices that are lost or damaged, to such an extent as to require replacement, regardless of the cause of such loss or damage.

- F. Prior to the start of construction operations, notify the police and fire department in whose jurisdiction the project lies, giving the expected starting date, completion date, and the names and telephone numbers of two responsible persons who may be contacted at any hour in the event of a condition requiring immediate emergency service to remove, install, relocate, and maintain warning devices. In the event these persons do not promptly respond or the authority deems it necessary to call out other forces to accomplish emergency service, the Contractor will be held responsible for the cost of such emergency service.
- G. Provide a minimum of 48 hours' notice to Ventura County and City of Oxnard for any work which may affect signal loops, equipment, or devices. In the event that any underground utilities, traffic devices, pipes, or conduits are damaged and require emergency repair, all costs incurred by Ventura County or City of Oxnard in making such repairs shall be paid by the Contractor.
- H. Post temporary "No Parking - Tow Away" signs 48 hours prior to work in areas where parking is normally permitted. The County of Ventura and City of Oxnard Police Department shall be notified 48 hours prior to the posting of any temporary parking restrictions along the pipeline route.
- I. Post the construction information signs at least two weeks prior to construction.
- J. Notify each postal address at least two working days prior to restricting parking along the project route via first class United States mail of the nature and duration of the parking restriction.
- K. Work shall be planned and carried out so that there will be the least possible inconvenience to the traveling public, and traffic shall not be unreasonably delayed. Vehicular, bicycles, and pedestrian access to properties adjoining the construction activities shall be maintained at all times unless approved otherwise by the County of Ventura. Closure of parking stalls shall be scheduled by the Contractor a minimum of two weeks in advance with the District. Proposed closure of sidewalks shall be posted at least one week in advance.
- L. Pedestrian access and circulation shall be maintained by the Contractor around the project areas. If the use of existing walkways, pedestrian crossings, ramps or other pedestrian facilities are impacted by the Contractor's operation, the Contractor shall provide temporary facilities that will provide the same level of service to the satisfaction of Construction Inspectors.

1.05 TRAFFIC CONTROL DEVICES AND SIGNS

- A. Traffic control devices and temporary striping shall conform to the California Manual of Uniform Traffic Control Devices (California MUTCD). Construction signs shall conform to the latest edition of the State of California Sign Specification Sheets.
- B. The placement of construction signing, striping, barricades, and other traffic control devices used for handling traffic and public convenience shall conform to the

California MUTCD, and “Work Area Traffic Control Handbook” (WATCH), latest edition.

- C. Signs shall be illuminated or reflectorized when they are used during hours of darkness. Cones and portable delineators used for night lane closures shall have reflective sleeves. Equip barricades used in the diversion of traffic with flashers if in place during hours of darkness.
- D. During the duration of a detour, cover existing signs not in accordance with the traffic control plan. Relocate existing signs that are in force to provide visibility from all relocated traffic lanes.

1.06 VEHICULAR TRAFFIC CONTROL

- A. Complete backfill, compaction, testing, and the first lift of permanent paving to a point not to exceed 500 feet behind the working heading. Shoring members, beams, or other obstructions shall not be permitted within a 2-foot clearance between the edge of excavation and the edge of any traffic lane. At construction areas where an open trench exists and/or where traffic detour will be in existence during night hours, replace delineators with barricades or K-rail.
- B. Accomplish construction in phases by detouring traffic from its normal patterns. Restore traffic to normal patterns in each phase before proceeding to the next phase.
- C. Transition traffic lane transitions from permanent lanes to construction zone patterns in accordance with the requirements for the normal posted speed limit and as shown in the drawings.
- D. Unless otherwise shown in the drawings or allowed by the city within whose jurisdiction the work is being performed, limit construction activities to 7 a.m. to 5 p.m. Monday through Friday. Return roadways and sidewalks to unrestricted vehicle and pedestrian usage when construction is not underway.
- E. During the peak traffic volume hours of the day, from 6:00 a.m. to 8:30 a.m. on weekdays only, limit construction activities within the construction zone to those which will not impact the free movement of vehicular traffic in its detoured pattern. Construction equipment or trucks shall not use or travel adjacent to traffic lanes during these time periods. Truck operations in and out of construction and staging areas shall be controlled by flagmen at all times.

1.07 PEDESTRIAN TRAFFIC CONTROL

- A. Maintain and delineate a minimum of one 4-foot-wide pedestrian walkway along each public street at all times during construction. Maintain existing pedestrian accesses at intersections at all times. When existing crosswalks are blocked by construction activity, install signs directing pedestrian traffic to the nearest alternative crosswalk.

- B. Erect a fence or provide other means of securement to preclude unauthorized entry to any excavation during all nonworking hours on a 24-hour basis including weekends and holidays. Said fence shall be a minimum of 7 feet high around the entire excavation, consisting of a minimum 9-gauge chain-link type fence fabric and shall be sturdy enough to prohibit toppling by children or adults. There shall be no openings under the wire large enough for any child to crawl through. Lock any gates if no adult is in attendance. Place warning signs spaced on 50-foot centers on the outside of the fence with the statement "DEEP HOLE DANGER."

1.08 ACCESS TO ADJACENT PROPERTIES

- A. Maintain reasonable access from public streets to adjacent properties at all times during construction. Prior to restricting normal access from public streets to adjacent properties, notify each property owner or responsible person, informing him of the nature of the access restriction, the approximate duration of the restriction, and the best alternate access route for that particular property.

END OF SECTION

SECTION 017410 CLEANING DURING CONSTRUCTION AND FINAL CLEANING

1.01 GENERAL

- A. This section includes cleaning during construction and final cleaning on completion of the work.
- B. At all times maintain areas covered by the contract and adjacent properties and public access roads free from accumulations of waste, debris, and rubbish caused by construction operations.
- C. Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws. Do not burn or bury rubbish or waste materials on project site. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains. Do not dispose of wastes into streams or waterways.
- D. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

1.02 CLEANING DURING CONSTRUCTION

- A. During execution of work, clean site, adjacent properties, and public access roads and dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. Provide containers for collection and disposal of waste materials, debris, and rubbish.
- D. Cover or wet excavated material leaving and arriving at the site to prevent blowing dust. Clean the public access roads to the site of any material falling from the haul trucks.

1.03 FINAL CLEANING

- A. At the completion of work and immediately prior to final inspection, clean the entire project site as follows.
- B. Clean, sweep, wash, and polish all work and equipment including finishes.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior finished surfaces, polish surfaces.
- D. Repair, patch, and touch up marred surfaces to match adjacent surfaces.
- E. Broom clean paved surfaces; rake clean landscaped areas.
- F. Remove from the site temporary structures and materials, equipment, and appurtenances not required as a part of, or appurtenant to, the completed work.

END OF SECTION

SECTION 020120 PROTECTING EXISTING UNDERGROUND UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials and procedures for protecting existing underground utilities.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Trenching, Backfilling, and Compacting: 312316.
- B. Subsurface Utility Locating (Potholing): 023219.
- C. General Concrete Construction: 030500

PART 2 - MATERIALS

2.01 REPLACEMENT IN KIND

Except as indicated below or as specifically authorized by the Owner's Representative, reconstruct utilities with new material of the same size, type, and quality as that removed.

PART 3 - EXECUTION

3.01 GENERAL

- A. Replace in kind street improvements, such as curbs and gutters, barricades, traffic islands, signalization, fences, signs, etc., that are cut, removed, damaged, or otherwise disturbed by the construction.
- B. Where utilities are parallel to or cross the construction but do not conflict with the permanent work to be constructed, follow the procedures given below and as indicated in the drawings. Notify the utility owner 48 hours in advance of the crossing construction and coordinate the construction schedule with the utility owner's requirements. For utility crossings not shown in the drawings, refer to the General Conditions and the instructions of the Owner's Representative for guidance.
- C. Determine the true location and depth of utilities and service connections which may be affected by or affect the work. Determine the type, material, and condition of these utilities. In order to provide sufficient lead-time to resolve unforeseen conflicts, order materials and take appropriate measures to ensure that there is no delay in work.

3.02 PROCEDURES

- A. Protect in Place: Protect utilities in place, unless abandoned, and maintain the utility in service, unless otherwise specified in the drawings or in the specifications.
- B. Cut and Plug Ends: Cut abandoned utility lines and plug the ends. Cap waterlines with a cast-iron cap or install a 3-foot-long concrete plug. Comply with all applicable state, CAL/OSHA and government health agency regulations for the disposal of AC water lines.
- C. Remove and Reconstruct: Where so indicated in the drawings or as required by the Owner's Representative, remove the utility and, after passage, reconstruct it with new materials. Provide temporary service for the disconnected utility.

3.03 COMPACTION

- A. Utilities Protected in Place: Backfill and compact under and around the utility so that no voids are left.
- B. Utilities Reconstructed: Prior to replacement of the utility, backfill the trench and compact to an elevation 1 foot above the top of the ends of the utility. Excavate a cross trench of the proper width for the utility and lay, backfill, and compact.
- C. Construction--Sand-Cement Slurry: Sand-cement slurry consisting of one sack (94 pounds) of portland cement per cubic yard of sand and sufficient moisture for workability shall be used for backfill materials as shown on the plans. Submit specific methods and procedures for the review of the Owner's Representative prior to construction.

3.04 THRUST BLOCKS ON WATERLINES

- A. The Contractor's attention is called to thrust blocks delineated in the drawings for waterlines throughout the project whose thrust is in the direction of the new excavation and, therefore, may be affected by the construction. These waterlines are owned and operated by the Owner. Protect thrust blocks in place or shore to resist the thrust by a means approved by the District and reconstruct. If the thrust blocks are exposed or rendered to be ineffective in the opinion of the Owner's Representative, reconstruct them to bear against firm unexcavated or backfill material.
- B. Provide firm support by backfilling that portion of the trench for a distance of 2 feet on each side of the thrust block to be reconstructed from the pipe bedding to the pavement subgrade, with either:
 - 1. Sand-cement slurry (94 pounds of cement per cubic yard).
 - 2. The native material compacted to a relative compaction of 95%.

- C. Then excavate the backfill material for construction of the thrust block.
- D. Test compaction of the backfill material before pouring any concrete thrust block. Use Class C (4500 psi) concrete.

3.05 ADJACENT PARALLEL UTILITIES

- A. Refer to the Construction Plans to determine where adjacent parallel utilities are located.
- B. The position of these utilities between the above stations is just outside the new construction. Protect these utilities from any disturbances and repair the pipelines and associated vaults and appurtenances if they are damaged in any way.

END OF SECTION

SECTION 023219 SUBSURFACE UTILITY LOCATING (POTHOLING)

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials and procedures for performing pothole operations to locate existing underground utilities.

1.02 SUBMITTALS

- A. Submit request for premarking of pothole locations at least five calendar days prior to the commencement of field activities.
- B. Submit a traffic control/protection plan at least seven calendar days prior to the commencement of field activities.
- C. Submit proposed method of potholing, including description of equipment to be used, and schedule for potholing for approval at least seven calendar days prior to the commencement of field activities. Obtain Owner's approval of pothole locations prior to commencement of field activities.
- D. Submit field logs to the Owner within two working days after the completion of pothole excavations in each area. Include dates of potholing operations and any additional discovered information or pertinent data. Include for each pothole excavation field log:
 - 1. Pothole number.
 - 2. Date of pothole.
 - 3. Depths to top and bottom of utility (measured from existing grade over utility at pothole).
 - 4. Miscellaneous Contractor's notes.
- E. Submit temporary steel cap and/or steel plate bridging shop drawings at least seven calendar days prior to the commencement of field activities.
- F. Submit sand-cement slurry mix design at least seven calendar days prior to the commencement of field activities.
- G. Submit asphalt concrete mix design at least seven calendar days prior to the commencement of field activities.

1.03 PROCEDURES

- A. Subsurface utility-locating (potholing) services shall conform to CI/ASCE 38-02. For the purpose of this scope, “locate” means to obtain the horizontal and vertical position of the utility line by excavating a circular test hole or narrow trench (where approved of and/or requested by the Owner). Construct test holes using vacuum excavation or comparable nondestructive equipment in a manner that will cause no damage to the utility.
- B. Subsurface utility locating shall consist of test hole excavations at locations indicated on the pothole plans as approved by the Owner. Narrow trench excavations (slot potholes) may be required at locations approved by the Owner or to locate multiple parallel utilities.
- C. The Owner’s surveyor will premark up to 20 pothole excavation locations. Cooperate with and facilitate the collection of subsurface utility data by the surveyor following pothole excavation. The following table includes identified utilities in conflict with the project and needed to be potholed.

Utility	Location
Electrical, Telephone, Cable TV	Harbor Blvd.
Gas	Harbor Blvd.
Sewer	Harbor Blvd.
Storm Drain	Harbor Blvd.
Tel	Harbor Blvd./ Playa Ct.
Sewer	Harbor Blvd./ Playa Ct.
Electrical, Cable TV	San Clemente Ave.
Sewer	San Clemente Ave.
Gas	San Clemente Ave.
Electrical, Cable TV	Santa Cruz Ave.
Electrical	Santa Cruz Ave.
Gas	Santa Cruz Ave.
Sewer	Santa Cruz Ave.

1.04 TIME OF COMPLETION/SCHEDULE

The Contractor shall diligently prosecute the work to completion before the expiration of 15 working days immediately following the date of the project kick-off meeting.

1.05 STANDARD SPECIFICATIONS

Wherever reference is made to the Public Works Specifications such reference shall mean the Standard Specifications for Public Works Construction (SSPWC), the latest edition.

PART 2 - MATERIALS

2.01 SAND-CEMENT SLURRY BACKFILL AT TEST HOLES AND AT EXPLORATORY TRENCHES

Sand-cement slurry backfill shall consist of two sacks of Type I or II portland cement added per cubic yard of imported sand and sufficient water for workability.

2.02 ASPHALT CONCRETE PAVEMENT REPAIR AT EXPLORATORY TRENCHES AND AT TEST HOLES

- A. Asphalt concrete paving shall conform to III-C2-AR-4000 as listed in Section 400-4 of the Public Works Specifications, except that Performance Grade PG 64-10 asphalt per Section 92 in the State Specifications.
- B. Asphalt shall be Performance Grade PG 64-10 per Section 92 in the State Specifications. Asphalt content in the pavement shall be 5.5% to 6.0%.
- C. Areas to be paved shall receive prime coat. Prime coat shall be per Section 39-4.02 in the State Specifications.
- D. Aggregate shall be Type A or B per Section 39-2.02 in the State Specifications.
- E. Paving thickness shall match existing plus 1 inch.

PART 3 - EXECUTION

3.01 POTHOLING OPERATIONS

- A. Backfill and repair test hole excavations immediately after obtaining the measurement data. Backfill and repair trench excavations requiring use of temporary steel plate bridging within four working days. Promptly provide notice to the Owner for scheduling field survey activities. Advise Owner of number of pothole excavations completed and number remaining.

- B. Underground Service Alert Requirements: Comply with Underground Service Alert requirements for notification prior to excavation. Contact Underground Service Alert at 1-800-422-4133 (or dial 811) no less than two and no more than ten days prior to the start of exploratory excavation. Verify whether or not a representative of each utility or agency will be present during excavation and coordinate with said individual(s). Take any precautions required by the utility owner.
- C. Conduct potholing operations in a manner that minimizes the damage potential to existing underground utilities in order to ensure that the existing facilities will remain in operation without interruption.
- D. Coordinate and cooperate with and facilitate field data collection by Owner's surveyor. Pothole excavations shall sufficiently expose subsurface utilities to allow surveyor to easily determine and measure the following data:
 - 1. Elevation at top and bottom of utility.
 - 2. Elevation of existing grade over utility at pothole.
 - 3. Coordinates at surface.
 - 4. Outside diameter of utility or width of duct banks.
 - 5. Utility material and condition.
- E. Location and Depiction of Existing Utilities: Pothole maps for subsurface utility locating shall be present and utilized during potholing activities. The plans shall be compared to utility/agency paint markings following Underground Service Alert notification as well as locations premarked by the Owner's surveyor. If discrepancies are found between the plans and paint markings, promptly notify the Owner prior to commencement of any excavation

3.02 TRAFFIC CONTROL

Furnish, install, maintain, and remove necessary traffic signs, barricades, lights, signals, cones, pavement markings, and other traffic control devices. Perform traffic control in accordance with Work Area Traffic Control Handbook (WATCH) promulgated by the Southern California Chapter, APWA, latest edition and OSHA Regulations for Construction Projects.

3.03 EXCAVATION

- A. Protect utilities or underground structures from damage during potholing. Immediately report any damaged utilities to the affected utility's owner and the Owner. Repair immediately any damaged utilities in accordance with the respective utility owner's requirements. Neatly cut and remove existing pavement. Excavate test holes in such a manner as to prevent any damage to wrappings, coatings, or other protective coverings, utilizing vacuum excavation or hand digging.

- B. Methods: Backhoe excavation is not permitted except for trench excavations. Use the following methods for pothole excavations:
 - 1. Hand Digging: Hand digging is the method of excavating a pothole by manual means with hand-held, nonmechanical equipment such as a shovel.
 - 2. Vacuum Excavation: Vacuum excavation shall consist of air or water pressure to break up the soil and a vacuum device to collect the spoil. Determine if air or water vacuum excavation shall be used depending upon specific site and environmental characteristics. Soil type such as heavy clay may require water vacuum excavation. Utilize air vacuum excavators if mud from water vacuum excavators cannot be disposed properly. Use air vacuum excavators if damage to utilities, such as cutting through cables, will occur with the use of water vacuum excavators.
 - a. Air: Air vacuum excavators shall utilize a high velocity air stream to penetrate, expand, and break up the soil. Remove the loosened particles of soil and rock from the excavation through the use of a vacuum.
 - b. Water: Water vacuum excavation systems shall excavate the pothole using high-pressure water to reduce and loosen the soil. Remove the wet soil and mud slurry to a spoil tank using a vacuum.
 - C. Size of Test Hole Excavation: Maximum test hole size shall be 8 inches in diameter at surface, unless indicated otherwise by Owner.
 - D. Size of Exploratory Trench Excavation: Trench width and length shall be as approved by the Owner. Trench depth shall be as required to accurately locate subsurface utilities.
- 3.04 TEMPORARY STEEL PLATE BRIDGING, WITH A NONSKID SURFACE (WHERE REQUIRED FOR APPROVED TRENCHES)
- A. Provide steel plate bridging with a nonskid surface and shoring to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:
 - 1. Steel plates used for bridging shall extend a minimum of 12 inches beyond the edges of the trench.
 - 2. Install steel plate bridging to operate with minimum noise.
 - 3. Shore the trench to support the bridging and traffic loads.
 - 4. Use temporary paving with cold asphalt concrete to feather the edges of the plates if plate installation by Method 2 is used.
 - 5. Secure bridging against displacement by using adjustable cleats, shims, or other devices.

- B. Install steel plate bridging and shoring using the following method:

Attach approach plate(s) and ending plate (if longitudinal placement) to the roadway by a minimum of two dowels predrilled into the corners of the plate and drilled 2 inches into the pavement. Butt subsequent plates to each other. Compact fine graded asphalt concrete to form ramps, maximum slope 8.5% with a minimum 12-inch taper to cover all edges of the steel plates. When steel plates are removed, backfill the dowel holes in the pavement with either graded fines of asphalt concrete mix or concrete slurry.

- C. Maintain the steel plates, shoring, and asphalt concrete ramps.
- D. Unless specified, use of steel plate bridging at any given location shall not exceed four consecutive working days in any given week. Cover backfilling of excavation with a minimum of 3 inches of temporary layer of cold mix asphalt concrete.
- E. The following table shows the required minimal thickness of steel plate bridging required for a given trench width:

Trench Width (feet)	Minimum Plate Thickness (inches)
1	1/2
1 1/2	3/4

- F. The Contractor may use standard steel plate with known coefficient of friction equal or exceeding 0.35.
- G. Use a “Rough Road” sign (W8-8) with black lettering on an orange background in advanced of steel plate bridging. This is to be used along with any other required construction signing.

3.05 POTHOLE REPAIR

- A. After excavating a test hole or trench, provide and install a temporary steel cap (over test hole) or temporary steel plate bridging (over trench) to facilitate data gathering by Owner’s surveyor.
- B. Following data gathering by surveyor, remove temporary steel caps and/or steel plate bridging, and backfill excavation with approved material as follows:
 1. Test Hole Excavations: Sand-cement slurry backfill per Part 2 of this section. Bring to grade with asphalt cement pavement per Part 2 of this section. Match existing pavement thickness plus 1 inch.
 2. Exploratory Trenches: Backfill per Part 2 of this section. Match existing pavement thickness plus 1 inch.

- C. The finished surface of the repair shall be of like material and constructed to the same finished grade as the adjacent pavement. The finished surface shall be such that it does not allow water to pond. There shall be no discernable difference in surface level at the joint between the existing pavement and the completed repair.

3.06 DISPOSAL OF CUTTINGS

Dispose of cuttings off-site.

END OF SECTION

SECTION 030500 GENERAL CONCRETE CONSTRUCTION

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, installation, and testing of formwork, reinforcing steel, joints, concrete, and finishing and curing for general concrete construction.

1.02 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 013300.
- B. Prepare concrete and mortar mix designs and laboratory 7-day and 28-day compressive tests or submit test reports of 7- and 28-day compressive tests of the mix where the same mix has been used on two previous projects. Submit mix design in writing for review by the Owner at least 15 days before placing of any concrete.
- C. Submit six copies of a report from a testing laboratory verifying that aggregate material contains less than 1% asbestos by weight or volume and conforms to the specified gradations or characteristics.

PART 2 - MATERIALS

2.01 NONDOMESTIC CEMENT AND ADDITIVES

- A. The use of nondomestic cement and additives in concrete may be permitted only after review of a written request to use such materials. The request to use nondomestic materials shall include a chemical analysis that indicates the material meets the project specifications. Certifications that state the nondomestic materials meet the project requirements will not be accepted.
- B. Test reports for concrete materials shall be current to within three months of inclusion into the project and shall be identifiable to the materials supplied.

2.02 FORMWORK

- A. Design forms according to ACI 347.
- B. Class I Forms: Use steel forms, ply form, or smooth-surface plywood 3/4-inch minimum thickness for straight surfaces and 1/2-inch minimum thickness for curved surfaces.
- C. Class II Forms: Use plywood in good condition, metal, or smooth-planed boards free from large or loose knots with tongue and groove or ship lap joints.

- D. Class II forms may be used for exterior concrete surfaces that are 1 foot or more below finished grade. Use Class I forms for all other surfaces.
- E. Coat forms with form release agent.

2.03 BOND BREAKER

Bond breaker shall be a nonstaining type which will provide a positive bond prevention, such as Williams Tilt-Up Compound, as manufactured by Williams Distributors, Inc., Seattle, Washington; Silcoseal 77, as manufactured by SCA Construction Supply Division, Superior Concrete Accessories, Franklin Park, Illinois; or equal.

2.04 FORM RELEASE AGENT

- A. Form release agent shall effectively prevent absorption of moisture and prevent bond with the concrete. Agent shall be nonstaining and nontoxic after 30 days.
- B. For steel forms, release agent shall prevent discoloration of the concrete due to rust.

2.05 REINFORCING STEEL

- A. Reinforcement shall conform to ASTM A615 or A706, Grade 60.
- B. Fabricate reinforcing in accordance with the current edition of the Manual of Standard Practice, published by the Concrete Reinforcing Steel Institute. Bend reinforcing steel cold.
- C. Deliver reinforcing steel to the site bundled and with identifying tags.

2.06 WELDED WIRE REINFORCEMENT

Welded wire reinforcement shall conform to ASTM A185.

2.07 TIE WIRE

Tie wire shall be 16 gauge minimum, black, soft annealed.

2.08 CEMENT

- A. Use domestic portland cement that conforms to ASTM C150 II/IV
- B. Use only one brand of cement in any individual structure. Use no cement that has become damaged, partially set, lumpy, or caked. Reject the entire contents of the sack or container that contains such cement. Use no salvaged or reclaimed cement.
- C. Maximum tricalcium aluminate shall not exceed 8%. The maximum percent alkalis shall not exceed 0.6%.

2.09 AGGREGATES

Aggregates shall be natural rock, sand, or crushed natural rock and shall comply with ASTM C33 and shall contain less than 1% asbestos by weight or volume. Aggregates shall be free from any substances that will react with the cement alkalies, as determined by Appendix X-1 of ASTM C33.

2.10 WATER AND ICE

Use water and ice that is clean and free from objectionable quantities of organic matter, alkali, salts, and other impurities that might reduce the strength, durability, or otherwise adversely affect the quality of the concrete. Water shall not contain more than 500 mg/L of chlorides or more than 500 mg/L of sulfate.

2.11 COLOR ADDITIVE FOR EXTERIOR ELECTRICAL DUCT ENCASUREMENT

For exterior electrical duct concrete encasements, use a color additive for identification purposes: brick red "Colorfull" as manufactured by Owl Manufacturing Company, Arcadia, California; coral red "Chromix C-22" as manufactured by L. M. Scofield Company, Los Angeles, California; or equal. Add the color additive while the concrete is being mixed using the quantity per cubic yard of concrete recommended by the manufacturer for the class of concrete indicated.

2.12 CONCRETE ADMIXTURES

- A. Do not use any admixture that contains chlorides or other corrosive elements in any concrete. Admixtures shall be nontoxic after 30 days.

2.13 CONCRETE MIX DESIGN

- A. Conform to ASTM C94, except as modified by these specifications.
- B. Air content as determined by ASTM C231 shall be 4% \pm 1%.
- C. Maximum water-cement ratio for Class A concrete = 0.45 by weight.
- D. Use classes of concrete as described in the following table:

Class	Type of Work	28-Day Compressive Strength (in psi)	Minimum Cement Content (in lbs per C.Y.)
A	Concrete for all structures and concrete not otherwise specified. Concrete fill at structure foundations, cradle, supports across pipe trenches, and reinforced pipe encasement.	4,500	564
C	Floor grout and Thrust Blocks	4,500	564

- E. Measure slump in accordance with ASTM C143.
- F. Combined aggregate grading shall be as shown in the following table:

	Maximum Aggregate Size			
	1 1/2"	1"	3/4"	3/8"
Aggregate Grade per ASTM C33	467	57	67	8

- G. Mix design for pumped concrete shall produce a plastic and workable mix. The percentage of sand in the mix shall be based on the void content of the coarse aggregate.

2.14 SLURRY CEMENT BACKFILL

- A. Slurry cement backfill shall consist of a fluid, workable mixture of aggregate, cement, and water.
- B. Aggregate shall be either:
 - 1. Material selected from excavation, imported material, or a combination thereof, free from organic matter and other deleterious materials and meeting the following gradation:

Sieve Sieves	Percentage Passing
1 1/2 inches	100
1 inch	80 to 100
3/4 inch	60 to 100
3/8 inch	50 to 100
No. 4	40 to 80
No. 100	10 to 40

2. Commercial quality concrete sand.

- C. Proportion the aggregate, cement, and water by either weight or volume. Include at least 188 pounds of cement per cubic yard produced. The water content shall be sufficient to produce a fluid, workable mix that will flow and can be pumped without segregation of the aggregate while being placed.
- D. Thoroughly machine-mix the materials for the slurry cement backfill in pugmill, rotary drum, or other mixer. Continue the mixing until the cement and water are thoroughly dispersed throughout the material. Place slurry cement backfill within one hour after mixing.

PART 3 - EXECUTION

3.01 FORM TOLERANCES

- A. Failure of the forms to produce the specified concrete surface and surface tolerance shall be grounds for rejection of the concrete work. Rejected work shall be repaired or replaced at no additional cost to the Owner.
- B. The following table indicates tolerances or allowable variations from dimensions or positions of structural concrete work:

	Maximum Tolerance (inch)
Sleeves and inserts	+1/4 -1/4
Projected ends of anchors	+1/4 -0.0
Anchor bolt setting	+1/4 -1/4
Finished concrete, all locations	+1/4 -1/4 in 10 feet
	Max ±1-inch in total length

The planes or axes from which the above tolerances are to be measured shall be as follows:

Sleeves and inserts:	Centerline of sleeve or insert.
Projected ends of anchors:	Plane perpendicular to the end of the anchor as located in the drawings.
Anchor bolt setting:	Centerline of anchor bolt.
Finish concrete:	The concrete surface as defined in the drawings.

Where equipment is to be installed, comply with manufacturer's tolerances if more restrictive than above.

3.02 FORM SURFACE PREPARATION

- A. Clean form surfaces to be in contact with concrete of foreign material prior to installation.
- B. Coat form surfaces in contact with concrete with a release agent prior to form installation.

3.03 FORM REUSE

Reuse only forms that provide a uniform surface texture on exposed concrete surfaces. Apply light sanding or other surface treatment between uses for uniform texture. Plug unused tie rod holes with corks, shave flush, and sand the concrete surface side. Do not patch forms other than filling tie rod holes, except in the case of Class II forms. Do not use metal patching discs on Class I forms.

3.04 REMOVAL OF FORMS

- A. Forms and shoring for elevated structural slabs or beams shall remain in place until the concrete has reached a compressive strength equal to the specified 28-day compressive strength as determined by test cylinders. Do not remove supports and reshore. The following table indicates the minimum allowable time after the last cast concrete is placed before forms, shoring, or wall bracing may be removed:

Sides of footings and encasements	24 hours
Walls, vertical sides of beams, girders, columns, and similar members not supporting loads	48 hours
Slabs, beams, and girders	10 days (forms only)
Shoring for slabs, beams, and girders	Until concrete strength reaches specified 28-day strength
Wall bracing	Until top or roof slab concrete reaches specified 28-day strength

- B. Do not remove forms from concrete that has been placed with outside air temperature below 50°F without first determining if the concrete has properly set without regard for time. Do not apply heavy loading on green concrete. Immediately after forms are removed, the surface of the concrete shall be carefully examined and any irregularities in the surface shall be repaired and finished as specified.

3.05 EMBEDDED ITEMS

Set anchor bolts and other embedded items accurately and hold securely in position until the concrete is placed and set. Check all special castings, channels, or other metal parts that are to be embedded in the concrete prior to and again after concreting. Check nailing blocks, plugs, and strips necessary for the attachment of trim, finish, and similar work prior to concreting.

3.06 BEVELED EDGES (CHAMFER)

Form 3/4-inch beveled edges on exposed concrete edges and corners, beam soffit corners, and where indicated in the drawings. Reentrant corners in concrete members shall not have fillets, unless otherwise shown in the drawings. The top edges of slabs, walkways, beams, and walls may be beveled with an edging trowel in lieu of using chamfer strips.

3.07 EXPANSION JOINTS

Provide expansion joints with continuous edge reservoirs, which shall be filled with a joint sealant. Leave the material used for forming the reservoirs in place until immediately before the grooves are cleaned and filled with joint sealant. After removing edge forms from the reservoir, remove grout, loose concrete, and fins; then sandblast the slots. Allow the reservoirs to become thoroughly dry; then blow out the reservoirs and immediately prime and fill with the expansion joint sealant and backup materials. The primer used shall be supplied by the same manufacturer supplying the joint sealant.

3.08 TIME BETWEEN POURS

At least two hours shall elapse after depositing concrete in the columns or walls before depositing in beams, girders, or slabs supported thereon. Place beams, girders, brackets, column capitals, and haunches monolithically as part of the floor or roof system, unless otherwise indicated in the drawings.

3.09 INSTALLATION OF PREMOLDED JOINT FILLER

Install in joint accurately as shown. Attach to concrete with a bonding agent recommended by the joint sealant and joint filler manufacturer for compatibility.

3.10 INSTALLATION OF JOINT SEALANTS

- A. Immediately before installing the joint sealant, clean the joint cavity by sandblasting or power wire brushing. Install bond breaker tape per manufacturer's instructions.

- B. After the joints have been prepared as described above, apply the joint sealant. Apply the primer, if required, and joint sealant only with the equipment and methods recommended by the joint sealant manufacturer. Application criteria for the sealant materials, such as temperature and moisture requirements and primer cure time, shall be in accordance with the recommendations of the sealant manufacturer.
- C. Apply masking tape along the edges of the exposed surface of the exposed joints. Trowel the joints smooth with a tuck pointing tool wiped with a solvent recommended by the sealant manufacturer.
- D. After the sealant has been applied, remove the masking tape and any sealant spillage.

3.11 SITE-MIXED CONCRETE

Conform to ACI 304.

3.12 READY-MIXED CONCRETE

Conform to ASTM C94.

3.13 PLACING CONCRETE

Conform to ACI 304.

3.14 PUMPING CONCRETE

Conform to ACI 304.2R-91.

3.15 WEATHER REQUIREMENTS

- A. Conform to ACI 305 for placing during hot weather.
- B. Conform to ACI 306 for placing during cold weather.

3.16 PLACING SLURRY CEMENT BACKFILL

Place slurry cement backfill in a uniform manner that will prevent voids in, or segregation of, the backfill. Remove foreign material that falls into the excavation or trench. Do not commence backfilling over or place any material over the slurry cement backfill until at least four hours after placing the slurry cement backfill, except that when concrete sand is used for the aggregate and the in-place material is free draining, backfilling may commence as soon as the surface water is gone.

3.17 CURING CONCRETE

- A. Conform to ACI 308.
- B. Water cure with burlap mats unless optional curing methods are permitted.

- C. It is the responsibility of the Contractor to select the appropriate curing method in response to climatical and/or site conditions occurring at the time of concrete placement. Take appropriate measures as described in ACI 305 and 306 for protecting and curing concrete during hot and cold weather.

3.18 REPAIR OF DEFECTS AND CRACKS

- A. Do not repair defects until concrete has been evaluated by the Owner's Representative.
- B. Surface Defects:
 - 1. Repair surface defects that are smaller than 1 foot across in any direction and are less than 1/2 inch in depth.
 - 2. Repair by removing the honeycombed and other defective concrete down to sound concrete, cut or grind edges perpendicular to the surface and at least 3/8 inch deep, abrasive clean and thoroughly dampen the surface, work into the surface an epoxy bonding agent, and fill the hole with one part cement to one part fine sand. Match the finish on the adjacent concrete, and cure as specified.
- C. Severe Defects:
 - 1. Repair severe defects that are larger than surface defects but do not appear to affect the structural integrity of the structure.
 - 2. Repair by removing the honeycombed and other defective concrete down to sound concrete, make edges of the repair area perpendicular to the surface, as required above, sandblast the sound concrete surface, coat the exposed surfaces with epoxy bonding compound, place nonshrink grout, match the finish on the adjacent concrete, and cure as specified.
- D. Repair minor cracks in concrete structures that are wider than 1/10 inch by cutting out a square edged and uniformly aligned joint 3/8 inch wide by 3/4 inch deep, preparing exposed surfaces of the joint, priming the joint, and applying polyurethane joint sealant.
- E. If the cracks are major or affect the hydraulic capacity or function of the element, the Owner's Representative may require the concrete to be repaired by epoxy injection.
- F. Major Defects and Cracks: If the defects affect the structural integrity of the structure or if patching does not satisfactorily restore quality and appearance to the surface, the Owner's Representative may require the concrete to be removed and replaced, complete.

3.19 CONCRETE TESTS

- A. Concrete quality testing will be performed on the concrete by the Owner as follows:
 - 1. Frequency of Sampling: Cast four concrete test cylinders from each 50 cubic yards, or fraction thereof, of each class of concrete placed in any one day. Sampling and curing of cylinders shall conform to ASTM C31.

2. Strength Testing: Test cylinders in accordance with ASTM C39. Test one cylinder at 7 days for information; test two cylinders at 28 days for acceptance; and hold one cylinder for verification. Strength acceptance will be based on the average of the strengths of the two cylinders tested at 28 days. If one cylinder of a 28-day test manifests evidence of improper sampling, molding, or testing, other than low strength, discard it and use the fourth cylinder for the test result.
 3. Determine concrete slump by ASTM C143 with each strength test sampling and as required to establish consistency.
 4. Determine air content of the concrete using ASTM C231 to verify the percentage of air in the concrete immediately prior to depositing in forms.
 5. Concrete acceptance shall be based on the requirements of ACI 318.
- B. To facilitate concrete sampling and testing, the Contractor shall:
1. Furnish labor to assist the Owner in obtaining and handling samples at the project site.
 2. Advise the Owner in advance of concrete placing operations to allow for scheduling and completion of quality testing.
 3. Provide and maintain facilities for safe storage and proper curing of concrete test specimens on the project site, as required by ASTM C31.

END OF SECTION

SECTION 099000 PAINTING AND COATING

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials and application of painting and coating systems for the following surfaces:

- A. Buried metal.
- B. PVC
- C. Metal in contact with concrete.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. General Piping Requirements: 400500.
- B. Manual, Check and Process Valves: 400520.

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 013300.
- B. Submit manufacturer's data sheets showing the following information:
 - 1. Percent solids by volume.
 - 2. Minimum and maximum recommended dry-film thickness per coat for prime, intermediate, and finish coats.
 - 3. Recommended surface preparation.
 - 4. Recommended thinners.
 - 5. Statement verifying that the specified prime coat is recommended by the manufacturer for use with the specified intermediate and finish coats.
 - 6. Application instructions including recommended equipment and temperature limitations.
 - 7. Curing requirements and instructions.
- C. Submit color swatches.

- D. Submit certificate and supplier’s data sheets identifying the type and gradation of abrasives used for surface preparation. The certificate or data sheets shall specifically identify that the abrasives comply with federal and state of California regulations for materials to be used for abrasive blasting for surface preparation for paints and coatings.
- E. Submit material safety data sheets for each coating.

PART 2 - MATERIALS

2.01 PAINTING AND COATING SYSTEMS

The following index lists the various painting and coating systems by service and generic type:

PAINT COATINGS SYSTEM INDEX

No.	Title	Generic Coating	
Submerged Metal Coating Systems			
7.	Submerged Metal, Potable or Nonpotable Water	Epoxy	
Buried Metal Coating Systems			
21.	Buried Metal	Epoxy	
24.	Buried Metal	Corrosion-resisting grease	
Physical Properties		Test Method	Value
Shore D Hardness		D 2240	45 to 55
Tensile Strength (psi)		D 638	2,750 minimum
Elongation		D 638	425% minimum
Tear Strength		D 638	430 pli minimum
Water Vapor Transmission		E 96	0.02 perm
Abrasion Resistance 1,000g, 1,000 rev, H-18 wheel		D 4060	235 mg maximum
or CS-17 wheel, 1,000 grams, 1,000 cycles		D 4060	7 mg maximum
Coefficient of Expansion			4x10 ⁻⁵
Flash Point			200°F minimum

- a. Apply two finish coats to a total thickness of 60 mils. Minimum thickness of the entire system shall be 65 mils. Maximum thickness of individual topcoat shall not exceed 30 mils. Product: Envirolastic AR 425 as manufactured by Sherwin-Williams.

B. System No. 7--Submerged Metal, Potable or Nonpotable Water:

Type: Epoxy.

Service Conditions: For use with structures, valves, piping, or equipment immersed in potable or nonpotable water.

Surface Preparation: SSPC SP-10.

Coating System: Apply the manufacturer's recommended number of coats to attain the specified minimum dry-film coating thickness. Products: Devoe Bar-Rust 233H, Tnemec 100, Scotchkote 323, or equal; 16 mils total. Color of topcoat: white. Each coat shall be different color than the one preceding it.

2.02 BURIED METAL COATING SYSTEMS

A. System No. 21--Buried Metal:

Type: High solids epoxy or phenolic epoxy having a minimum volume solids of 80% (ASTM D2697).

Service Conditions: Buried metal, such as valves, flanges, bolts, nuts, structural steel, and fittings.

Surface Preparation: SSPC SP-10.

Coating System: Apply three or more coats of PPG Amerlock 400 or 400VOC, Tnemec 104HS or 80, Devoe Bar-Rust 233H, Carboline 890LT, Sherwin-Williams Tank Clad HS B62-80 series, or equal; 30 mils total. Maximum thickness of an individual coating shall not exceed the manufacturer's recommendation.

B. System No. 24--Buried Metal:

Type: Corrosion-resisting grease.

Service Conditions: Buried metal, such as bolts, bolt threads, tie rods, and nuts.

Surface Preparation: SSPC SP-3 or SP-6.

Coating: NO-OX-ID GG-2 as manufactured by Sanchem, Inc. Apply to a minimum thickness of 1/4 inch.

2.03 ABRASIVES FOR SURFACE PREPARATION

A. Abrasives used for preparation of ferrous (excluding stainless steel) surfaces shall be one of the following:

1. Recyclable fused copper slag.

2. 16 to 30 or 16 to 40 mesh silica-free sand or mineral grit.
 3. 20 to 40 mesh garnet.
 4. Crushed iron slag, 100% retained on No. 80 mesh.
 5. SAE Grade G-40 or G-50 iron or steel grit.
- B. In the above gradations, 100% of the material shall pass through the first stated sieve size and 100% shall be retained on the second stated sieve size.
- C. Abrasives shall meet all requirements of the California Air Resources Control Board for content and emissions.

PART 3 - EXECUTION

3.01 WEATHER CONDITIONS

- A. Do not paint in the rain, wind, snow, mist, and fog or when steel or metal surface temperatures are less than 5°F above the dew point.
- B. Do not apply paint when the relative humidity is above 85%.
- C. Do not paint when temperature of metal to be painted is above 120°F.
- D. Do not apply epoxy, acrylic latex, and polyurethane paints on an exterior or interior surface if air or surface temperature is below 60°F or expected to drop below 60°F in 24 hours.

3.02 SURFACE PREPARATION PROCEDURES

- A. Remove oil and grease from metal surfaces in accordance with SSPC SP-1. Use clean cloths and cleaning solvents and wipe dry with clean cloths. Do not leave a film or greasy residue on the cleaned surfaces before abrasive blasting.
- B. Remove weld spatter and weld slag from metal surfaces and grind smoothly rough welds, beads, peaked corners, and sharp edges including erection lugs in accordance with SSPC SP-2 and SSPC SP-3. Grind 0.020 inch (minimum) off the weld caps on pipe weld seams. Grind outside sharp corners, such as the outside edges of flanges, to a minimum radius of 1/4 inch.
- C. Do not abrasive blast or prepare more surface area in one day than can be coated in one day; prepare surfaces and apply coatings the same day. Remove sharp edges, burrs, and weld spatter.
- D. Do not abrasive blast PVC piping or equipment. Do not abrasive blast epoxy- or enamel-coated pipe that has already been factory coated, except to repair scratched or damaged coatings.

- E. For carbon steel, do not touch the surface between the time of abrasive blasting and the time the coating is applied. Apply coatings within two hours of blasting or before any rust bloom forms.
- F. Surface preparation shall conform with the SSPC specifications as follows:

Solvent Cleaning	SP-1
Hand Tool Cleaning	SP-2
Power Tool Cleaning	SP-3
White Metal Blast Cleaning	SP-5
Commercial Blast Cleaning	SP-6
Brush-Off Blast Cleaning	SP-7
Pickling	SP-8
Near-White Blast Cleaning	SP-10
Power Tool Cleaning to Bare Metal	SP-11
Surface Preparation and Cleaning of Steel and Other Hard Materials by High- and Ultrahigh-Pressure Water Jetting Prior to Recoating	SP-12
Surface Preparation of Concrete	SP-13

- G. Wherever the words “solvent cleaning,” “hand tool cleaning,” “wire brushing,” or “blast cleaning” or similar words are used in these specifications or in paint manufacturer’s specifications, they shall be understood to refer to the applicable SSPC (Society for Protective Coatings), surface preparation specifications listed above.
- H. For carbon steel surfaces, after abrasive blast cleaning, the height of the surface profile shall be 2 to 3 mils. Verify the surface profile by measuring with an impresser tape acceptable to the Owner’s Representative. Perform a minimum of one test per 100 square feet of surface area. Testing shall be witnessed by the Owner’s Representative. The impresser tape used in the test shall be permanently marked with the date, time, and locations where the test was made. Test results shall be promptly presented to the Owner’s Representative.
- I. Do not apply any part of a coating system before the Owner’s Representative has reviewed the surface preparation. If coating has been applied without this review, if directed by the Owner’s Representative, remove the applied coating by abrasive blasting and reapply the coat in accordance with this specification.

3.03 ABRASIVE BLAST CLEANING

- A. Use dry abrasive blast cleaning for metal surfaces. Do not use abrasives in automatic equipment that have become contaminated. When shop or field blast cleaning with handheld nozzles, do not recycle or reuse blast particles.

- B. After abrasive blast cleaning and prior to application of coating, dry clean surfaces to be coated by dusting, sweeping, and vacuuming to remove residue from blasting. Apply the specified primer or touch-up coating within the period of an eight-hour working day. Do not apply coating over damp or moist surfaces. Reclean prior to application of primer or touch-up coating any blast cleaned surface not coated within said eight-hour period.
- C. Keep the area of the work in a clean condition and do not permit blasting particles to accumulate and constitute a nuisance or hazard.
- D. During abrasive blast cleaning, prevent damage to adjacent coatings. Schedule blast cleaning and coating such that dust, dirt, blast particles, old coatings, rust, mill scale, etc., will not damage or fall upon wet or newly coated surfaces.

3.04 PROCEDURES FOR ITEMS HAVING SHOP-APPLIED PRIME COATS

- A. After application of primer to surfaces, allow coating to cure for a minimum of two hours before handling to minimize damage.
- B. When loading for shipment to the project site, use spacers and other protective devices to separate items to prevent damaging the shop-primed surfaces during transit and unloading. If wood spacers are used, remove wood splinters and particles from the shop-primed surfaces after separation. Use padded chains or ribbon binders to secure the loaded items and minimize damage to the shop-primed surfaces.
- C. Cover shop-primed items 100% with protective coverings or tarpaulins to prevent deposition of road salts, fuel residue, and other contaminants in transit.
- D. Handle shop-primed items with care during unloading, installation, and erection operations to minimize damage. Do not place or store shop-primed items on the ground or on top of other work unless ground or work is covered with a protective covering or tarpaulin. Place shop-primed items above the ground upon platforms, skids, or other supports.

3.05 FIELD TOUCH-UP OF SHOP-APPLIED PRIME COATS

- A. Remove oil and grease surface contaminants on metal surfaces in accordance with SSPC SP-1. Use clean rags wetted with a degreasing solution, rinse with clean water, and wipe dry.
- B. Remove dust, dirt, salts, moisture, chalking primers, or other surface contaminants that will affect the adhesion or durability of the coating system. Use a high-pressure water blaster or scrub surfaces with a broom or brush wetted with a solution of trisodium phosphate, detergent, and water. Rinse scrubbed surfaces with clean water.
- C. Remove loose or peeling primer and other surface contaminants not easily removed by the previous cleaning methods in accordance with SSPC SP-7. Take care that remaining primers are not damaged by the blast cleaning operation. Remaining primers shall be firmly bonded to the steel surfaces with blast cleaned edges feathered.

- D. Remove rust, scaling, or primer damaged by welding or during shipment, storage, and erection in accordance with SSPC SP-10. Take care that remaining primers are not damaged by the blast cleaning operation. Areas smaller than 1 square inch may be prepared per SSPC SP-11. Remaining primers shall be firmly bonded to the steel surfaces with cleaned edges feathered.
- E. Use repair procedures on damaged primer that protects adjacent primer. Blast cleaning may require the use of lower air pressure, smaller nozzles, and abrasive particle sizes, short blast nozzle distance from surface, shielding, and/or masking.
- F. After abrasive blast cleaning of damaged and defective areas, remove dust, blast particles, and other debris by dusting, sweeping, and vacuuming; then apply the specified touch-up coating.
- G. Surfaces that are shop primed shall receive a field touch-up of the same primer used in the original prime coat.

3.06 PAINTING SYSTEMS

- A. All materials of a specified painting system, including primer, intermediate, and finish coats, shall be produced by the same manufacturer. Thinners, cleaners, driers, and other additives shall be as recommended by the paint manufacturer for the particular coating system.
- B. Deliver paints to the jobsite in the original, unopened containers.

3.07 PAINT STORAGE AND MIXING

- A. Store and mix materials only in areas designated for that purpose by the Owner's Representative. The area shall be well-ventilated, with precautionary measures taken to prevent fire hazards. Post "No Smoking" signs. Storage and mixing areas shall be clean and free of rags, waste, and scrapings. Tightly close containers after each use. Store paint at an ambient temperature from 50°F to 100°F.
- B. Prepare multiple-component coatings using all of the contents of the container for each component as packaged by the paint manufacturer. Do not use partial batches. Do not use multiple-component coatings that have been mixed beyond their pot life. Provide small quantity kits for touch-up painting and for painting other small areas. Mix only the components specified and furnished by the paint manufacturer. Do not intermix additional components for reasons of color or otherwise, even within the same generic type of coating.

3.08 PROCEDURES FOR THE APPLICATION OF COATINGS

- A. Conform to the requirements of SSPC PA-1. Follow the recommendations of the coating manufacturer including the selection of spray equipment, brushes, rollers, cleaners, thinners, mixing, drying time, temperature and humidity of application, and safety precautions.

- B. Stir, strain, and keep coating materials at a uniform consistency during application. Power mix components. For multiple component materials, premix each component before combining. Apply each coating evenly, free of brush marks, sags, runs, and other evidence of poor workmanship. Use a different shade or tint on succeeding coating applications to indicate coverage where possible. Finished surfaces shall be free from defects or blemishes.
- C. Do not use thinners unless recommended by the coating manufacturer. If thinning is allowed, do not exceed the maximum allowable amount of thinner per gallon of coating material. Stir coating materials at all times when adding thinner. Do not flood the coating material surface with thinner prior to mixing. Do not reduce coating materials more than is absolutely necessary to obtain the proper application characteristics and to obtain the specified dry-film thicknesses.
- D. Remove dust, blast particles, and other debris from blast cleaned surfaces by dusting, sweeping, and vacuuming. Allow ventilator fans to clean airborne dust to provide good visibility of working area prior to coating applications. Remove dust from coated surfaces by dusting, sweeping, and vacuuming prior to applying succeeding coats.
- E. Apply coating systems to the specified minimum dry-film thicknesses as determined per SSPC PA-2.
- F. Apply primer immediately after blast cleaning and before any surface rusting occurs, or any dust, dirt, or any foreign matter has accumulated. Reclean surfaces by blast cleaning that have surface colored or become moist prior to coating application.
- G. Apply a brush coat of primer on welds, sharp edges, nuts, bolts, and irregular surfaces prior to the application of the primer and finish coat. Apply the brush coat prior to and in conjunction with the spray coat application. Apply the spray coat over the brush coat.
- H. Before applying subsequent coats, allow the primer and intermediate coats to dry for the minimum curing time recommended by the manufacturer. In no case shall the time between coats exceed the manufacturer's recommendation.
- I. Each coat shall cover the surface of the preceding coat completely, and there shall be a visually perceptible difference in applied shade or tint of colors.
- J. Applied coating systems shall be cured at 75°F or higher for 48 hours. If temperature is lower than 75°F, curing time shall be in accordance with printed recommendations of the manufacturer, unless otherwise allowed by the Owner's Representative.
- K. Assembled parts shall be disassembled sufficiently before painting or coating to ensure complete coverage by the required coating.

3.09 SURFACES NOT TO BE COATED

Do not paint the following surfaces unless otherwise noted in the drawings or in other specification sections. Protect during the painting of adjacent areas:

- A. Concrete walkways.
- B. Mortar-coated pipe and fittings.
- C. Metal letters.
- D. Glass.
- E. Fencing.
- F. Electrical fixtures except for factory coatings.
- G. Nameplates.
- H. Grease fittings.
- I. Brass and copper, submerged.
- J. Buried pipe, unless specifically required in the piping specifications.
- K. Fiberglass items, unless specifically required in the FRP specifications.
- L. Aluminum handrail, stairs, and grating.

3.10 PROTECTION OF SURFACES NOT TO BE PAINTED

Remove, mask, or otherwise protect hardware, lighting fixtures, switch plates, aluminum surfaces, machined surfaces, couplings, shafts, bearings, nameplates on machinery, and other surfaces not intended to be painted. Provide drop cloths to prevent paint materials from falling on or marring adjacent surfaces. Protect working parts of mechanical and electrical equipment from damage during surface preparation and painting process. Mask openings in motors to prevent paint and other materials from entering the motors.

3.11 SURFACES TO BE COATED

The exact coating to be applied in any location is not designated by the descriptive phrases in the coating system titles such as “corrosive environment,” “buried metal,” or “submerged metal.” Coat surfaces with the specific coating systems as described below:

Coat belowground piping, valves, and appurtenances. Coat valves as described in the various valve specifications. Aboveground valves, or valves in vaults and structures, shall match the color of the connecting piping.

- A. Coat buried flanges, nuts and bolts, valves, flexible pipe couplings, exposed rebar in thrust blocks, and valve boxes per System No. 21. Coat buried bolt threads, tie bolt threads, and nuts per System No. 24.

3.12 DRY-FILM THICKNESS TESTING

- A. Measure coating thickness specified for carbon steel surfaces with a magnetic-type dry-film thickness gauge in accordance with SSPC PA-2. Provide certification that the gauge has been calibrated by a certified laboratory within the past six months. Provide dry-film thickness gauge as manufactured by Mikrotest or Elcometer.
- B. Test the finish coat of metal surfaces (except zinc primer and galvanizing) for holidays and discontinuities with an electrical holiday detector, low-voltage, wet-sponge type. Provide measuring equipment. Provide certification that the gauge has been calibrated by a certified laboratory within the past six months. Provide detector as manufactured by Tinker and Razor or K-D Bird Dog.
- C. Check each coat for the correct dry-film thickness. Do not measure within eight hours after application of the coating.
- D. For metal surfaces, make five separate spot measurements (average of three readings) spaced evenly over each 100square feet of area (or fraction thereof) to be measured. Make three readings for each spot measurement of either the substrate or the paint. Move the probe or detector a distance of 1 to 3 inches for each new gauge reading. Discard any unusually high or low reading that cannot be repeated consistently. Take the average (mean) of the three readings as the spot measurement. The average of five spot measurements for each such 100-square-foot area shall not be less than the specified thickness. No single spot measurement in any 100-square-foot area shall be less than 80%, nor more than 120%, of the specified thickness. One of three readings which are averaged to produce each spot measurement may underrun by a greater amount as defined by SSPC PA-2.
- E. Perform tests in the presence of the Owner's Representative.

3.13 REPAIR OF IMPROPERLY COATED SURFACES

If the item has an improper finish color or insufficient film thickness, clean and topcoat the surface with the specified paint material to obtain the specified color and coverage. Sandblast or power-sand visible areas of chipped, peeled, or abraded paint, feathering the edges. Then prime and finish coat in accordance with the specifications. Work shall be free of runs, bridges, shiners, laps, or other imperfections.

3.14 CLEANING

- A. During the progress of the work, remove discarded materials, rubbish, cans, and rags at the end of each day's work.
- B. Thoroughly clean brushes and other application equipment at the end of each period of use and when changing to another paint or color.
- C. Upon completion of painting work, remove masking tape, tarps, and other protective materials, using care not to damage finished surfaces.

END OF SECTION

SECTION 312316 TRENCHING, BACKFILLING, AND COMPACTING

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, testing, and installation for pipeline trench excavation, backfilling, and compacting.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Existing Conditions: General Conditions.
- B. Protecting Existing Underground Utilities: 020120.
- C. General Concrete Construction: 030500.
- D. Asphalt Concrete Paving: 321216.
- E. Pressure Testing of Piping: 400515.

1.03 SUBMITTALS

- A. Submit six copies of a report from a testing laboratory verifying that material contains less than 0.25% asbestos by weight or volume and conforms to the specified gradations or characteristics for pea gravel, granular material, imported sand, rock refill for foundation stabilization, and water. Submit asbestos test results with the submittals for materials gradation. Material gradation reports without the accompanying asbestos test results will be rejected as incomplete.
- B. Submit method(s) of compaction including removal sequence of shoring where used.
- C. Submit mix design for controlled low-strength material (CLSM).

1.04 TESTING FOR COMPACTION

- A. The Owner will test for compaction as described below.
- B. Determine the density of soil in place by the sand cone method, ASTM D1556 or by nuclear methods, ASTM D6938. Compaction tests will be performed for each lift or layer.
- C. Determine laboratory moisture-density relations of soils by ASTM D1557. If nuclear methods are used for in-place density determination, the compaction test results for maximum dry density and optimum water content shall be adjusted in accordance with ASTM D4718. This will be required for determination of percent relative compaction and moisture variation from optimum.

- D. Determine the relative density of cohesionless soils by ASTM D4253 and D4254.
- E. Sample backfill materials per ASTM D75.
- F. "Relative compaction" is the ratio, expressed as a percentage, of the in-place dry density to the laboratory maximum dry density.
- G. Compaction shall be deemed to comply with the specifications when no test of any three consecutive tests falls below the specified relative compaction. The one test shall be no more than three percentage points below the specified compaction. The Contractor shall pay the costs for any retesting or additional testing of work not conforming to the specifications.
- H. Where compaction tests indicate a failure to meet the specified compaction, the Owner will take additional tests every 25 feet in each direction until the extent of the failing area is identified. Rework the entire failed area until the specified compaction has been achieved.

1.05 PAVEMENT ZONE

The pavement zone includes the asphalt concrete and aggregate base pavement section placed over the trench backfill.

1.06 STREET ZONE

The street zone is the top 30 inches of the trench immediately below the pavement zone in paved areas. Where the depth of cover over the pipe does not permit the full specified thickness of the street zone, construct a thinner street zone, extending from the top of the pipe zone to the bottom of the pavement zone.

1.07 TRENCH ZONE

The trench zone includes the portion of the trench from the top of the pipe zone to the bottom of the street zone in paved areas or to the existing surface in unpaved areas. If the resulting trench zone is less than 24 inches thick, the street zone shall extend to the top of the pipe zone and there shall be no separate trench zone.

1.08 PIPE ZONE

The pipe zone shall include the full width of trench from the bottom of the pipe or conduit to a horizontal level above the top of the pipe, as specified below. Where multiple pipes or conduits are placed in the same trench, the pipe zone shall extend from the bottom of the lowest pipe to a horizontal level above the top of the highest or topmost pipe. Thickness of pipe zone above the highest top of pipe shall be as follows unless otherwise shown in the drawings or otherwise described in the specifications for the particular type of pipe installed.

Pipe Diameter	Thickness of Pipe Zone Above Top of Pipe
6 inches through 8 inches	12 inches

1.09 PIPE BASE OR BEDDING

The pipe base or bedding shall be defined as a layer of material immediately below the bottom of the pipe or conduit and extending over the full trench width in which the pipe is bedded. Thickness of pipe base shall be as follows unless otherwise shown in the drawings or otherwise described in the specifications for the particular type of pipe installed. See plans for pipeline jurisdiction.

Location	Pipe Diameter	Thickness of Pipe Base
County of Ventura	6 inches through 8 inches	1/4" of Pipe OD, Min 3"
City of Oxnard	6 inches through 8 inches	6"

PART 2 - MATERIALS

2.01 MATERIAL FOR BACKFILL--STREET AND TRENCH ZONES, PIPE ZONE AND PIPE BASE

Pipeline Location	Backfill Material
County of Ventura	Refer to County of Ventura Standard Plate E-11
City of Oxnard	Refer to City of Oxnard Standard Plate 602

See plans for pipeline jurisdiction.

2.02 CONCRETE FOR THRUST BLOCKS

- A. Concrete for thrust blocks shall be Class C per Section 030500 unless otherwise shown in the drawings.
- B. Provide thrust blocks at fittings in pipe having rubber gasket bell-and-spigot or unrestrained mechanical joints. Do not provide thrust blocks for steel pipe having welded, flanged, or butt-strap joints unless detailed in the drawings or required in the detailed piping specification.
- C. See the details in the drawings for thrust block sizes. Install thrust blocks based on the test pressures given in the drawings.

2.03 WATER FOR COMPACTION

Water shall be free of organic materials injurious to the pipe coatings.

2.04 UNDERGROUND DETECTABLE METALLIC PIPE WARNING TAPE

See trench detail in drawings.

PART 3 - EXECUTION

3.01 SLOPING, SHEETING, SHORING, AND BRACING OF TRENCHES

Trenches shall have sloping, sheeting, shoring, and bracing conforming with 29CFR1926, Subpart P--Excavations, CAL/OSHA requirements, and the General Conditions.

3.02 SIDEWALK, PAVEMENT, AND CURB REMOVAL

Cut bituminous and concrete pavements regardless of the thickness and curbs and sidewalks prior to excavation of the trenches with a pavement saw or pavement cutter. Width of the pavement cut shall be at least equal to the required width of the trench at ground surface. Haul pavement and concrete materials from the site. Do not use for trench backfill.

3.03 TRENCH EXCAVATION

- A. Excavate the trench to the lines and grades shown in the drawings with allowance for pipe thickness, sheeting and shoring if used, and for pipe base or special bedding. If the trench is excavated below the required grade, refill any part of the trench excavated below the grade at no additional cost to the Owner with granular material. Place the refilling material over the full width of trench in compacted layers not exceeding 6 inches deep to the established grade with allowance for the pipe base or special bedding.
- B. Trench widths in the pipe zone shall be as shown in the drawings. If no details are shown, maximum width shall be 18 inches greater than the pipe outside diameter. Comply with 29CFR Part 1926 Subpart P--Excavations. Trench width at the top of the trench will not be limited except where width of excavation would undercut adjacent structures and footings. In such case, width of trench shall be such that there is at least 2 feet between the top edge of the trench and the structure or footing.
- C. Construct trenches in rock by removing rock to a minimum of 6 inches below bottom of pipe bedding and backfilling with imported sand.

3.04 TRENCH EXCAVATION IN BACKFILL AND EMBANKMENT AREAS

- A. Construct and compact the embankment to an elevation of 1-foot minimum over the top of the largest pipe or conduit to be installed.

- B. Excavate trench in the compacted backfill or embankment.

3.05 LOCATION OF EXCAVATED MATERIAL

- A. During trench excavation, place the excavated material only within the working area. Do not obstruct any roadways or streets. Do not place trench spoil over pipe, buried utilities, manholes, or vaults. Conform to federal, state, and local codes governing the safe loading of trenches with excavated material.
- B. Locate trench spoil piles at least 15 feet from the tops of the slopes of trenches. Do not operate cranes and other equipment on the same side of the trench as the spoil piles.

3.06 DEWATERING

Provide and maintain means and devices to remove and dispose of water entering the trench excavation during the time the trench is being prepared for the pipe laying, during the laying of the pipe, and until the backfill at the pipe zone has been completed. These provisions shall apply during both working and nonworking hours, including lunchtime, evenings, weekends, and holidays. Dispose of the water in a manner to prevent damage to adjacent property and in accordance with regulatory agency requirements. Do not drain trench water through the pipeline under construction.

3.07 INSTALLING BURIED PIPING

- A. Grade the bottom of the trench to the line and grade to which the pipe is to be laid, with allowance for pipe thickness. Remove hard spots that would prevent a uniform thickness of bedding. Place the specified thickness of pipe base material over the full width of trench. Grade the top of the pipe base ahead of the pipe laying to provide firm, continuous, uniform support along the full length of pipe, and compact to the relative compaction specified herein. Before laying each section of the pipe, check the grade and correct any irregularities.
- B. Excavate bell holes at each joint to permit proper assembly and inspection of the entire joint. Fill the area excavated for the joints with the bedding material specified or indicated in the drawings for use in the pipe zone. If no bedding material is specified or indicated, use imported sand.
- C. Inspect each pipe and fitting before lowering the buried pipe or fitting into the trench. Inspect the interior and exterior protective coatings. Patch damaged areas in the field with material recommended by the protective coating manufacturer. Clean ends of pipe thoroughly. Remove foreign matter and dirt from inside of pipe and keep clean during and after installation.
- D. Handle pipe in such a manner as to avoid damage to the pipe. Do not drop or dump pipe into trenches under any circumstances.

- E. After pipe has been bedded, place pipe zone material simultaneously on both sides of the pipe, in maximum 6-inch lifts, keeping the level of backfill the same on each side. If no pipe zone material is specified or indicated, use imported sand. Carefully place the material around the pipe so that the pipe barrel is completely supported, and no voids or uncompacted areas are left beneath the pipe. Use particular care in placing material on the underside of the pipe to prevent lateral movement during subsequent backfilling.
- F. Compact each lift to the relative compaction specified herein.
- G. Push the backfill material carefully onto the backfill previously placed in the pipe zone. Do not permit free-fall of the material until at least 2 feet of cover is provided over the top of the pipe. Do not drop sharp, heavy pieces of material directly onto the pipe or the tamped material around the pipe. Do not operate heavy equipment or a sheepsfoot wheel mounted on a backhoe over the pipe until at least 3 feet or one-half of the internal diameter, whichever is greater, of backfill has been placed and compacted over the pipe.
- H. When the pipe laying is not in progress, including the noon hours, close the open ends of pipe. Do not allow trench water, animals, or foreign material to enter the pipe.
- I. Keep the trench dry until the pipe laying and jointing are completed.

3.08 BACKFILL COMPACTION

- A. Unless otherwise shown in the drawings or otherwise described in the specifications for the particular type of pipe installed, relative compaction in pipe trenches shall be as follows:
 - 1. Pipe Zone: 90% relative compaction.
 - 2. Backfill in Trench Zone to Street Zone in Paved Areas: 90% relative compaction.
 - 3. Backfill in Street Zone in Paved Areas: 95% relative compaction.
 - 4. Refill for Overexcavation: 80% relative density.
- B. Compact trench backfill to the specified relative compaction. Compact by using mechanical compaction or hand tamping. Do not use high-impact hammer-type equipment except where the pipe manufacturer warrants in writing that such use will not damage the pipe.
- C. Compact material placed within 12 inches of the outer surface of the pipe by hand tamping only.
- D. Do not use any axle-driven or tractor-drawn compaction equipment within 5 feet of building walls, foundations, and other structures.

3.09 MATERIAL REPLACEMENT

Remove and replace any trenching and backfilling material that does not meet the specifications, at the Contractor's expense.

3.10 PLACING SAND-CEMENT SLURRY BACKFILL

Place sand-cement slurry backfill in a uniform manner that will prevent voids in or segregation of the material. Remove foreign material that falls into the excavation or trench. Do not commence backfilling over or place any material over the slurry cement backfill until at least four hours after placing the sand-cement slurry.

END OF SECTION

SECTION 321216 ASPHALT CONCRETE PAVING (CALIFORNIA)

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, testing, and installation of asphalt concrete pavement, aggregate base course, herbicide, prime coat, tack coat, seal coat, striping paint, and pavement markers.

1.02 RELATED WORK SPECIFIED ELSEWHERE

1.03 SUBMITTALS

- A. Submit six copies of a report from a testing laboratory verifying that aggregate material contains less than 1% asbestos by weight or volume and conforms to the specified gradations or characteristics.
- B. Submit manufacturer's certificate of compliance or product literature for the following materials:
 - 1. Aggregate: Gradation.
 - 2. Asphalt for Binder: Type and grade.
 - 3. Prime Coat: Type and grade of asphalt.
 - 4. Tack Coat: Type and grade of asphalt.
 - 5. Seal Coat: Type and grade of asphalt.
 - 6. Mixes: Conforms to job-mix formula.
 - 7. Herbicide.
 - 8. Paint for traffic and parking lot striping.
 - 9. Pavement markers.

1.04 TESTING FOR COMPACTION

- A. The Owner will test for compaction as described below.
- B. Determine the density of soil in place by the sand cone method, ASTM D1556 or by nuclear methods, ASTM D6938. Compaction tests will be performed for each lift or layer.

- C. Determine laboratory moisture-density relations of soils by ASTM D1557. If nuclear methods are used for in-place density determination, adjust the compaction test results for maximum dry density and optimum water content in accordance with ASTM D4718. This will be required for determination of percent relative compaction and moisture variation from optimum.
- D. Determine the relative density of cohesionless soils by ASTM D4253 and D4254.
- E. Sample backfill materials by ASTM D75.
- F. "Relative compaction" is the ratio, expressed as a percentage, of the in-place dry density to the laboratory maximum dry density.
- G. Compaction shall be deemed to comply with the specifications when no test of any three consecutive tests falls below the specified relative compaction. The Contractor shall pay the costs of any retesting of work not conforming to the specifications.

PART 2 - MATERIALS

2.01 ASPHALT CONCRETE PAVING

Asphalt concrete paving shall conform to III-C2-AR-4000 as listed in Section 400-4 of the Public Works Specifications, except that Performance Grade PG 64-10 asphalt per Section 92 in the Caltrans Standard Specifications.

2.02 AGGREGATE BASE COURSE

Aggregate base shall be crushed aggregate base as specified in Section 200-2 of the Public Works Specifications. Aggregate shall contain less than 1% asbestos by weight or volume.

2.03 PRIME COAT

All areas to be paved shall receive prime coat. Prime coat shall be medium curing (MC-70) in accordance with Section 203-2 of the Public Works Specifications.

2.04 TACK COAT

Tack coat shall conform with Section 302-5.4 of the Public Works Specifications and shall be either AR1000 paving asphalt or Grade SS-1h emulsified asphalt.

2.05 ASPHALT

Asphalt shall be Performance Grade PG 64-10 per Section 92 in the Caltrans Standard Specifications. Asphalt content in the pavement shall be 5.5% to 6.0%.

2.06 AGGREGATE FOR ASPHALT CONCRETE

Aggregate shall be in accordance with Section 400-1 of the Public Works Specifications. Aggregate shall contain less than 1% asbestos by weight or volume.

2.07 SEAL COAT

Seal coat shall be Type I emulsion-aggregate slurry per Section 203-5 of the Public Works Specifications.

2.08 PAINT FOR TRAFFIC AND PARKING LOT STRIPING AND MARKING

Paint shall match the existing and shall be thermoplastic paint per Section 210-1.6 of the Public Works Specifications. Traffic striping and marking shall comply with California Manual on Uniform Traffic Control Devices (CA MUTCD), latest edition and revisions.

2.09 PAVEMENT MARKERS

Markers shall be Type A per Section 214 of the Public Works Specifications.

PART 3 - EXECUTION

3.01 PAVEMENT REMOVAL

- A. Initially cut asphalt concrete pavement with pneumatic pavement cutter or other equipment at the limits of the excavation and remove the pavement. After backfilling the excavation, saw cut asphalt concrete pavement to a minimum depth of 2 inches at a point not less than 12 inches outside the limits of the excavation or the previous pavement cut, whichever is greater, and remove the additional pavement.
- B. Saw cut concrete pavement, including cross gutters, curbs and gutters, sidewalks, and driveways, to a minimum depth of 1 1/2 inches at a point 1 foot beyond the edge of the excavation and remove the pavement. The concrete pavement may initially be cut at the limits of the excavation by other methods prior to removal and the saw cut made after backfilling the excavation. If the saw cut falls within 3 feet of a concrete joint or pavement edge, remove the concrete to the joint or edge.
- C. Make arrangements for and dispose of the removed pavement.
- D. Final pavement saw cuts shall be straight along both sides of trenches, parallel to the pipeline alignment, and provide clean, solid, vertical faces free from loose material. Saw cut and remove damaged or disturbed adjoining pavement. Saw cuts shall be parallel to the pipeline alignment or the roadway centerline or perpendicular to same.

3.02 PAVEMENT REPLACEMENT

- A. Backfill, compaction, and the permanent paving, except for the final asphalt surface course, shall be complete at all times to a point not to exceed 400 feet behind any working heading. The final

asphalt surface course shall be 1 inch thicker than existing. Do not place final surface course until at least three months after traffic has been returned to that portion of the street. Place temporary striping after the base course of A.C. pavement has been completed in the same configuration as the existing permanent striping so that traffic can be returned to normal patterns. This striping shall be considered temporary and is the Contractor's responsibility to place and maintain.

3.03 INSTALLATION

Producing, hauling, placing, compacting, and finishing of asphalt concrete shall conform to Section 302-5 of the Public Works Specifications. Apply seal coat to all paving except open asphalt concrete.

3.04 CONNECTIONS WITH EXISTING PAVEMENT

Where new paving joins existing paving, chip the existing surfaces 12 inches back from the joint line so that there will be sufficient depth to provide a minimum of 1 inch of asphalt concrete. Dispose of waste material offsite. Tack chipped areas prior to placing the asphalt concrete. Meet lines shall be straight and the edges vertical. Paint the edges of meet line cuts with liquid asphalt or emulsified asphalt prior to placing asphalt concrete. After placing the asphalt concrete, seal the meet line by painting with a liquid asphalt or emulsified asphalt and then immediately cover with clean, dry sand.

3.05 PREPARATION OF SUBGRADE

- A. Excavate and shape subgrade to line, grade, and cross section shown in the drawings. The subgrade shall be considered to extend over the full width of the base course.
- B. Scarify and cultivate the top 6 inches of subgrade when the subgrade consists of dry soils which are impervious to the penetration of water, soils which contain excessive amounts of moisture which may result in unstable foundations, soils which are nonuniform in character which may result in nonuniform relative compactions and subsequent differential settlements of finished surfaces, or when pavement is to be placed directly on the roadbed material.
- C. After rough grading has been completed, when scarifying and cultivating are required, loosen the roadbed to a depth of at least 6 inches. Work the loosened material to a finely divided condition and remove rocks larger than 3 inches in diameter. Bring the moisture content to optimum by the addition of water, by the addition and blending of dry material, or by the drying of existing material. Compact the material to the specified relative compaction.
- D. Uniform pervious soils that allow the immediate penetration of water or uniform impervious soils which will allow the penetration of water to a depth of at least 6 inches after the addition of a suitable wetting agent will not require scarifying and cultivating. When scarifying and cultivating are not required, bring the moisture content of the top 6 inches of the subgrade material to optimum by the addition of water at the surface, and compact the material to the specified relative compaction.

- E. Remove soft material disclosed by the subgrade preparation, replace with backfill material , and recompact.
- F. Compact the top 6 inches of subgrade to 90% relative compaction.
- G. The finished subgrade shall be within a tolerance of ± 0.08 of a foot of the grade and cross-section shown and shall be smooth and free from irregularities and at the specified relative compaction.

3.06 PLACING AGGREGATE BASE COURSE

Place aggregate base course to a minimum thickness of 6 inches, unless shown otherwise in the drawings. Compact to 95% relative compaction. Install in accordance with Section 301-2 of the Public Works Specifications.

3.07 COMPACTION OF AGGREGATE BASE AND LEVELING COURSES

Compaction and rolling shall begin at the outer edges of the surfacing and continue toward the center. Apply water uniformly throughout the material to provide moisture for obtaining the specified compaction. Compact each layer to the specified relative compaction before placing the next layer.

3.08 PLACING PRIME COAT

Apply prime coat to the surface of the leveling course of aggregate base at the rate of 0.25 gallon per square yard per Section 302-5.3 of the Public Works Specifications.

3.09 PLACING TACK COAT

Apply tack coat on surfaces to receive finish pavement per Section 302-5.4 of the Public Works Specifications. Apply tack coat to metal or concrete surfaces that will be in contact with the asphalt concrete paving.

Place asphalt paving to a minimum thickness to match existing unless otherwise shown in the drawings. Install in accordance with Section 302-5 of the Public Works Specifications.

3.10 COMPACTION OF ASPHALT CONCRETE PAVING

Compact until roller marks are eliminated and a density of 92% minimum to 98% maximum has been attained per ASTM D2041.

3.11 APPLYING SEAL COAT

Apply fog-type seal coat at the rate of 0.05 to 0.10 gallon per square yard slurry seal coat at the rate of 10 to 15 pounds of dry aggregate per square yard.

3.12 SURFACE TOLERANCE

- A. Finished grade shall not deviate more than 0.02 foot in elevation from the grade indicated in the drawings. Slopes shall not vary more than 1/4 inch in 10 feet from the slopes shown in the drawings.
- B. After paving has been installed and compacted, spray water over the entire paved area. Correct any areas where water collects and does not drain away.

3.13 APPLYING PAINT FOR TRAFFIC STRIPING AND MARKING

Apply in accordance with Section 310-5.6 of the Public Works Specifications.

3.14 INSTALLING PAVEMENT MARKERS

- A. After the application of pavement striping and markings, install markers on new paved surfaces and existing surfaces that were damaged by the construction. Install in accordance with Section 312 of the Public Works Specifications.
- B. Use markers that are reflective and match the color or combination of colors of existing markers within the area of work. Install markers along the alignment and match spacing of the existing.

3.15 INSTALLING FIRE HYDRANT MARKERS

Install a blue reflective marker opposite each fire hydrant. Place the marker on the pavement and locate 6 inches off the centerline of the traffic striping or reflective pavement markers towards the hydrant. Install markers in accordance with Section 312 of the Public Works Specifications. Where existing fire hydrants have been relocated or removed from service, dislodge the existing blue marker from the pavement and dispose.

END OF SECTION

SECTION 331300 DISINFECTION OF PIPING

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials and procedures for disinfection of water mains by the continuous feed method and by the slug method. Disinfect piping in accordance with AWWA C651, except as modified below.

1.02 RELATED WORK DESCRIBED ELSEWHERE

Pressure Testing of Piping: 400515.

1.03 JOB CONDITIONS

- A. Discharge of chlorinated water into watercourses or surface waters is regulated by the National Pollutant Discharge Elimination System (NPDES). Disposal of the chlorinated disinfection water and the flushing water is the Contractor's responsibility. Dechlorinate the disinfection water such that the chlorine residual complies with California Regional Water Quality Control Board requirements.
- B. Use potable water for chlorination.
- C. Submit request for use of water from waterlines of Owner 48 hours in advance.

PART 2 - MATERIALS

2.01 LIQUID CHLORINE

Inject with a solution feed chlorinator and a water booster pump. Follow the instructions of the chlorinator manufacturer.

2.02 CALCIUM HYPOCHLORITE (DRY)

Dissolve in water to a known concentration in a drum and pump into the pipeline at a metered rate.

2.03 SODIUM HYPOCHLORITE (SOLUTION)

Further dilute in water to desired concentration and pump into the pipeline at a metered rate.

2.04 CHLORINE RESIDUAL TEST KIT

For measuring chlorine concentration, supply and use a medium range, drop count, DPD drop dilution method kit per AWWA C651, Appendix A.1. Maintain kits in good working order available for immediate test of residuals at point of sampling.

2.05 DECHLORINATION MATERIALS

If dechlorination is required and the Contractor elects to use a means of chemical dechlorination, use one of the chemicals described in AWWA C655.

PART 3 - EXECUTION

3.01 CONTINUOUS FEED METHOD FOR PIPELINES

Introduce potable water into the pipeline at a constant measured rate. Feed the chlorine solution into the same water at a measured rate. Proportion the two rates so that the chlorine concentration in the pipeline is maintained at a minimum concentration of 25 mg/L. Check the concentration at points downstream during the filling to ascertain that sufficient chlorine is being added.

3.02 SLUG METHOD FOR PIPELINES

Introduce the water in the pipeline at a constant measured rate. At the start of the test section, feed the chlorine solution into the pipeline at a measured rate so that the chlorine concentration created in the pipeline is 100 mg/L. Feed the chlorine for a sufficient period to develop a solid column or "slug" of chlorinated water that will, as it passes along the line, expose all interior surfaces to a concentration of at least 100 mg/L for at least three hours.

3.03 DISINFECTION OF VALVES, BLIND FLANGES, AND APPURTENANCES

During the period that the chlorine solution or slug is in the section of pipeline, open and close valves to obtain a chlorine residual at hydrants and other pipeline appurtenances. Swab exposed faces of valves and blind flanges prior to bolting flanges in place with a 1% sodium hypochlorite solution.

3.04 DISINFECTION OF CONNECTIONS TO EXISTING PIPELINES

Disinfect isolation valves, pipe, and appurtenances per AWWA C651, Section 4.7. Flush with potable water until discolored water, mud, and debris are eliminated. Swab interior of pipe and fittings with a 1% sodium hypochlorite solution. After disinfection, flush with potable water again until water is free of chlorine odor.

3.05 CONFIRMATION OF RESIDUAL IN PIPING

- A. After the chlorine solution applied by the continuous feed method has been retained in the pipeline for 24 hours, confirm that a chlorine residual of 25 mg/L minimum exists along the pipeline by sampling at air valves and other points of access, such as tapping valves.
- B. With the slug method, confirm by sampling as the slug passes each access point and as it leaves the pipeline that the chlorine concentration in the slug is at least 50 mg/L.

3.06 PIPELINE FLUSHING

After confirming the chlorine residual, flush the excess chlorine solution from the pipeline until the chlorine concentration in the water leaving the pipe is within 0.5 mg/L of the replacement water.

3.07 SAMPLING AND BACTERIOLOGIC TESTING

- A. There shall be no water in trenches up to the connection for sampling. The sampling piping shall be clean, disinfected, and flushed prior to sampling.
- B. Collect two sets of samples per AWWA C651, Section 5.1, deliver to a certified laboratory within six hours of obtaining the samples, and obtain a bacteriologic quality test to demonstrate the absence of coliform organisms in each separate section of the pipeline after chlorination and refilling. Collect at least one set of samples from every 1,200 feet of the new water main and line stopping insertion point, plus one set from the end of the pipeline and at least one set from each branch. At each connection to an existing pipeline, take two additional samples. Use pipeline blowoffs for obtaining samples.

3.08 PIPING TEST FACILITY REMOVAL

After satisfactory disinfection, disinfect and replace air valves, restore the pipe coating, and complete the pipeline where temporary disinfection or test facilities were installed.

3.09 PIPING TO BE DISINFECTED

- A. Disinfect all potable water piping

3.10 REPETITION OF PROCEDURE

If the initial chlorination fails to produce required residuals and bacteriologic tests, repeat the chlorination and retesting until satisfactory results are obtained.

3.11 DECHLORINATION

Dechlorinate per AWWA C655. Perform testing of residual chlorine before discharge of water into the environment.

END OF SECTION

SECTION 400500 GENERAL PIPING REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

This section describes the general requirements for selecting piping materials; selecting the associated bolts, nuts, and gaskets for flanges for the various piping services in the project; and miscellaneous piping items.

1.02 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions Section 013300.
- B. Submit affidavit of compliance with referenced standards (e.g., AWWA, ANSI, ASTM, etc.).
- C. Submit certified copies of mill test reports for bolts and nuts, including coatings if specified. Provide recertification by an independent domestic testing laboratory for materials originating outside of the United States.
- D. Submit manufacturer's data sheet for gaskets supplied showing dimensions and bolting recommendations.

1.03 DEFINITIONS OF BURIED AND EXPOSED PIPING

- A. Buried piping is piping buried in the soil, commencing at the wall or beneath the slab of a structure. Where a coating is specified, provide the coating up to the structure wall. Unless detailed otherwise, coating shall penetrate wall no less than 1 inch. Piping encased in concrete is considered to be buried. Do not coat encased pipe.
- B. Exposed piping is piping in any of the following conditions or locations:
 1. Above ground.
 2. Inside buildings, vaults, or other structures.
 3. In underground concrete trenches or galleries.

1.04 PIPING SERVICE

Piping service is determined by the fluid conveyed, regardless of the pipe designation. For example, pipes designated "Air Low Pressure," "Air High Pressure," and "Air" are all considered to be in air service.

1.05 DEFAULT PIPING MATERIALS

Use PVC for all piping.

PART 2 - MATERIALS

2.01 MATERIALS SELECTION AND ALTERNATIVE MATERIALS

- A. The drawings may show alternative piping materials for certain services. In such cases, the same pipe material shall be used for all pipe sizes in all locations for the given piping service. Do not intermix piping materials.

2.02 THREAD FORMING FOR STAINLESS STEEL BOLTS

Form threads by means of rolling, not cutting or grinding.

2.03 BOLTS AND NUTS FOR FLANGES FOR COPPER TUBING

- A. Connect to flanged valves and fittings with bronze flanges conforming to ASME B16.24, Class 125 or Class 150, to match the connecting flange. Use solder end companion flanges.
- B. When both aboveground adjoining flanges are bronze, use bronze bolts and nuts. Bolts shall conform to ASTM F468, Grade C65100 or C63000. Nuts shall conform to ASTM F467, Grade C65100 or C63000.
- C. When only one of the aboveground adjoining flanges is bronze, use Type 316 stainless steel bolts and nuts conforming to ASTM A193 (Grade B8M) for bolts and ASTM A194 (Grade 8M) for nuts.
- D. Connect to buried ferrous flanges with flange insulation kits. Bolts used in flange insulation kits shall conform to ASTM A193, Grade B7. Nuts shall comply with ASTM A194, Grade 2H. If the adjoining buried flange is bronze, use bronze bolts and nuts as described above, without a flange insulation kit.
- E. Provide washers for each nut. Washers shall be of the same material as the nuts.

2.04 LUBRICANT FOR STAINLESS STEEL BOLTS AND NUTS

Lubricant shall be chloride free and shall be RAMCO TG-50, Anti-Seize by RAMCO, Specialty Lubricants Corporation Husky™ Lube O'Seal, or equal.

- A. Gaskets for Class 300 flanges with ring-joint facing shall conform to ASME B16.20, Type 316 stainless steel.

2.05 GASKETS FOR FLANGES FOR DUCTILE-IRON PIPING AND FITTINGS IN WATER SERVICE

Gaskets shall be full face, 1/8-inch thick, cloth-inserted rubber, with a Shore "A" hardness of 75 to 85. Gaskets shall be suitable for a water pressure of 200 psi at a temperature of 180°F. Gaskets shall have "nominal" pipe size inside diameters not the inside diameters per ASME B16.21. Products: Garlock Style 19 or equal.

2.06 GASKETS FOR FLANGES FOR COPPER TUBING AND PIPING FOR WATER SERVICE

Gaskets shall be full face, 1/8-inch thick, and shall be one of the following nonasbestos materials:

- A. Cloth-inserted rubber with a Shore "A" hardness of 75 to 85. Gaskets shall be suitable for a pressure of 200 psi at a temperature of 180°F. Products: Garlock Style 19 or equal.

PART 3 - EXECUTION

3.01 RAISED FACE AND FLAT FACE FLANGES

Where a raised face flange connects to a flat-faced flange, remove the raised face of the flange.

3.02 INSTALLING FLANGED PIPING

- A. Set pipe with the flange bolt holes straddling the pipe horizontal and vertical centerline. Install pipe without springing, forcing, or stressing the pipe or any adjacent connecting valves or equipment. Before bolting up, align flange faces to the design plane within 1/16 inch per foot measured across any diameter. Align flange bolt holes within 1/8-inch maximum offset.
- B. Inspect each gasket to verify that it is the correct size, material, and type for the specified service and that it is clean and undamaged. Examine bolts or studs, nuts, and washers for defects such as burrs or cracks and rust and replace as needed.
- C. Clean flanges by wire brushing before installing flanged fittings. Clean flange bolts and nuts by wire brushing, lubricate carbon steel bolts with oil and graphite, and tighten nuts uniformly and progressively.
- D. Bolt lengths shall extend completely through their nuts. Any that fail to do so shall be considered acceptably engaged if the lack of complete engagement is not more than one thread.
- E. Do not use more than one gasket between contact faces in assembling a flanged joint.

- F. Tighten the bolts to the manufacturer's specifications, using the recommended cross bolt pattern in multiple steps of increasing torque, until the final torque requirements are achieved. Do not over torque.
- G. If flanges leak under pressure testing, loosen or remove the nuts and bolts, reset or replace the gasket, reinstall or retighten the bolts and nuts, and retest the joints. Joints shall be watertight.

3.03 INSTALLING BLIND FLANGES

- A. At outlets not indicated to be connected to valves or to other pipes and to complete the installed pipeline hydrostatic test, provide blind flanges with bolts, nuts, and gaskets.
- B. Coat the inside face of blind flanges per Section 099000, System No. 7.

3.04 INSTALLATION OF STAINLESS-STEEL BOLTS AND NUTS

Prior to assembly, coat threaded portions of stainless-steel bolts and nuts with lubricant.

END OF SECTION

SECTION 400515 PRESSURE TESTING OF PIPING

PART 1 - GENERAL

1.01 DESCRIPTION

This section specifies the cleaning and hydrostatic and leakage testing of pressure piping for water distribution and transmission mains.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Disinfection of Piping: 331300.
- B. Manual, Check, and Process Valves: 400520.

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 013300.
- B. Submit test bulkhead locations and design calculations, pipe attachment details, and methods to prevent excessive pipe wall stresses.
- C. Submit six copies of the test records to the Owner's Representative upon completion of the testing.

1.04 TEST PRESSURES

Test pressures for the various services and types of piping are shown in the subsection on "Test Pressure and Test Fluids" in Part 3.

1.05 TESTING RECORDS

Provide records of each piping installation during the testing. These records shall include:

- A. Date and times of test.
- B. Identification of pipeline, or pipeline section tested or retested.
- C. Identification of pipeline material.
- D. Identification of pipe specification.
- E. Test fluid.
- F. Test pressure at low point in pipeline or pipeline section.

- G. Remarks: Leaks identified (type and location), types of repairs, or corrections made.
- H. Certification by Contractor that the leakage rate measured conformed to the specifications.

PART 2 - MATERIALS

2.01 MANUAL AIR-RELEASE VALVES FOR BURIED PIPING

Provide temporary manual air-release valves for pipeline test. Construct the pipe outlet in the same manner as for a permanent air valve and after use, seal with a blind flange, pipe cap, or plug and coat the same as the adjacent pipe.

2.02 TESTING FLUID

- A. Testing fluid shall be water
- B. For potable water pipelines, obtain and use only potable water for hydrostatic testing.
- C. Submit request for use of water from waterlines of Owner 48 hours in advance.
- D. The Contractor may obtain the water from the Owner at the Owner's rate of charges.

2.03 TESTING EQUIPMENT

Provide calibrated pressure gauges, pipes, bulkheads, pumps, chart recorder, and meters to perform the hydrostatic testing.

PART 3 - EXECUTION

3.01 TESTING PREPARATION

- A. Pipes shall be in place, backfilled, and anchored before commencing pressure testing.
- B. Conduct pressure tests on exposed and aboveground piping after the piping has been installed and attached to the pipe supports, hangers, anchors, expansion joints, valves, and meters.
- C. For buried piping, the pipe may be partially backfilled and the joints left exposed for inspection during an initial leakage test. Perform the final pressure test, however, after completely backfilling and compacting the trench.
- D. Provide any temporary piping needed to carry the test fluid to the piping that is to be tested. After the test has been completed and demonstrated to comply with the specifications, disconnect and remove temporary piping. Do not remove exposed vent and drain valves at the high and low points in the tested piping; remove any temporary

buried valves and cap the associated outlets. Plug taps or connections to the existing piping from which the test fluid was obtained.

- E. Provide temporary drain lines needed to carry testing fluid away from the pipe being tested. Remove such temporary drain lines after completing the pressure testing. Pipes shall remain full after testing.
- F. Prior to starting the test, the Contractor shall notify the Owner's Representative.

3.02 CLEANING

- A. Before conducting hydrostatic tests, flush pipes with water to remove dirt and debris. Maintain a flushing velocity of at least 3 fps for water testing. Flush pipes for time period as given by the formula

$$T = \frac{2L}{3}$$

in which:

T = flushing time (seconds)

L = pipe length (feet)

3.03 TESTING AND DISINFECTION SEQUENCE FOR POTABLE WATER PIPING

- A. Perform required disinfection after hydrostatic testing, except when pipeline being tested is connected to a potable waterline.
- B. Locate and install test bulkheads, valves, connections to existing pipelines, and other appurtenances in a manner to provide an air gap separation between existing potable water pipelines and the pipeline being tested. Disinfect water and pipeline being tested before hydrostatic testing when connected to a potable waterline.

3.04 INITIAL PIPELINE FILLING FOR HYDROSTATIC TESTING

Maximum rate of filling shall not cause water velocity in pipeline to exceed 1 fps. Filling may be facilitated by removing automatic air valves and releasing air manually.

3.05 TESTING NEW PIPE WHICH CONNECTS TO EXISTING PIPE

Prior to testing new pipelines that are to be connected to existing pipelines, isolate the new line from the existing line by means of test bulkheads, spectacle flanges, or blind flanges. After successfully testing the new line, remove test bulkheads or flanges and connect to the existing piping.

3.06 HYDROSTATIC TESTING OF BURIED PIPING

- A. Where any section of the piping contains concrete thrust blocks or encasement, do not perform the pressure test until at least 10 days after placing the concrete. When testing mortar-lined or PVC piping, fill the pipe to be tested with water and allow it to soak for at least 48 hours to absorb water before conducting the pressure test.
- B. Apply and maintain the test pressure by means of a positive displacement hydraulic force pump.
- C. Maintain the test pressure for the following duration by restoring it whenever it falls an amount of 5 psi:

Pipe Diameter (inches)	Hours
18 and less	4

- D. After the test pressure is reached, use a meter to measure the additional water added to maintain the pressure. This amount of water is the loss due to leakage in the piping system. The allowable leakage volume is defined by the formula

$$L = \frac{HND(P)^{1/2}}{C}$$

in which:

- L = allowable leakage (gallons)
- H = specified test period (hours)
- N = number of rubber-gasketed joints in the pipe tested
- D = diameter of the pipe (inches)
- P = specified test pressure (psig)
- C = 7,400

- E. The allowable leakage for buried piping having threaded, brazed, or welded (including solvent welded) joints shall be zero.
- F. Repair and retest any pipes showing leakage rates greater than that allowed in the above criteria.

3.07 REPETITION OF TEST

If the actual leakage exceeds the allowable, locate and correct the faulty work and repeat the test. Restore the work and all damage resulting from the leak and its repair. Eliminate visible leakage.

3.08 BULKHEAD AND TEST FACILITY REMOVAL

After a satisfactory test, remove the testing fluid, remove test bulkheads and other test facilities, and restore the pipe coatings.

3.09 TEST PRESSURE AND TEST FLUIDS

A. Testing pressures (psig) shall be as listed below:

Pipe Service	Pipe Material	Testing Fluid	Test Pressure
Water	PVC C900	Potable Water	150

END OF SECTION

SECTION 400520 MANUAL, CHECK, AND PROCESS VALVES

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, testing, and installation of manually operated valves, check valves, and process valves including gate, knife gate, butterfly, ball, hose bibbs, globe, angle, needle, eccentric plug, lubricated plug, nonlubricated plug, diaphragm, check, pinch, solenoid, pet cocks, mud valves, vacuum breakers, deluge valves, flap valves, balancing valves, gauge valves, instrument valve manifolds, and telescoping valves.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A.
- B. Painting and Coating: 099000.
- C. General Piping Requirements: 400500.
- D. Pressure Testing of Piping: 400515.

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 013300.
- B. Submit manufacturer's catalog data and detail construction sheets showing all valve parts. Describe each part by material of construction, specification (such as AISI, ASTM, SAE, or CDA), and grade or type.
- C. Show valve dimensions including laying lengths. Show port sizes. Show dimensions and orientation of valve actuators, as installed on the valves. Show location of internal stops for gear actuators. State differential pressure and fluid velocity used to size actuators. For worm-gear actuators, state the radius of the gear sector in contact with the worm and state the handwheel diameter.
- D. Show valve linings and coatings. Submit manufacturer's catalog data and descriptive literature.
- E. Submit six copies of a report verifying that the valve interior linings and exterior coatings have been tested for holidays and lining thickness. Describe test results and repair procedures for each valve. Do not ship valves to project site until the reports have been returned by the Owner's Representative and marked "Resubmittal not required."

- F. For butterfly and eccentric plug valves, show the clear diameter or size of the port. Show the actual area of the port as a percentage of the area as calculated for the nominal valve size.

PART 2 - MATERIALS

2.01 GENERAL

- A. Install valves complete with operating handwheels or levers, chainwheels, extension stems, floor stands, gear actuators, operating nuts, chains, and wrenches required for operation.
- B. Valves shall have the name of the manufacturer and the size of the valve cast or molded onto the valve body or bonnet or shown on a permanently attached plate.
- C. For buried locations, valves with mechanical joint ends may be substituted for the flanged ends specified provided the mechanical joint ends are compatible with the pipe ends.

2.02 VALVE ACTUATORS AND VALVE BOXES

- A. Provide 2-inch AWWA operating nuts for buried and submerged valves.
- B. Design gear actuators assuming that the differential pressure across the gate, or disc is equal to the test pressure of the connecting piping unless otherwise required in the detailed valve specifications. Size actuators using a minimum safety factor of 1.5 for valves in open/close service and 2.0 in modulating service.
- C. For buried or submerged service, provide watertight shaft seals and watertight valve and actuator cover gaskets. Provide totally enclosed actuators designed for buried or submerged service.
- D. Valve actuators shall open by turning counterclockwise.
- E. Valve boxes shall be two-piece sliding type, cast iron, with extension shafts per CIBCSO Plate W-4.

2.03 BOLTS AND NUTS FOR FLANGED VALVES

Bolts and nuts for flanged valves shall be as described in Section 400500.

2.04 GASKETS FOR FLANGES

Gaskets for flanged end valves shall be as described in Section 400500.

2.05 PAINTING AND COATING

- A. Coat buried metal valves at the place of manufacture per Section 099000, System No. 21.
- B. Line the interior metal parts of metal valves 4 inches and larger, excluding seating areas and bronze and stainless steel pieces, per Section 099000, System No. 7. Apply lining at the place of manufacture.
- C. Test the valve interior linings and exterior coatings at the factory with a low-voltage (22.5 to 80 volts, with approximately 80,000-ohm resistance) holiday detector, using a sponge saturated with a 0.5% sodium chloride solution. The lining shall be holiday free.
- D. Measure the thickness of the valve interior linings per Section 099000. Repair areas having insufficient film thickness per Section 099000.

2.06 PACKING, O-RINGS, AND GASKETS

Unless otherwise stated in the detailed valve specifications, packing, O-rings, and gaskets shall be one of the following nonasbestos materials:

- A. Teflon.
- B. Kevlar aramid fiber.
- C. Acrylic or aramid fiber bound by nitrile. Products: Garlock "Bluegard," Klinger "Klingersil C4400," or equal.
- D. Buna-N (nitrile).

2.07 RUBBER SEATS

Rubber seats shall be made of a rubber compound that is resistant to free chlorine and monochloramine concentrations up to 10 mg/L in the fluid conveyed.

2.08 VALVES

- A. Gate Valves:
 - 1. Type 175—Buried Cast-Iron Gate Valves 4 Inches and Larger for Fire Protection Service:

Gate valves of sizes 4 through 12 inches for fire protection service shall be UL listed, FM approved, nonrising stem for use with indicator posts, solid wedge disc, bolted bonnet, with indicator post flange. Valves shall be rated for at least 175 psi, nonshock cold water. Ends shall be flanged, Class 125, ASME B16.1 or mechanical joint. Materials of construction shall be as follows:

Component	Material	Specification
Body, bonnet, disc, and indicator post flange	Cast iron	ASTM A126, Class B
Disc bushing, disc ring, backseat bushing, and seat ring	Bronze	ASTM B62 or ASTM B584 (Alloy C83600)
Stem	Copper silicon or brass	ASTM B21 or ASTM B584 or ASTM B763 (Alloys C87600, C99500,)

Valves shall be Stockham G-632 or G-634, Nibco F-609, Clow F-6100 or F-6102, or equal.

2. Type 180—Cast-Iron Resilient Wedge Gate Valves 3 Through 20 Inches (AWWA C509):

Valves shall comply with AWWA C509 and the following. Valves shall be of the bolted-bonnet type with nonrising stems. Valve stems shall be Type 304 or 316 stainless steel or cast, forged, or rolled bronze. Provide operating nut for buried valves. Provide handwheel for exposed valves. Stem nuts shall be made of solid bronze. Bronze for internal working parts, including stems, shall not contain more than 2% aluminum or more than 7% zinc. Bronze shall conform to ASTM B62 or ASTM B584 (Alloy C83600), except the stem bronze shall have a minimum tensile strength of 60,000 psi, a minimum yield strength of 30,000 psi, and a minimum of 10% elongation in 2 inches (ASTM B584 or B763, Alloy C87600 or C99500). Body bolts shall be Type 316 stainless steel. End connections for exposed valves shall be flanged. End connections for buried valves shall be mechanical joint type.

Provide reduction thrust bearings above the stem collar. Stuffing boxes shall be O-ring seal type with two rings located in stem above thrust collar. Each valve shall have a smooth unobstructed waterway free from any sediment pockets.

Valves shall be lined and coated at the place of manufacture with either fusion-bonded epoxy or heat-cured liquid epoxy. Minimum epoxy thickness shall be 8 mils.

Manufacturers: Clow R/W, AVK, American Flow Control CRS-80, Waterous Series 500, Kennedy Ken-Seal, or equal.

3. Type 309—Bronze Angle Meter Stops for Water Service:

Angle meter stops shall be bronze. Components in contact with water shall be bronze (ASTM B584, Alloys C89833 or C89836). Components not in contact with water shall be bronze (ASTM B62 or ASTM B584, Alloys C83600, C89833, or C89836). Bronze alloys having a maximum lead content in accordance with NSF/ANSI 372, Bronze alloys having a maximum lead content of 0.25%, a maximum zinc content of

7.0%, and a minimum copper content of 80% may be substituted for the bronze alloys specified above. Minimum pressure rating shall be 150 psi.

For 1-inch service and smaller, use Ford Ball Meter Valve No. BA13-444W, James Jones J-1966W, or equal. Provide valve with inlet iron pipe threads and meter saddle nut outlet.

For larger than 1- through 2-inch service, use Ford Ball Meter Valve No. FV63-444W or Jones J4202 or equal. Provide valve with inlet iron pipe threads and meter flange outlet.

PART 3 - EXECUTION

3.01 VALVE SHIPMENT AND STORAGE

- A. Provide flanged openings with metal closures at least 3/16-inch thick, with elastomer gaskets and at least four full-diameter bolts. Install closures at the place of valve manufacture prior to shipping. For studded openings, use all the nuts needed for the intended service to secure closures. Alternatively, ship flanged valves 3 inches and smaller in separate sealed cartons or boxes.
- B. Provide threaded openings with steel caps or solid-shank steel plugs. Do not use nonmetallic (such as plastic) plugs or caps. Install caps or plugs at the place of valve manufacture prior to shipping. Alternatively, ship valves having threaded openings or end connections in separate sealed cartons or boxes.
- C. Store resilient seated valves in sealed polyethylene plastic enclosures with a minimum of one package of desiccant inside. Store resilient seated valves in the open or unseated position. Valves with adjustable packing glands shall have the packing gland loosened prior to storage. Inspect valves at least once per week, replace desiccant if required and repair damaged storage enclosures. Do not store valves with resilient seats near electric motors or other electrical equipment.
- D. Inspect valves on receipt for damage in shipment and conformance with quantity and description on the shipping notice and order. Unload valves carefully to the ground without dropping. Use forklifts or slings under skids. Do not lift valves with slings or chain around operating shaft, actuator, or through waterway. Lift valves with eyebolts or rods through flange holes or chain hooks at ends of valve parts.
- E. Protect the valve and actuators from weather and the accumulation of dirt, rocks, and debris. Do not expose rubber seats to sunlight or ozone for more than 30 days. Also, see the manufacturer's specific storage instructions.
- F. Make sure flange faces, joint sealing surfaces, body seats, and disc seats are clean. Check the bolting attaching the actuator to the valve for loosening in transit and

handling. If loose, tighten firmly. Open and close valves having manual or power actuators to make sure the valve operates properly and that stops or limit switches are correctly set so that the valve seats fully. Close valve before installing.

3.02 FACTORY PRESSURE TESTING

- A. Hydrostatically test the valve pressure-containing parts at the factory per the valve specification or per the referenced standard. If no testing requirement is otherwise specified or described in the referenced standards, then test with water for 30 minutes minimum at a pressure of 1.5 times the rated pressure but not less than 20 psig. Test shall show zero leakage. If leaks are observed, repair the valve and retest. If dismantling is necessary to correct valve deficiencies, then provide an additional operational test and verify that the valve components function.
- B. The chloride content of liquids used to test austenitic stainless steel materials shall not exceed 50 ppm. To prevent deposition of chlorides as a result of evaporative drying, remove residual liquid from tested parts at the conclusion of the test.

3.03 INSTALLING VALVES—GENERAL

- A. Remove covers over flanged openings and plugs from threaded openings, after valves have been placed at the point to which the valves will be connected to the adjacent piping. Do not remove valves from storage cartons or boxes until they are ready to be installed.
- B. Handle valves carefully when positioning, avoiding contact or impact with other equipment, vault or building walls, or trench walls.
- C. Clean valve interiors and adjacent piping of foreign material prior to making up valve to pipe joint connection. Prepare pipe ends and install valves in accordance with the pipe manufacturer's instructions for the joint used. Do not deflect pipe-valve joint. Do not use a valve as a jack to pull pipe into alignment. The installation procedure shall not result in bending of the valve/pipe connection with pipe loading.
- D. Make sure valve ends and seats are clean. Check exposed bolting for loosening in transit and handling and tighten to manufacturer's recommendations. Open and close the valve to make sure it operates properly and that stops or limit switches are correctly set so that the vane, ball, gate, needle, diaphragm, disc, plug, or other seating element seats fully. Close the valve before installing. Check coatings for damage and repair. Handle valves carefully when positioning, avoiding contact or impact with other equipment or structures.

- E. Prior to assembly, coat threaded portions of stainless steel bolts and nuts with lubricant.

3.04 INSTALLING BURIED VALVES

- A. Connect the valve, coat the flanges, apply tape wrapping or polyethylene encasement, and place and compact the backfill to the height of the valve stem.

- B. Place block pads under the extension pipe to maintain the valve box vertical during backfilling and repaving and to prevent the extension pipe from contacting the valve bonnet.
- C. Mount the upper slip pipe of the extension in midposition and secure with backfill around the extension pipe. Pour the concrete ring allowing a depression so the valve box cap will be flush with the pavement surface.
- D. Install debris cap as close as possible under the cast-iron cover without interfering with the cover operation. Trim flexible skirt to provide a smooth contact with the interior or the extension pipe. Install Owner-furnished locks.

3.05 FIELD COATING BURIED VALVES

- A. Coat flanges of buried valves and the flanges of the adjacent piping, and the bolts and nuts of flanges and mechanical joints, per Section 099000, System No. 24.
- B. Wrap buried metal valves 6 inches and larger in two layers of polyethylene conforming to AWWA C105, 8 mils in thickness each. Pass the two sheets of polyethylene under the valve and the coated flanges or joints with the connecting pipe and draw the sheets around the valve body, the valve bonnet, and the connecting pipe. Secure the sheets with plastic adhesive tape about the valve stem below the operating nut and about the barrel of the connecting pipe to prevent the entrance of soil. Fold overlaps twice and tape. Backfill the valve with care to avoid damaging the polyethylene.

3.06 ASSEMBLING JOINTS

- A. Bolt holes of flanged valves shall straddle the horizontal and vertical centerlines of the pipe run to which the valves are attached. Clean flanges by wire brushing before installing flanged valves. Clean flange bolts and nuts by wire brushing, lubricate threads with oil and graphite, and tighten nuts uniformly and progressively. If flanges leak under pressure testing, loosen or remove the nuts and bolts, reseal or replace the gasket, reinstall or retighten the bolts and nuts, and retest the joints. Joints shall be watertight.
- B. Clean threaded joints by wire brushing or swabbing. Apply Teflon joint compound or Teflon tape to pipe threads before installing threaded valves. Joints shall be watertight.
- C. Install lug-type valves with separate hex head machine bolts at each bolt hole and each flange (two bolts per valve bolt hole).

3.07 VALVE FIELD TESTING

- A. Test valves for leakage at the same time that the connecting pipelines are hydrostatically tested. See Section 400515 for pressure testing requirements. Protect or isolate any parts of valves, actuators, or control and instrumentation systems whose pressure rating is less than the pressure test. Valves shall show zero leakage. Repair or replace any leaking valves and retest.

- B. Operate manual valves through three full cycles of opening and closing. Valves shall operate from full open to full close without sticking or binding. Do not backfill buried valves until after verifying that valves operate from full open to full closed. If valves stick or bind, or do not operate from full open to full closed, repair or replace the valve and repeat the tests.

END OF SECTION

SECTION 400722 FLEXIBLE PIPE COUPLINGS AND EXPANSION JOINTS

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials and installation of flexible expansion joints and couplings for connecting different pipe materials.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Painting and Coating: 099000.
- B. General Piping Requirements: 400500.
- C. Pressure Testing of Piping: 400515.
- D. Submittals
- E. Submit shop drawings in accordance with the General Conditions and Section 13300.
- F. Submit manufacturer's catalog data on flexible pipe couplings, and expansion joints. Show manufacturer's model or figure number for each type of coupling or joint for each type of pipe material for which couplings and joints are used. Show coatings.
- G. Submit manufacturer's recommended torques to which the coupling bolts shall be tightened for the flexible gasketed sleeve-type compression pipe couplings.
- H. Show materials of construction by ASTM reference and grade. Show dimensions.
- I. Show number, size, and material of construction of tie rods and lugs for each thrust harness on the project.

PART 2 - MATERIALS

2.01 COUPLING SYSTEM DESIGN AND COMPONENT UNIT RESPONSIBILITY

The coupling manufacturer shall furnish the gaskets, bolts, nuts, glands, end rings, and hardware for pipe couplings of all types and shall design these components as an integral system. Design the gaskets for the coupling and appropriately size to provide a watertight seal at the design pressure and temperature. Ship gaskets, bolts, nuts, glands, end rings, and hardware for pipe couplings with the pipe coupling and clearly label indicating the origin of the material, including place and date of manufacture. Package the manufacturer's printed installation instructions with each pipe coupling.

2.02 DUCTILE-IRON FLEXIBLE PIPE COUPLINGS

- A. Couplings shall have center sleeves and end rings made of ductile iron conforming to AWWA C219, Section 4.
- B. Sleeve bolts in buried service shall be Type 316 stainless steel per AWWA C219, Section 4.

2.03 TRANSITION COUPLINGS

Couplings for connecting different pipes having different outside diameters shall be stainless steel: Smith-Blair Series 413, Baker Series 212 or 220, or equal. Couplings shall have an internal full circumference ring pipe stop at the midpoint of the coupling. Inside diameter of coupling pipe stop shall equal inside diameter of smaller diameter pipe.

2.04 FLANGED COUPLING ADAPTERS FOR PVC PIPE

- A. Adapters for PVC pipe 12 inches and smaller shall be cast iron: Smith-Blair Series 920, or equal.
- B. Flange ends shall match the flange of the connecting pipe; see detail piping specifications.

2.05 BOLTS AND NUTS FOR FLANGES

See Section 400500.

PART 3 - EXECUTION

3.01 SHIPMENT AND STORAGE OF FLEXIBLE PIPE COUPLINGS, DISMANTLING JOINTS, EXPANSION JOINTS, AND FLEXIBLE HOSE CONNECTORS

- A. Inspect on receipt for damage in shipment and conformance with quantity and description on the shipping notice and order. Unload carefully to the ground without dropping. Do not load or unload by inserting forklift tines or lifting chains inside the waterway. Use nonmetallic slings, padded chains, or padded forklift tines to lift items. Lift with eyebolts or rods through flange holes or chain hooks at ends.
- B. Protect from weather and the accumulation of dirt, rocks, and debris. Do not expose rubber seats to sunlight or ozone for more than 30 days. Also, see the manufacturer's specific storage instructions.
- C. Make sure flange faces, joint sealing surfaces, body seats, and disc seats are clean.

3.02 INSTALLATION OF FLEXIBLE PIPE COUPLINGS, SEGMENTED SLEEVE COUPLINGS, DISMANTLING JOINTS, AND EXPANSION JOINTS

- A. Clean oil, scale, rust, and dirt from pipe ends. Clean gaskets in flexible pipe couplings before installing.
- B. Install expansion joints per manufacturer's recommendations, so that 50% of total travel is available for expansion and 50% is available for contraction.
- C. Do not spring flanges or ends of connecting piping into position. Separately work connecting piping system into position to bring the piping flanges or ends into alignment with the matching coupling flanges or joints. Do not move couplings to achieve piping alignment.
- D. Line up pipe flange bolt holes with coupling or joint flange bolt holes within 1/16 inch maximum offset from the center of the bolt hole to permit insertion of bolts without applying any external force to the piping.
- E. Flange face separation shall be within the gasket spacing $\pm 1/16$ inch. Use only one gasket per flanged connection.
- F. Lubricate bolt threads with graphite and oil prior to installation.
- G. Thoroughly clean contact surfaces of gaskets and pipe ends of flexible pipe couplings just prior to assembly for a distance equal to center-sleeve length plus 2 inches. Install flexible pipe couplings such that the center sleeves are centered over the gap between the ends of the pipes being joined. Install centerline gaps per AWWA C219, Table 5 unless otherwise indicated. Install harnessed flexible pipe couplings in straight-run piping such that 50% of the total travel of the center sleeve or permissible centerline gap is available for expansion and 50% of the travel is available for contraction. In assembling the bolted or studded harnesses of flexible pipe couplings, tighten the nuts gradually and equally at diametrically opposite sides until snug. Do not misalign the harness bolts or studs. Tighten such that bolts or studs carry equal loads. Do not use wrenches or power fastening tools to tighten the nuts.
- H. Install segmented sleeve couplings per AWWA C227, Section 4.6.

3.03 PAINTING AND COATING

- A. Coat buried flexible pipe couplings (including joint harness assemblies), transition couplings, segmented sleeve couplings, and flanged coupling adapters per Section 099000, System No. 21. Coat buried bolt threads, tie bolt threads, and nuts per Section 099000, System No. 24. Then wrap the couplings with cold-applied wax tape..
- B. Coat flexible pipe couplings (including joint harness assemblies), transition couplings, segmented sleeve couplings, and flanged coupling with the same coating system as specified for the adjacent pipe. Apply prime coat at factory.

3.04 HYDROSTATIC TESTING

Hydrostatically test flexible pipe couplings, expansion joints, segmented sleeve couplings, and expansion compensators in place with the pipe being tested. Test in accordance with Section 400515.

END OF SECTION

SECTION 402092 PVC DISTRIBUTION PIPE (AWWA C900)

PART 1 - GENERAL

1.01 DESCRIPTION

This section includes materials, installation, and testing of PVC distribution pipe conforming to AWWA C900. Size range is 6 through 8 inches.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Painting and Coating: 099000.
- B. Trenching, Backfilling, and Compacting: 312316.
- C. Disinfection of Piping and Structures: 331300.
- D. General Piping Requirements: 400500.
- E. Pressure Testing of Piping: 400515.
- F. Flexible Pipe Couplings and Expansion Joints: 400722

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 013300.
- B. Provide affidavit of compliance with AWWA C900.
- C. Submit fully dimensioned cross-section of the bell and barrel of the pipe. Show the bell maximum outside diameter in the pressurized area and its minimum wall thickness at the same location.
- D. Submit copies of the following manufacturer-required tests conducted on project pipe:
 - 1. Quick-burst strength of pipe and couplings.
 - 2. Flattening resistance of pipe.
 - 3. Record of additional tests after test sample failure.
- E. Submit manufacturer's literature of gray iron and ductile-iron fittings including dimensions, thickness, weight, coating, lining, and a statement of inspection and compliance with the acceptance tests of AWWA C110 or C153. Submit copy of report of pressure tests for qualifying the designs of all sizes and types of AWWA C153 fittings that are being used in the project. The pressure test shall demonstrate that the minimum safety factor described in AWWA C153, Section 53-15 is met.

Submit outline drawings and materials description of service connection saddles, corporation stops, and pipe plugs.

PART 2 - MATERIALS

2.01 PIPE

AWWA C900 rubber-ring gasket bell end or plain end with elastomeric gasket coupling, DR 14, cast iron equivalent outside diameter, material cell classification 12454-B per ASTM D1784.

2.02 FITTINGS

- A. Fittings shall conform to AWWA C110 with a minimum pressure rating of 250 psi. Size bells specifically for outside diameter of cast-iron equivalent PVC pipe including rubber-ring retaining groove.
- B. Mechanical joint fittings conforming to AWWA C153 may be used in lieu of AWWA C110 fittings.

2.03 LINING AND COATING FOR FITTINGS

- A. Provide cement-mortar lined fittings per AWWA C104. Lining thickness shall be the double thickness listed in AWWA C104, Section 4.8. Cement for lining shall conform to ASTM C150, Type II.

2.04 FLANGES

Flanges on outlets of fittings shall be Class 125 per ASME B16.1.

2.05 GASKETS FOR FLANGES

See Section 400500.

2.06 BOLTS AND NUTS FOR FLANGES

See Section 400500.

2.07 RESTRAINED JOINTS

Provide restrained joints where indicated in the drawings. Restrained joints shall be provided by restraining systems that incorporate a series of machined serrations on the inside diameter of a restraint ring to provide positive restraint. Restraining systems shall meet or exceed the requirements of UNI-B-13-94 and ASTM F1674 and the following:

- A. Restraint devices for bell-and-spigot joints shall consist of a split restraint ring installed on the spigot, connected to a solid backup ring seated behind the bell.

- B. Restraint devices for connection to ductile-iron mechanical joints shall consist of a split restraint ring installed behind the ductile-iron fitting follower gland and gasket and shall retain the full deflection capability of the joint.
- C. The split restraint ring shall be machined to match the outside diameter of the pipe, provide full 360-degree support around the barrel of the pipe, and shall incorporate a series of machined serrations for gripping the outside surface of the pipe. The serrations shall be uniform and extend the full circumference of the clamp. The ring shall also incorporate a positive means of avoiding applying excessive clamping force to the pipe.
- D. Materials used in the restraint device shall be ductile iron conforming to ASTM A536, Grade 60-42-12 or 65-45-12.
- E. T-bolts, studs, and connecting hardware shall be high-strength, low alloy material in accordance with AWWA C111.
- F. Design restraining devices to have a 2:1 safety factor based on the design strength of the pipe.
- G. Restraining devices shall be UNI-Flange Block Buster Series 1300 or 1500, EBAA Iron Series 1600, or equal.

2.08 FLANGED COUPLING ADAPTERS

See Section 400722.

PART 3 - EXECUTION

3.01 PRODUCT MARKING

Legibly mark pipe at 5-foot intervals and each coupling to identify the nominal diameter, the outside diameter base, that is, cast-iron or steel pipe (IPS), the material code for pipe and couplings, the dimension ratio number, AWWA C900, and the seal of the testing agency that verified the suitability of the material for potable water service (NSF in the United States).

3.02 DELIVERY AND TEMPORARY STORAGE OF PIPE

- A. Ship, store, and place pipe at the installation site, supporting the pipe uniformly. Avoid scratching the pipe surface. Do not stack higher than 4 feet or with weight on bells. Cover to protect from sunlight.
- B. Do not install pipe that is gouged or scratched forming a clear depression.

3.03 PIPE LAYOUT FOR CURVED ALIGNMENT

Pipe lengths may be bent for curved alignment but to no smaller radius curve than the following:

Pipe Diameter (inches)	Minimum Curve Radius (feet)
6	600
8	800

3.04 HANDLING PIPE

Hoist pipe with mechanical equipment using a cloth belt sling or a continuous fiber rope that avoids scratching the pipe. Do not use a chain. Pipes up to 12 inches in diameter may be lowered by rolling on two ropes controlled by snubbing. Pipes up to 6 inches in diameter may be lifted by hand.

3.05 INSTALLING BURIED PIPING

- A. Install in accordance with AWWA C605, Section 312316, and as follows.
- B. Backfill materials in the pipe zone shall be imported sand per Section 312316. Do not add successive layers unless the previous layer is compacted to 90% relative compaction per ASTM D1557.
- C. Compact material placed within 12 inches of the outer surface of the pipe by hand tamping only.
- D. Compact trench backfill to the specified relative compaction. Do not float pipe. Do not use high-impact hammer-type equipment except where the pipe manufacturer warrants in writing that such use will not damage the pipe.

3.06 ASSEMBLY OF PIPE JOINT

- A. The spigot and bell or bell coupling shall be dirt free and slide together without displacing the rubber ring. Lay the pipe section with the bell coupling facing the direction of laying.
- B. Insert the rubber ring into the groove in the bell in the trench just before joining the pipes. First clean the groove. Observe the correct direction of the shaped ring. Feel that the ring is completely seated.
- C. Lubricate the spigot over the taper and up to the full insertion mark with the lubricant supplied by the pipe manufacturer. If the lubricated pipe end touches dirt, clean the pipe end and reapply lubricant.
- D. Insert the spigot into the bell and force it slowly into position.
- E. Check that the rubber ring has not left the groove during assembly by passing a feeler gauge around the completed joint.

3.07 WRAPPING FITTINGS AND RESTRAINED JOINT DEVICES

Wrap buried cast-iron fittings and restrained joint devices with wax tape .

3.08 FIELD HYDROSTATIC TESTING

Test pressures are shown in Section 400515. Test in accordance with Section 400515.

3.09 DISINFECTION

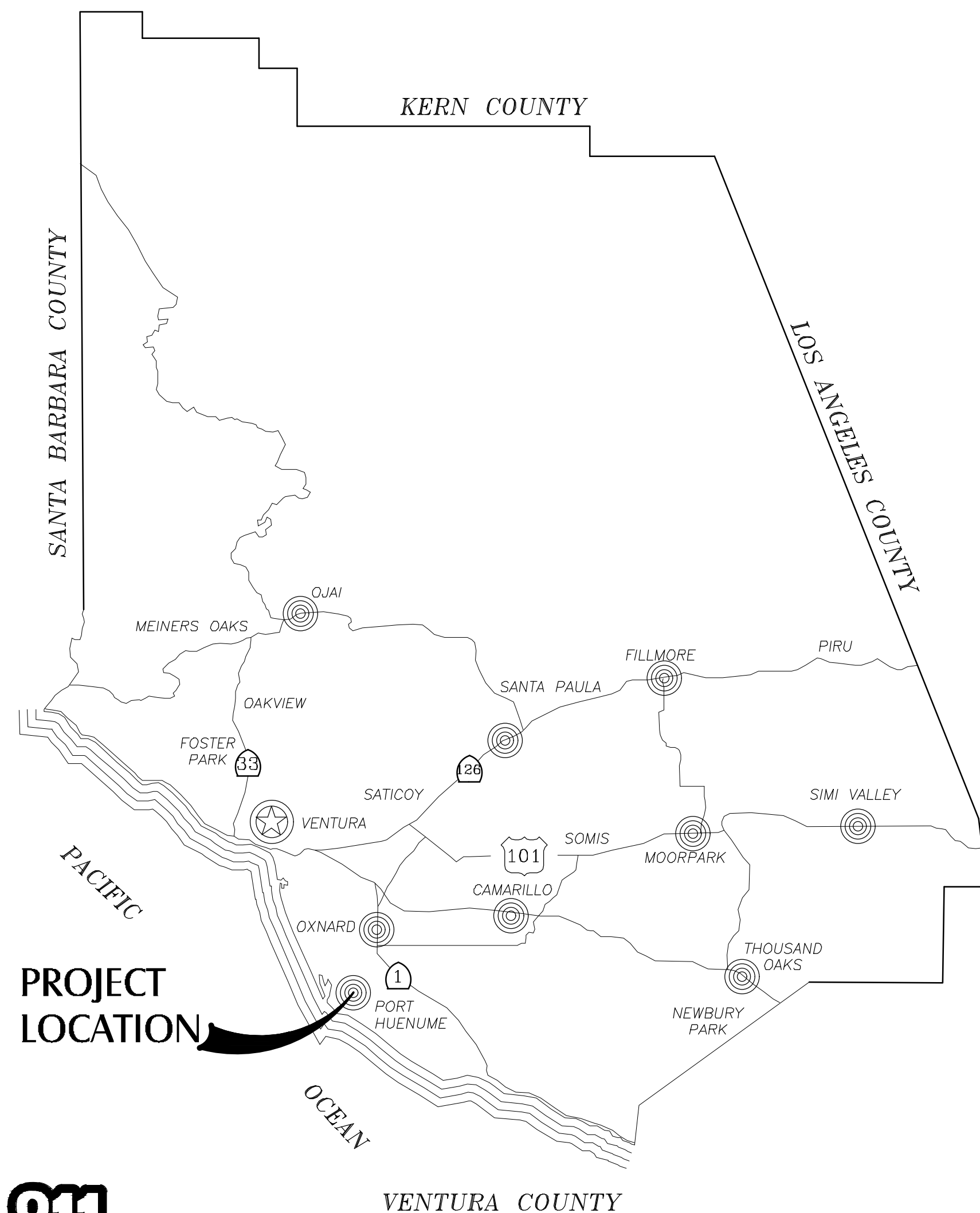
See Section 331300.

END OF SECTION

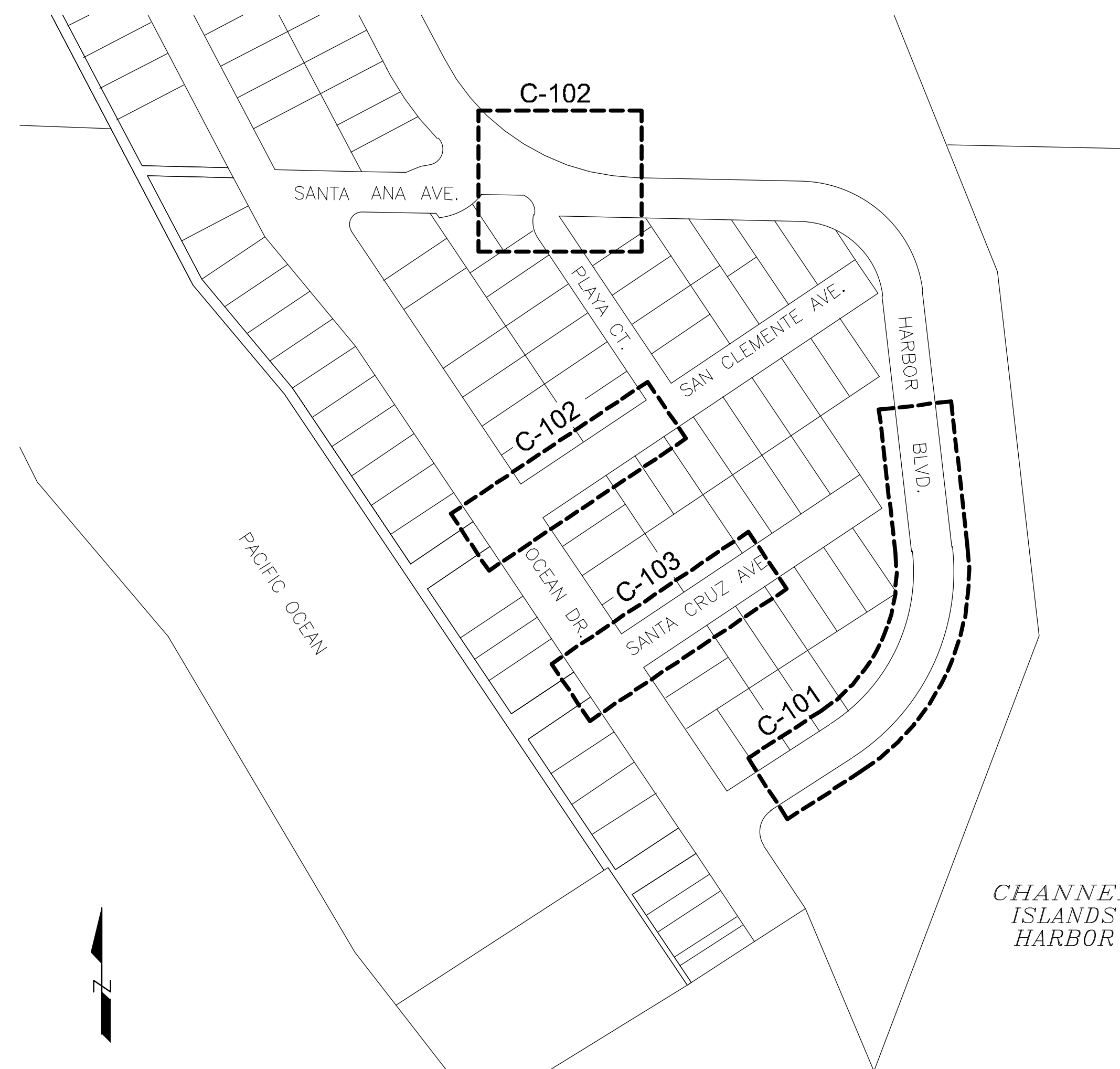
CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT



Construction Plans for HOLLYWOOD BEACH WATER PIPELINE IMPROVEMENT PROJECT CI 101 JULY 2022



VICINITY MAP
NOT TO SCALE



SHEET INDEX AND LOCATION MAP
NOT TO SCALE

SHEET INDEX

NO.	SHT.	DESCRIPTION
1	G-001	TITLE SHEET, SHEET INDEX AND LOCATION MAP, AND VICINITY MAP
2	G-002	LEGEND, ABBREVIATIONS, AND NOTES
3	CD-101	PIPELINE DEMOLITION AND ABANDONMENT
4	C-101	HARBOR BLVD. PIPELINE REPLACEMENT - PLAN AND PROFILE
5	C-102	SANTA ANA AVE, AND SAN CLEMENTE AVE SITE PLANS
6	C-103	SANTA CRUZ SITE PLAN AND CONNECTION DETAILS
7	C-501	CIVIL DETAILS
8	C-502	DETAILS 1
9	C-503	DETAILS 2

PROJECT APPROVALS

PETE MARTINEZ
C.I.B.C.S.D General Manager

Date _____

CLIENT



**Channel Islands Beach
Community Services
District**
353 Santa Monica Drive
Channel Islands Beach, CA 93035
Tel. (805) 985-6021

PROJECT

**HOLLYWOOD BEACH
WATER PIPELINE
IMPROVEMENT
PROJECT**

REVIEWED BY:
PETE MARTINEZ
C.I.B.C.S.D General Manager



16310 BAKE PARKWAY
IRVINE, CA 92618 (714) 213-9758

ENGINEER OF RECORD

Parasto Azami
Parasto Azami, PE
No. C91468 Exp. 09/30/2022



DATE
JULY 2022

SHEET
G-001

1 OF 9

DWG: N:\channel_islands_beach\channel_islands_est-2021-004_assessment_risk_mitigation_300_engineer\301_CAD\Plansets\C-001.dwg USER: roblism
 DATE: Jul 27, 2022 9:23am XREFS: CITY OF PORT HUENEME IMAGES: Channel Islands Beach ISO - logo.png C-101-MN.png



Know what's below.
Call before you dig.

GENERAL NOTES:

- CONSTRUCT WATER LINES AS INDICATED ON PLANS.
- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, AND/OR STRUCTURES SHOWN ON THESE PLANS WAS OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION AND SIZE OF ANY UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREIN. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE AGENCIES LISTED ON THIS SHEET. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600 TWO WORKING DAYS BEFORE PERFORMING ANY DIGGING.
- THE CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT (CIBCSO) AND MKN (ENGINEER) HARMLESS FOR ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CIBCSO OR ENGINEER.
- THE CONTRACTOR SHALL NOT DISTURB EXISTING SURVEY MONUMENTS OR BENCHMARKS NOTED ON THE PLANS OR FOUND DURING CONSTRUCTION. REMOVAL AND REPLACEMENT SHALL BE DONE BY A REGISTERED CIVIL ENGINEER WITH AN R.C.E. OR A LICENSED LAND SURVEYOR ONLY.
- ALL PUBLIC TRAVELED WAYS MUST BE CLEANED DAILY OF ALL DIRT, MUD, AND DEBRIS DEPOSITED ON THEM AS A RESULT OF THE SEWER CONSTRUCTION. CLEANING IS TO BE DONE TO THE SATISFACTION OF THE CIBCSO.
- AT NO TIME WILL PRIVATE PROPERTY BE USED IN CONJUNCTION WITH THE PROJECT UNLESS PROPERTY OWNER APPROVAL IS OBTAINED IN WRITING AND EVIDENCE OF SAME IS GIVEN TO CIBCSO.
- UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ALL ACCESS TO PUBLIC FACILITIES AND PRIVATE PROPERTY IN THE PROJECT AREA.
- THE CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO PROTECT THE PROJECT AND ADJACENT PROPERTY FROM ANY EROSION AND SILTATION RESULTING FROM CONTRACTOR OPERATIONS BY APPROPRIATE MEANS (SAND BAGS, DIKES, SHORING, ETC.) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY THE COUNTY OF VENTURA AND CITY OF OXNARD.
- ALL EXISTING IMPROVEMENTS DISTURBED BY THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO LANDSCAPING, IRRIGATION, SIDEWALK, CURB, GUTTER, TREES, PAVEMENT, ETC. SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE UNLESS NOTED OTHERWISE.
- UPON COMPLETION OF EACH DAY'S WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING THE WORK AREA FREE OF HAZARDS AND SHALL PROVIDE NECESSARY TEMPORARY SIGNS, WARNING DEVICES AND BARRICADES.
- REMOVE AND DISPOSE OF DAMAGED EXISTING ASPHALT PAVEMENT AND PAVEMENT STRIPING PER SPECIFICATIONS.
- ALL EXISTING FACILITIES SHALL BE PROTECTED IN PLACE UNLESS SPECIFIED OTHERWISE IN THE PLANS OR BY CIBCSO.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE CONSTRUCTION ACTIVITIES NEAR THE UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK.
- CONSTRUCTION WORK HOURS ARE LIMITED TO 8:00 AM TO 6:00 PM, MONDAY THROUGH FRIDAY. WORK PROHIBITED ON SATURDAYS, SUNDAYS AND NATIONAL HOLIDAYS.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
- ALL WORK DONE WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE DONE BY A CONTRACTOR WITH A CLASS A LICENSE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS. PUBLIC WORKS TEMPORARY RIGHT-OF-WAY PERMITS ARE REQUIRED FOR ANY UTILITY TRENCHING, CRANES, DUMPSTERS, ETC. ON PUBLIC PROPERTY. THE PUBLIC WORKS PERMIT MUST BE ON THE JOB SITE AND AVAILABLE FOR REVIEW BY CIBCSO OFFICIALS AT ALL TIMES. IF ANY WORK HAS BEGUN BEFORE OBTAINING A PERMIT, THE JOB WILL BE STOPPED UNTIL THE PERMIT IS OBTAINED.
- ALL EQUIPMENT SHALL BE REMOVED FROM PROJECT SITE AT THE END OF EACH WORKING DAY AND ROADS OPENED TO VEHICULAR TRAFFIC UNLESS OTHERWISE APPROVED BY CIBCSO.
- ALL CONSTRUCTION TO BE IN CONFORMANCE WITH THE REGULATIONS OF CAL-OSHA.
- IN RESIDENTIAL STREETS, THE TOP OF THE WATER PIPE SHALL BE A MINIMUM OF 36-INCHES BELOW FINISHED STREET SURFACE UNLESS OTHERWISE SHOWN ON THE PLANS.
- REPLACE OR RECONNECT WATER SERVICES AS SHOWN ON THE PLANS.
- IF GROUNDWATER IS ENCOUNTERED, CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING ACCESS PITS AND TRENCHES AND DISPOSE OF WATER AS REQUIRED BY THE DISTRICT AND APPLICABLE NPDES PERMITS, FEDERAL, STATE, AND LOCAL GOVERNMENT REQUIREMENTS.
- GAS AND SEWER LATERALS EXIST WITHIN THE PROJECT AREA. LOCATIONS ARE UNKNOWN AND ARE NOT SHOWN ON THE PLANS. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING GAS AND SEWER LATERALS PER SPECIFICATION SECTION 020120.

STANDARD TRAFFIC CONTROL / TRAFFIC STRIPING NOTES

- ALL TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO ENCROACHING INTO ANY STREETS.
- ALL TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD).
- ALL STRIPING MUST COMPLY WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), LATEST EDITION AND REVISIONS

EXISTING AND TEMPORARY FACILITIES NOTES

- POTABLE WATER WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS AND MATERIALS AS PROVIDED IN SPECIFICATIONS.
- THE TIME AND DURATION OF ANY WATER SHUTDOWN SHALL BE SUBJECT TO DISTRICT APPROVAL. THE DISTRICT SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS IN ADVANCE OF ANY SHUT DOWN OR MAKING CONNECTION TO CIBCSO FACILITIES.
- LIMIT THE WATER SHUT DOWN TO 8 HOURS MAXIMUM.
- ALL TRENCH REPAIR BACKFILLS, AND COMPACTION SHALL BE INSPECTED BY THE OWNER. THE CONTRACTOR SHALL ALWAYS COMPLY WITH ALL CAL-OSHA SAFETY STANDARDS.
- ALL DESIGN CHANGES SHALL BE APPROVED BY THE DISTRICT IN WRITING PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE CHANGE.
- WATER SYSTEM SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE SPECIFICATIONS SECTION 400515. PIPELINES AND APPURTENANCES SHALL BE DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS SECTION 331300.
- IF ASBESTOS CEMENT PIPE MUST BE CUT AND HANDLED IN THE FIELD TO ACCOMPLISH THE WORK, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL APPROPRIATE PRECAUTIONS FOR PROTECTING AGAINST THREATS TO HEALTH AND SAFETY OF THE WORK FORCE AND GENERAL PUBLIC ARISING OUT OF CONSTRUCTION INVOLVING ASBESTOS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CALIFORNIA STATE, CAL/OSHA AND GOVERNMENT HEALTH AGENCY REGULATIONS FOR THE HANDLING, CUTTING, TAPPING, SHAPING, INSTALLATION AND DISPOSAL OF ASBESTOS. ASBESTOS CEMENT PIPE TO BE DISPOSED SHALL BE PROPERLY MANIFESTED, PREPARED FOR TRANSPORT FOLLOWING CRITERIA OF COUNTY OF VENTURA DEPARTMENT OF PUBLIC WORKS, SOLID WASTE DIVISION, AND DELIVERED TO A LANDFILL PERMITTED FOR DISPOSAL OF NON-FRIABLE ASBESTOS CONTAINING MATERIALS. THE COMPLETED GENERATOR COPY (YELLOW) MANIFEST SHALL BE RETURNED TO THE DISTRICT'S REPRESENTATIVE.
- ANY AND ALL UTILITY VALVE COVERS, INCLUDING VALVE BOXES, AND CONCRETE COLLARS, SHALL BE RAISED TO GRADE WITHIN THE LIMITS OF STREET RESURFACING AREA.
- REMOVE AND DISPOSE OF INTERFERING PORTION OF SIDEWALK AND CONCRETE DRIVEWAY AND CURB TO NEAREST CONSTRUCTION JOINT. INSTALL NEW SIDEWALK CONCRETE DRIVEWAY AND CURB. MATCH EXISTING HEIGHT AND GRADES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EXISTING WATER MAIN IN SERVICE DURING CONSTRUCTION AND SHALL SUBMIT A WATER SUPPLY BYPASS PLAN FOR APPROVAL BY CIBCSO PRIOR TO CONSTRUCTION. THE BYPASS PLAN SHALL INCLUDE TEMPORARY BACKFLOW PREVENTION AND CONNECTION TO FIRE HYDRANT. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE PROTECTED WITH ADEQUATE BARRICADES, LIGHTS, SIGNS AND WARNING DEVICES. THE CONTRACTOR SHALL PROVIDE ADEQUATE ACCESS TO RESIDENT GARAGES AT THE END OF EACH WORKING DAY TO THE SATISFACTION OF CIBCSO.
- DISTRICT EMPLOYEES WILL INSTALL AND REMOVE METERS. CONTRACTOR TO COORDINATE METER INSTALLATION WITH DISTRICT A MINIMUM OF 2 WORKING DAYS PRIOR TO WORK.

SURVEY NOTES

SITE SURVEY DATED AUGUST 17 AND 18, 2021 AND PREPARED BY ENCOMPASS CONSULTANT GROUP (ECG).

- MAPPING:**
TOPOGRAPHIC MAPPING WAS COMPILED AT A SCALE OF 1"=20', WITH A 1 FOOT CONTOUR INTERVAL FROM DATA COLLECTED IN A FIELD SURVEY PERFORMED USING CONVENTIONAL EQUIPMENT AND PROCEDURES IN AUGUST 2021, AT THE REQUEST OF MKN AND ASSOCIATES.
- RECORD COMPILED BOUNDARY AND EASEMENTS:**
THE LOT LINES SHOWN HEREON ARE BASED UPON RECORD COMPILED INFORMATION SHOWN ON BOOK 22, PAGE 85, BOOK 44, PAGE 67, AND BOOK 45, PAGE 56, ALL OF PARCEL MAPS AND VENTURA COUNTY FIELDBOOK 1528-M IN THE COUNTY OF VENTURA. THIS INFORMATION HAS BEEN TRANSLATED AND ROTATED TO BEST FIT SEVERAL MONUMENTS OF RECORD THAT WERE LOCATED AS A PART OF THE FIELD SURVEY AND TIED TO THE SURVEY CONTROL SHOWN HEREON. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY ESTABLISHMENT SURVEY.
- BASIS OF BEARINGS AND COORDINATES:**
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM NAD83, ZONE 5, EPOCH 2017.50 AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING STATIONS (CGPS) AND/OR CONTINUOUS OPERATING REFERENCE STATIONS (CORS) P729 & VNCO BEING NORTH 83°10'36.46" WEST AS DERIVED FROM GEODETIC VALUES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC).
- ELEVATIONS:**
THE VERTICAL DATUM OF THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), PER GPS TIES & GEOID MODELING (GEOID12B) TO CGPS STATION VNCO. ELLIPSOID HEIGHTS ARE CONSTRAINED PER CSRC. NO COUNTY BENCHMARKS WERE MEASURED IN THIS SURVEY.
- UTILITIES:**
SURFACE UTILITY FEATURES SHOWN HEREON WERE LOCATED AS A PART OF THE FIELD SURVEY PERFORMED BY ECG BASED ON VISIBILITY ON THE DATE OF SURVEY. NO RESEARCH OR MAPPING OF SUBSURFACE UTILITIES HAS BEEN PERFORMED.

UTILITY AGENCY CONTACTS

CABLE FRONTIER COMMUNICATIONS 32477 HAUN ROAD, MENIFEE, CA 92584 (951) 723-0736	SC GAS 9400 OAKDALE AVENUE CHATSWORTH, CA 91311 (818) 701-3448	CITY OF OXNARD 251 S HAYES AVE. OXNARD, CA 93030 (805) 385-8131	WATER / SEWER CIBCSO 353 SANTA MONICA DRIVE CHANNEL ISLANDS BEACH, CA 93035-4473 (805) 985-6021
CABLE SPECTRUM 6357 ARIZONA CIRCLE LOS ANGELES, CA 90045 (310) 216-3545	SCE 10060 TELEGRAPH ROAD VENTURA, CA 93004 (805) 654-7291	COUNTY OF VENTURA 800 S. VICTORIA AVE. VENTURA, CA 93009 (805) 654-2087	U.S.A. LOCATING: 811

LEGEND

- BACK FLOW PREVENTER	PIV - POST INDICATOR VALVE	- BOUNDARY LINE
- BOLLARD	GUY-P - GUY POLE	- EASEMENT LINE
DI - DRAIN INLET	- POLE - LIGHT	- RIGHT OF WAY LINE
FDC - FIRE DEPARTMENT CONNECTION	- POLE - TRAFFIC SIGNAL ARM	- FLOWLINE
FH - FIRE HYDRANT	- POLE - TRAFFIC SIGNAL	- BUILDING OVERHANG
GUY - GUY-ANCHOR	- POLE - UTILITY	- BUILDING FACE
HB - HOSE BIB	- UTILITY RISER	- CONTOUR LINE
MB - MAILBOX	- SEWER CLEAN OUT	- CURB
GM - GAS METER	- SIGN	- CENTERLINE
WM - WATER METER	- SIGN W/ DOUBLE POST	- EDGE OF PAVEMENT
TMH - TELEPHONE MANHOLE	- TREE	- CHAINLINK/BARBWIRE FENCE
FOMH - FIBER OPTIC MANHOLE	- UTILITY MARK	- POST FENCE
SDM - STORM DRAIN MANHOLE	- GAS VALVE	- WOOD FENCE
SMH - SEWER MANHOLE	- IRRIGATION CONTROL VALVE	- GUARD RAIL
MH - MANHOLE	- VALVE (UNSPECIFIED)	- WALL
CATV - CABLE TV PULLBOX	- WATER VALVE	- CABLE TV
COMM - COMMUNICATION PULLBOX	- CONTROL POINT	- ELECTRIC
ELPB - ELECTRIC PULLBOX	- FOUND MONUMENT AS NOTED	- NATURAL GAS (SIZE)
GAS - GAS PULLBOX	- SPOT ELEVATION (GROUND SURVEY)	- SANITARY SEWER (SIZE & MATERIAL)
SLPB - STREET LIGHT PULLBOX	- SPOT ELEVATION (AERIAL SURVEY)	- STORM DRAIN (SIZE AND MATERIAL)
TSPB - TRAFFIC SIGNAL PULLBOX	- HOUSE NUMBER AND ADDRESS WITH NEW WATER SERVICE CONNECTION	- TELEPHONE
WPB - WATER PULLBOX		- WATER (SIZE AND MATERIAL)
- PLASTER		- ELECTRIC & CABLE TV
BO - BLOWOFF		- ABANDON IN PLACE
AV - AIR/VAC		- REMOVE AND DISPOSE

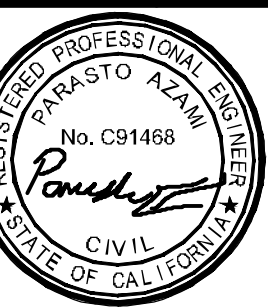
ABBREVIATIONS

ABDN	ABANDON	EL	ELEVATION	RG	ROUGH GRADE
AC	ASPHALT CONCRETE OR ASBESTOS-CEMENT	EP	EDGE OF PAVEMENT	R/W	RIGHT-OF-WAY
AGG	AGGREGATE	EG	EXISTING GRADE	SCH	SCHEDULE
APPROX	APPROXIMATE	FG	FINISHED GRADE	SS	STAINLESS STEEL
ASTM	ASTM INTERNATIONAL	FH	FIRE HYDRANT	SSCO	SANITARY SEWER CLEAN-OUT
AWWA	AMERICAN WATER WORKS ASSOCIATION	FL	FLOW LINE OR FLANGE	SSMH	SANITARY SEWER MANHOLE
BO	BOTTOM OF	FS	FINISHED SURFACE	STA	STATION
BC	CURVE BEGINNING	GB	GRADE BREAK	STD	STANDARD
CALOSHA	THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH AT CALIFORNIA	INV	INVERT	TC	TOP OF CURB
CIP	CAST IRON PIPE	MAX	MAXIMUM	THK	THICK
CLR	CLEARANCE	MIN	MINIMUM	TO	TOP OF
CONC	CONCRETE	MJ	MECHANICAL JOINT	TYP	TYPICAL
CTR	CENTER	N	NEW	UNK	UNKNOWN
¢ OR CL	CENTERLINE	OHW	OVERHEAD WIRE	WM	WATER METER
DEFL	DEFLECTION	OC	ON CENTER	WV	WATER VALVE
DIA OR Ø	DIAMETER	OD	OUTSIDE DIAMETER		
E	EASTING	PC	TANGENT-CURVE INTERSECTION		
E	EXISTING	PCC	COMPOUND CURVE-CURVE INTERSECTION		
EC	CURVE END	PT	CURVE-TANGENT INTERSECTION		
		PVC	POLYVINYL CHLORIDE		
		RCP	REINFORCE CONCRETE PIPE		

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1883022.71	6190803.97	11.92	SET MAG NAIL ECG CONTROL WASHER
2	1883085.13	6190923.42	7.95	SET MAG NAIL ECG CONTROL WASHER
3	1882878.14	6190900.67	11.75	SET MAG NAIL ECG CONTROL WASHER
4	1882944.32	6191025.17	8.11	SET MAG NAIL ECG CONTROL WASHER
5	1882799.43	6191160.10	9.48	SET SCRIBED X
6	1882944.71	6191203.99	8.93	SET SCRIBED X
7	1883129.33	6191225.57	9.62	SET SCRIBED X
8	1883360.90	6190811.18	9.64	SET MAG NAIL ECG CONTROL WASHER
206	1883355.48	6190558.03	11.97	FND LTT LS ILLEG
207	1882718.23	6191007.43	9.75	FND 3.5IN CAP W/ PUNCH
208	1882754.53	6191017.63	10.81	FND 2IN BRASS CAP 32-1 RM-1 1988

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
209	1882992.51	6191222.82	9.09	FND MAG WASHER LS 5411
210	1883081.41	6191212.74	9.37	FND MAG NAIL WASHER LS 5411
211	1883251.80	6191193.44	10.46	FND MAG NAIL WASHER LS 5411
212	1883282.71	6191190.04	10.54	FND MAG NAIL WASHER LS 5411
213	1883331.39	6191171.68	10.85	FND LTT LS 5411
214	1883344.11	6191092.39	11.06	FND MAG NAIL WASHER LS 5411
215	1883347.16	6190944.98	10.24	FND MAG NAIL
216	1883366.97	6190910.48	9.76	FND LTT LS 5411
217	1883330.83	6190901.32	9.84	FND LTT CITY OF OXNARD
218	1883362.08	6190849.13	10.06	FND MAG NAIL
219	1883356.94	6190774.70	10.30	FND BM 3IN DISK CITY OX PUBLIC WORKS

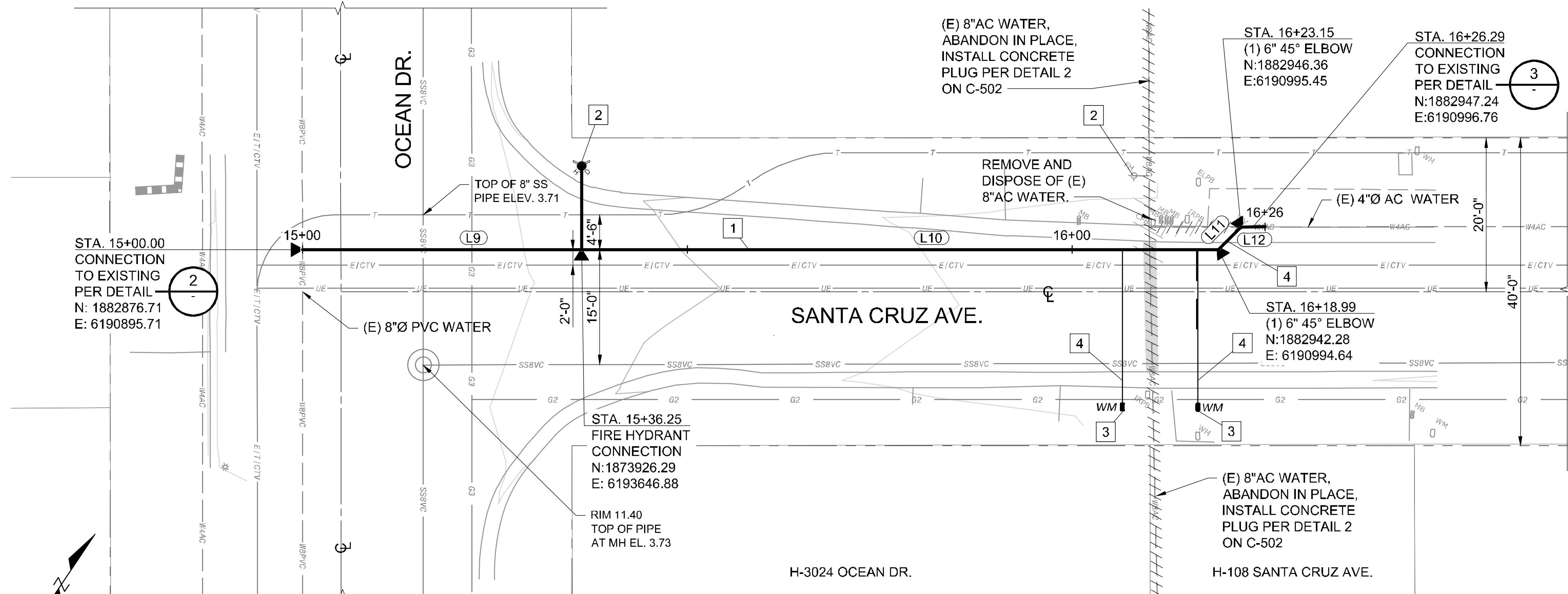
DATE	09/30/2022
PROJECT ENGINEER	PARASOTO AZAMI
PROJECT NUMBER	C91486
DESCRIPTION	
APP	
EXP DATE	



Channel Islands Beach Community Service District
 Hollywood Beach Water Pipeline Improvement Project
 LEGEND, ABBREVIATIONS, AND NOTES

DESIGNED: PA
DETAILED: JPF
CHECKED: KEB
APPROVED:
DATE: JULY 2022
PROJECT NO. CI 101
G-002 SHEET 2 OF 9





SANTA CRUZ AVE - STA. 15+00.00 to STA. 16+26.29

SCALE: 1" = 10'

LINE TABLE

LINE #	LENGTH	DIRECTION
L9	44.41	N56° 14' 47.47"E
L10	74.59	N56° 14' 47.47"E
L11	4.16	N11° 14' 04.36"E
L12	3.14	N56° 02' 13.45"E

CONSTRUCTION NOTES:

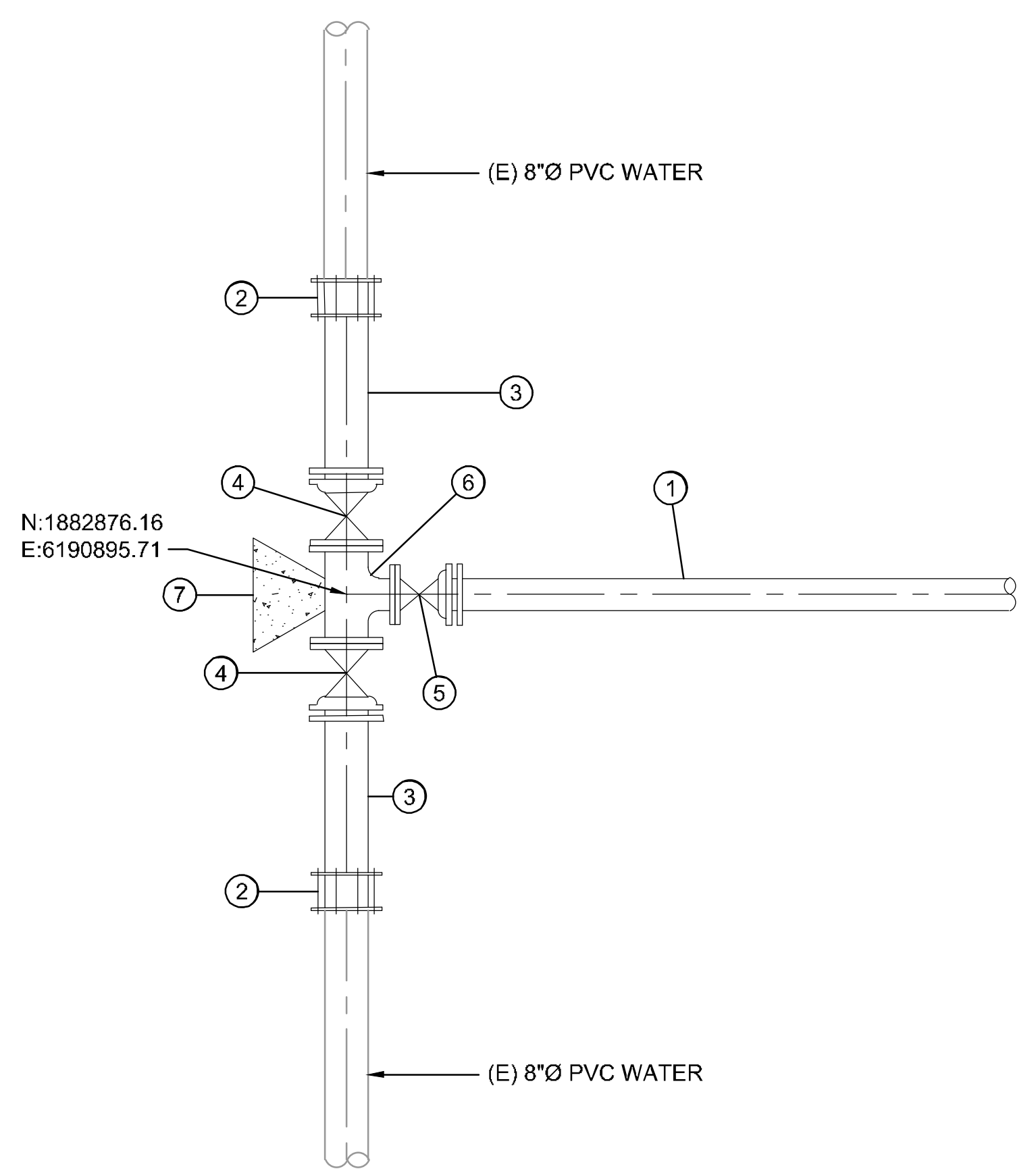
- | | | |
|-------------------------------------|--|-------------------------------------|
| <p>1</p> <p>2</p> <p>3</p> <p>4</p> | <p>INSTALL 6"Ø C900 PVC DR-14 PIPE PER SPECIFICATION SECTION 402092. PROVIDE RESTRAINED JOINT MJ RETAINER GLANDS AT FITTINGS AND CONNECTIONS. TRENCHING AND PAVEMENT REPAIR PER DETAIL</p> <p>RELOCATE EXISTING FIRE HYDRANT TO NEW LOCATION AS SHOWN ON THE PLAN. REMOVE AND DISPOSE OF EXISTING FIRE HYDRANT LATERAL. INSTALL NEW FIRE HYDRANT CONNECTION PER DETAIL</p> <p>INSTALL NEW 1-INCH SERVICE LINE AND NEW METER BOX PER DETAIL</p> <p>SAWCUT, REMOVE AND REPLACE IN KIND EXISTING CONCRETE DRIVEWAY, SIDEWALK, CURB AND GUTTER FOR VENTURA COUNTY STD PLATES E-1 TO E-3.</p> | <p>1</p> <p>4</p> <p>3</p> <p>3</p> |
|-------------------------------------|--|-------------------------------------|

CONSTRUCTION NOTES

- | | | |
|--|--|--|
| <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> | <p>6"Ø C900 PVC PIPE</p> <p>8" TRANSITION COUPLING, ROMAC OR APPROVED EQUAL</p> <p>8"Ø x 3'-0" C900 DR-14 PVC SPOOL, PEXPE</p> <p>8" GATE VALVE, FLG xMJ, RESTRAINED PER DETAIL</p> <p>6" GATE VALVE, FLGxMJ, RESTRAINED PER DETAIL</p> <p>6"x8" D.I. TEE, FLG'D</p> <p>THRUST BLOCK PER DETAIL</p> <p>6" 45° D.I. ELBOW, MJxMJ, RESTRAINED</p> <p>6" 45° D.I. ELBOW, FLGxMJ RESTRAINED</p> <p>6" D.I. SPOOL PEXPE</p> <p>4" FLANGED COUPLING ADAPTER</p> <p>4"x6" D.I. REDUCER, FLGxMJ, RESTRAINED</p> <p>6" FLANGED COUPLING ADAPTER</p> | <p>5</p> <p>5</p> <p>2</p> <p>5</p> <p>2</p> |
|--|--|--|

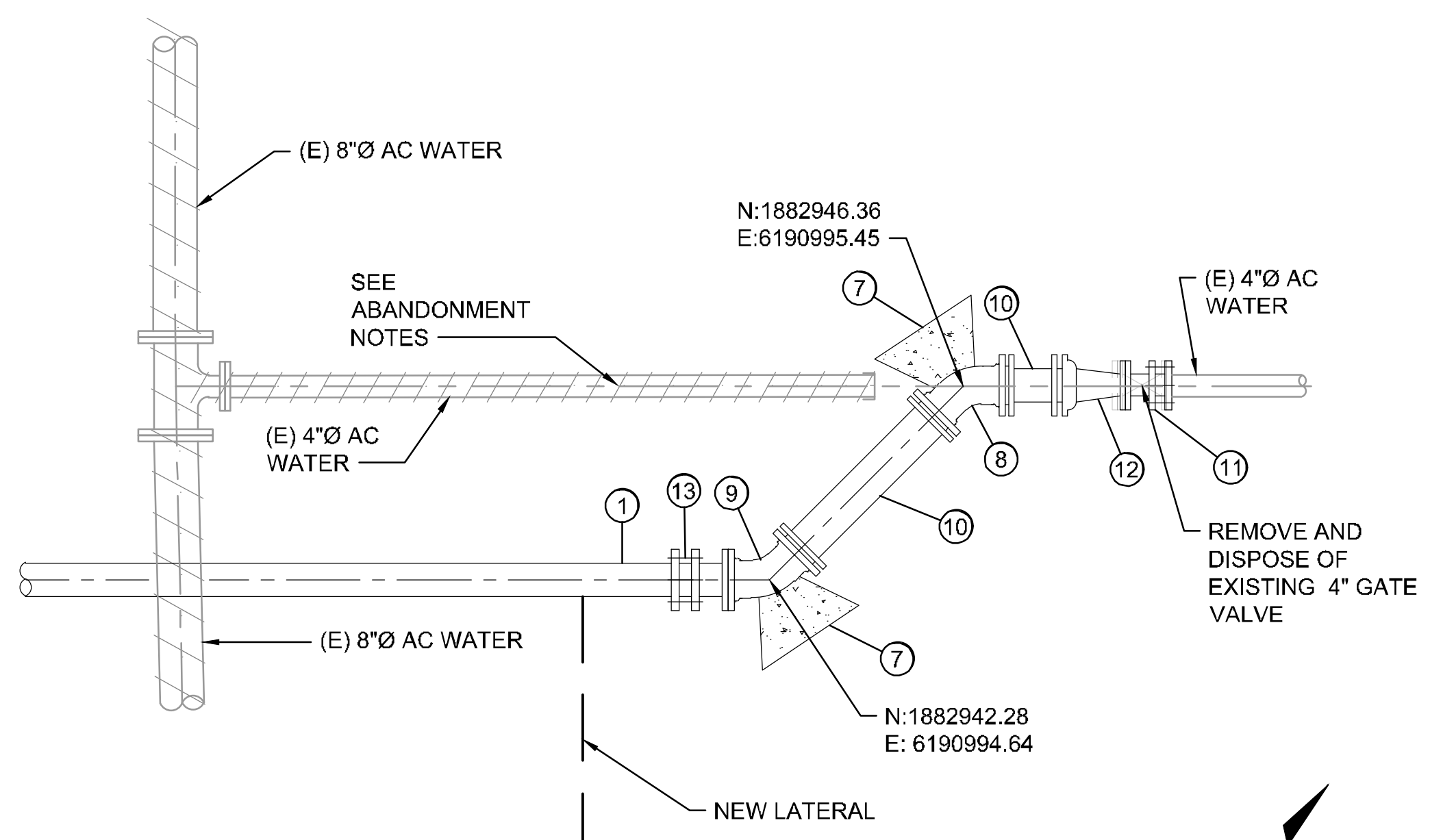
ABANDONMENT NOTES

- REMOVE AND DISPOSE OF EXISTING 8" AC PIPE, TEE AND EXISTING 4" AC SPOOL UP TO NEW CONNECTION. REFER TO SHEET CD-101 FOR ABANDONMENT DETAILS.
- REFER TO SPEC SECTION 011100 FOR WORK SEQUENCE.



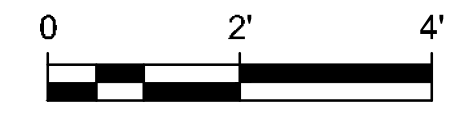
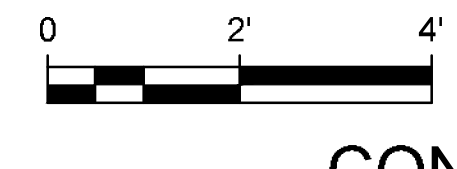
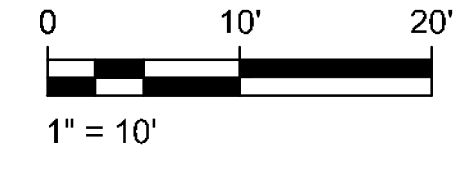
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SCALE: 1" = 2'



CONNECTION DETAIL - STA. 16+26.29

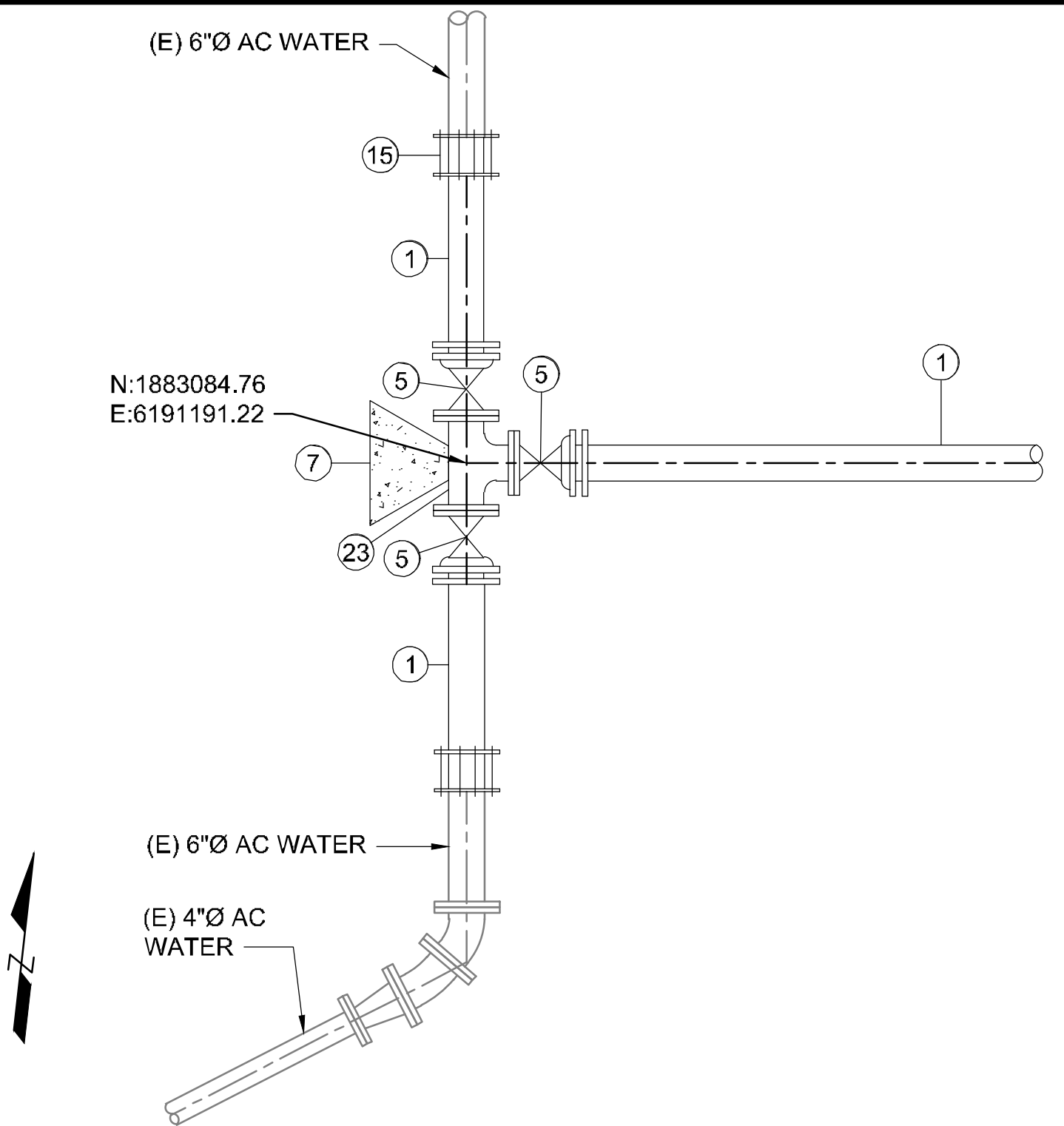
SCALE: 1" = 2'



		<p>Channel Islands Beach Community Service District Hollywood Beach Water Pipeline Improvement Project</p>	<p>SANTA CRUZ AVE. SITE PLAN AND CONNECTION DETAILS</p>	<p>DESIGNED: PA DETAILED: TC CHECKED: APPROVED: DATE: JULY 2022</p>
<p>PROJECT NO. CI 101</p>	<p>PROJECT ENGINEER PARASTO AZAMI</p>	<p>DESCRIPTION REG NUMBER C91486</p>	<p>EXP DATE 09/30/2022</p>	<p>IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE</p>
<p>C-103 SHEET 6 OF 9</p>				

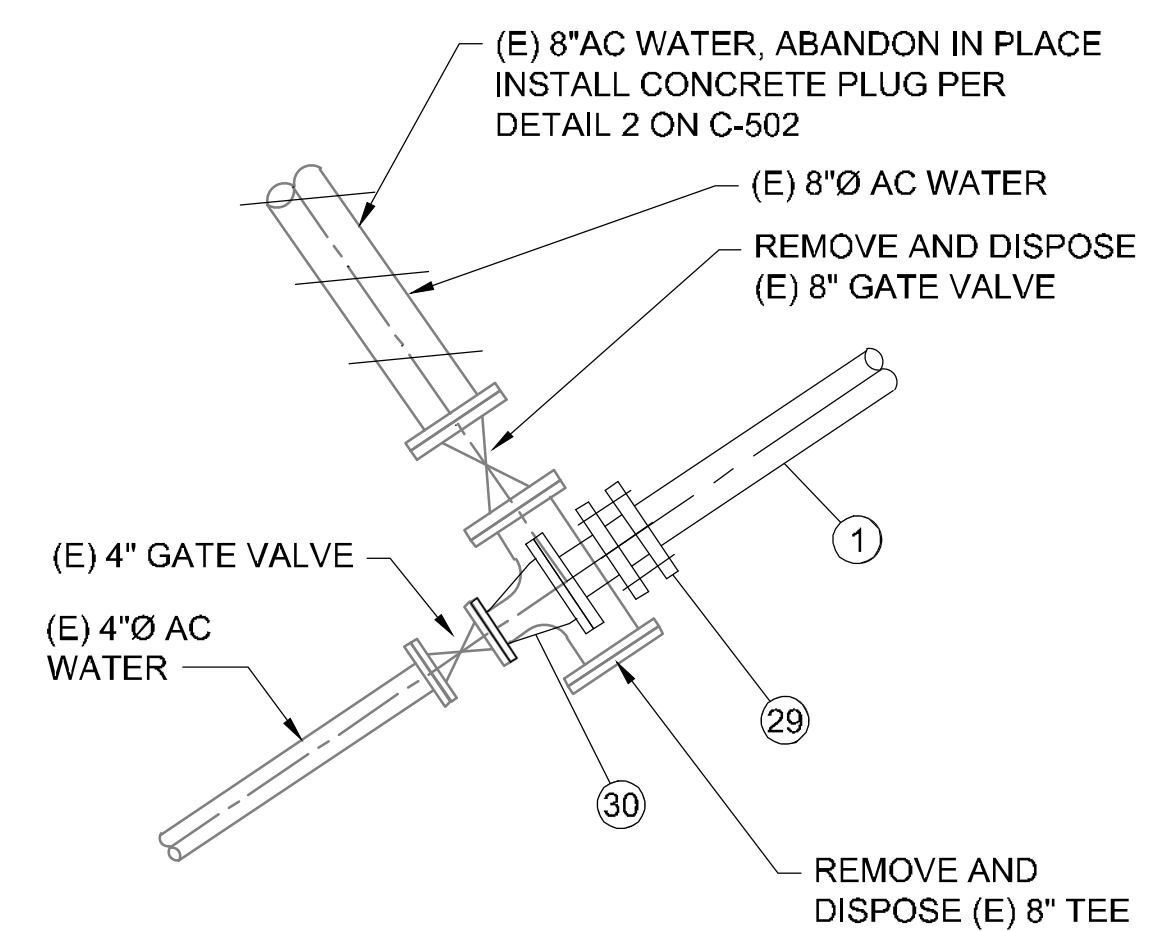
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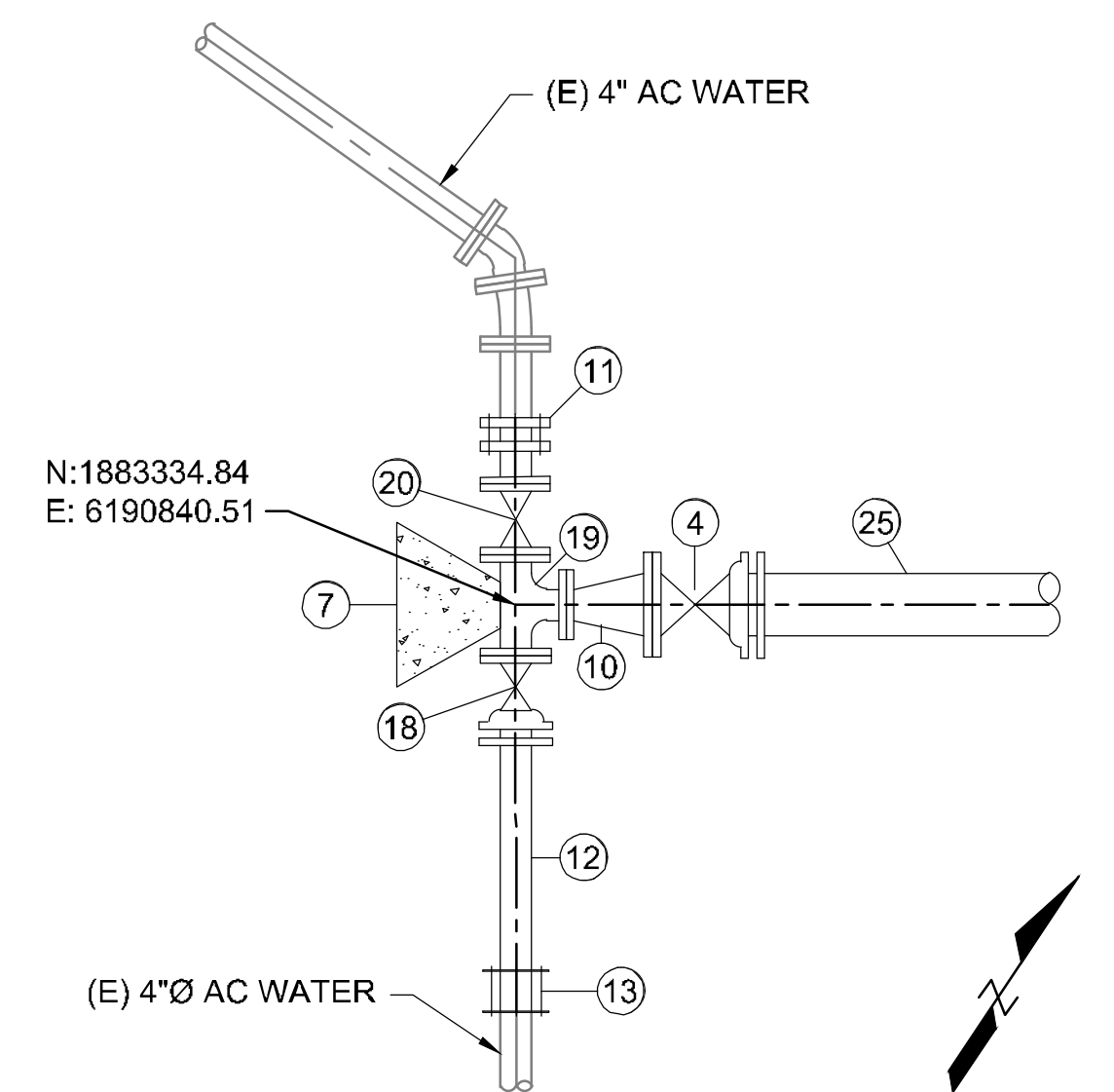
CONNECTION DETAIL - STA. 1+00.00
SCALE: 1" = 2'

1
C-101



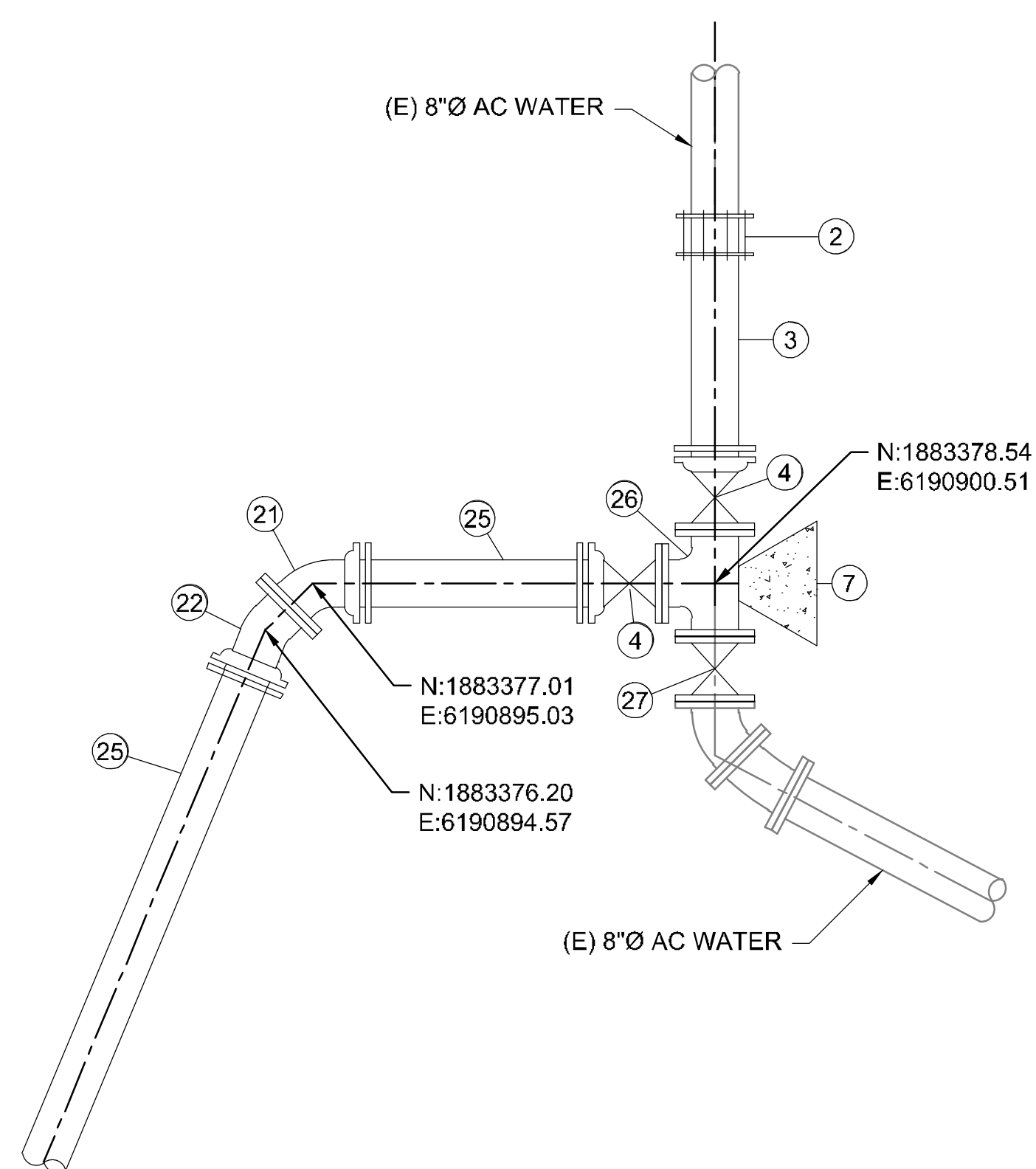
CONNECTION DETAIL - STA. 4+92.81
SCALE: 1" = 2'

2
C-101



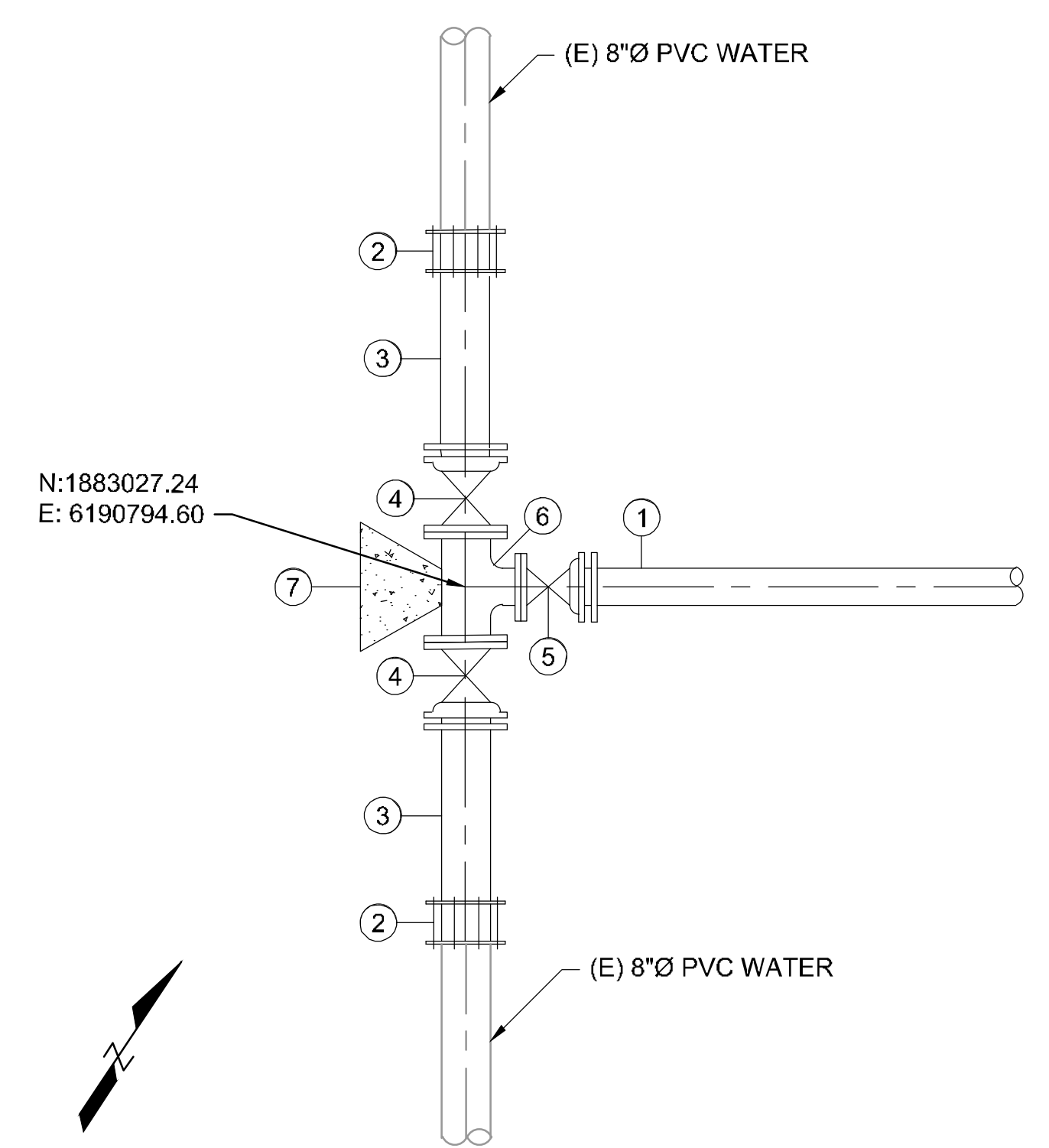
CONNECTION DETAIL - STA. 8+00
SCALE: 1" = 2'

3
C-101



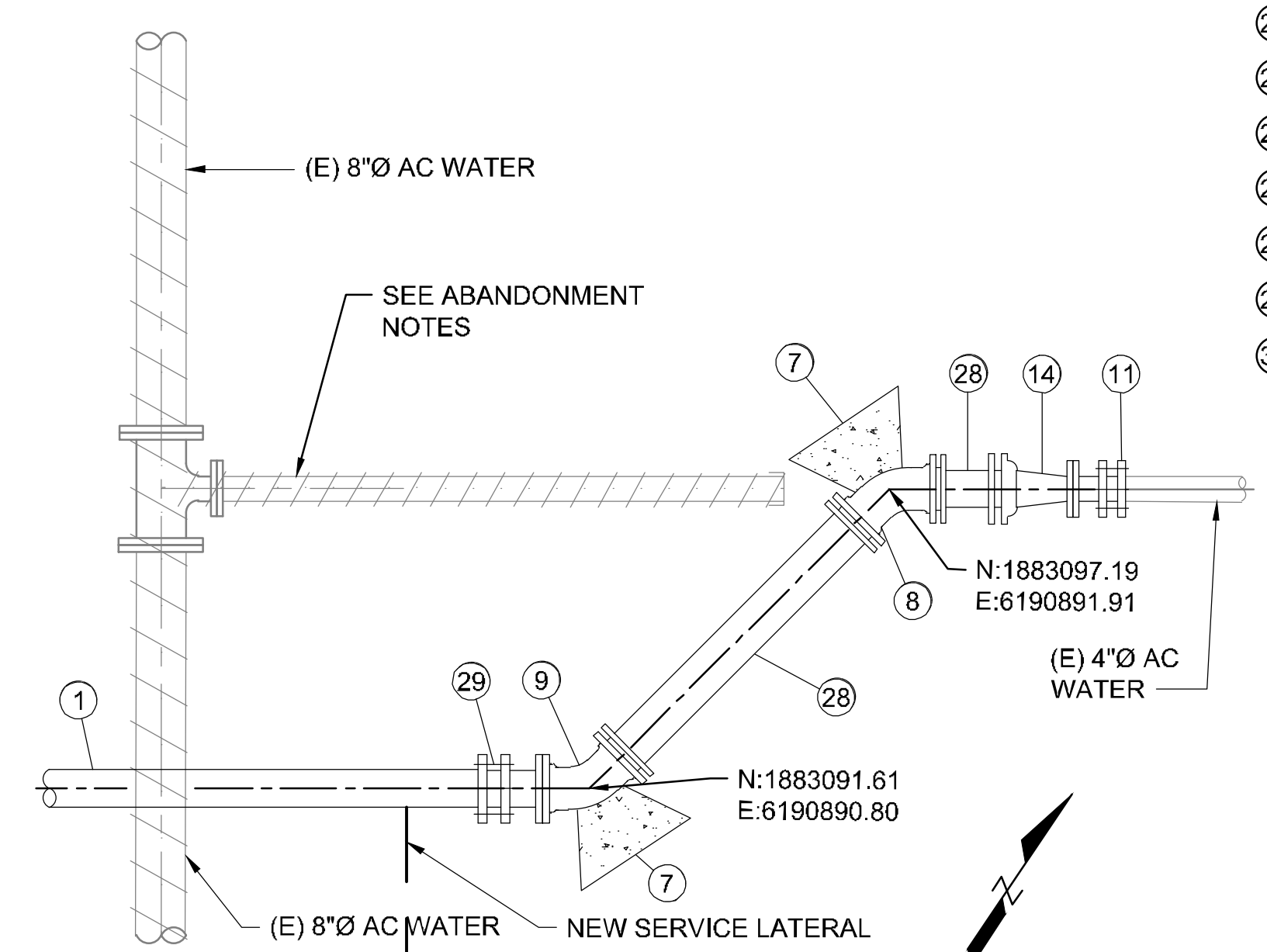
CONNECTION DETAIL - STA. 8+97.92
SCALE: 1" = 2'

4
C-102



CONNECTION DETAIL - STA. 11+00.00
SCALE: 1" = 2'

5
C-102



CONNECTION DETAIL - STA. 12+24.60
SCALE: 1" = 2'

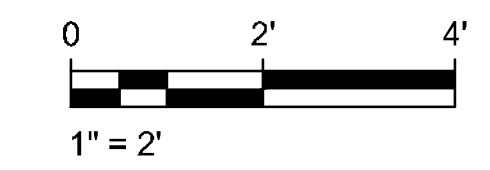
6
C-102

CONSTRUCTION NOTES

- | TAG | DESCRIPTION |
|-----|---|
| 1 | 6"Ø C900 PVC PIPE, RESTRAINED |
| 2 | 8" TRANSITION COUPLING, ROMAC OR APPROVED EQUAL |
| 3 | 8"Ø x 3'-0" C900 DR-14 PVC SPOOL, PEXPE |
| 4 | 8" GATE VALVE, FLG xMJ, RESTRAINED WITH VALVE CAN AND NUT OPERATOR PER DETAIL |
| 5 | 6" GATE VALVE, FLGxMJ, RESTRAINED WITH VALVE CAN AND NUT OPERATOR PER DETAIL |
| 6 | 6"x8" D.I. TEE, FLG'D |
| 7 | THRUST BLOCK PER DETAIL |
| 8 | 6" 45° D.I. ELBOW, MJXMJ, RESTRAINED |
| 9 | 6" 45° D.I. ELBOW, FLGXMJ RESTRAINED |
| 10 | 4"x8" D.I. REDUCER, FLGXFLG |
| 11 | 4" FLANGE COUPLING ADAPTER |
| 12 | 4"Ø x 3'-0" C900 DR-14 PVC SPOOL, PEXPE |
| 13 | 4" TRANSITION COUPLING, ROMAC OR APPROVED EQUAL |
| 14 | 4"x6" D.I. REDUCER, FLG X MJ |
| 15 | 6" TRANSITION COUPLING, ROMAC OR APPROVED EQUAL |
| 16 | 6"x8" D.I. REDUCER, FLGXFLG |
| 17 | NOT USED |
| 18 | 4" GATE VALVE, FLGXMJ, RESTRAINED WITH VALVE CAN AND NUT OPERATOR PER DETAIL |
| 19 | 4" D.I. TEE, FLG'D |
| 20 | 4" GATE VALVE, FLGXFLG |
| 21 | 8" 45° D.I. ELBOW, FLGXMJ, RESTRAINED |
| 22 | 8" 22.5° D.I. ELBOW, FLGXMJ, RESTRAINED |
| 23 | 6" D.I. TEE, FLG'D |
| 24 | 6"Ø x 3'-0" C900 DR-14 PVC SPOOL, PEXPE |
| 25 | 8"Ø C900 DR-14 PVC PIPE, RESTRAINED |
| 26 | 8" D.I. TEE, FLG'D |
| 27 | 8" GATE VALVE, FLG xFLG |
| 28 | 6"Ø DUCTILE IRON SPOOL, PEXPE |
| 29 | 6" FLANGE COUPLING ADAPTER |
| 30 | 4"x6" D.I. REDUCER, FLGXFLG |

ABANDONMENT NOTES

- REMOVE AND DISPOSE OF EXISTING 8" AC, 4" AC SPOOL PIPE AND TEE UP TO NEW CONNECTION. REFER TO SHEET CD-101 FOR ABANDONMENT DETAILS.
- REFER TO SPEC SECTION 011100 FOR WORK SEQUENCE.



	<p>Channel Islands Beach Community Service District Hollywood Beach Water Pipeline Improvement Project</p>
<p>mkn 16810 BAKE PARKWAY IRVINE, CA 92618 (714) 213-9758</p>	<p>CIVIL DETAILS</p>
<p>DESIGNED: PA DETAILED: TC CHECKED: APPROVED: DATE: JULY 2022</p>	<p>PROJECT NO. CI 101</p>
<p>0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE</p>	<p>C-501 SHEET 7 OF 9</p>

