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**CONTRACT SPECIFICATIONS
FOR THE
WATER DISTRIBUTION SYSTEM IMPROVEMENTS
FOR
SIERRA MADRE VILLA AVE., VILLA KNOLLS DR., AND
EDGECLIFF LN.
And
LOWER PASADENA GLEN
PROJECTS
IN THE
KINNELOA IRRIGATION DISTRICT
1999 KINCLAIR DRIVE
PASADENA, CALIFORNIA 91107-1017**

August 2026



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March 5, 2015 version

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ATTACHMENTS:

Los Angeles County Permit

**KINNELOA IRRIGATION DISTRICT
1999 Kinclair Drive
Pasadena, CA 91107**

NOTICE INVITING BIDS

**For the
SIERRA MADRE VILLA AVE., VILLA KNOLLS DR., EDGECLIFF LN. and
PASADENA GLEN
WATER LINE IMPROVEMENT
Projects**

N-1 NOTICE IS HEREBY GIVEN that sealed bids will be received by the Kinneloa Irrigation District (hereinafter "Owner"), for furnishing all plant, labor, services, materials, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefore, as provided in the Contract Documents and Specifications for the construction of the Work described in Section N-4, together with all appurtenances thereto, in strict accordance with the specifications and drawings on file at the office of the Kinneloa Irrigation District, 1999 Kinclair Drive, Pasadena, California 91107 (hereinafter "District").

The Board of Directors reserves the right to accept or reject any or all bids

N-2 DATE OF OPENING BIDS. Bids will be received at the office of Kinneloa Irrigation District, 1999 Kinclair Drive, Pasadena, CA 91107, until 2:00 p.m. on **September 30** at which time and place the bids will be publicly opened and read aloud. Bids shall be submitted in sealed envelopes marked as directed in Section N-13. Bids received after the deadline specified will be returned unopened to the bidder.

N-3 LOCATION OF THE WORK. The Work to be constructed hereunder is located in Los Angeles County, California.

N-4 DESCRIPTION OF WORK.

Furnish all labor, equipment, materials, and services for the installation of 12", and 8" ductile iron pipelines valves fittings, pressure reducing station, and service reconnections in Sierra Madre Villa Ave., Villa Knolls Dr., and Edgecliff Ln. and Lower Pasadena Glen.

N-5 CLASSIFICATION OF CONTRACTORS' LICENSES.

Contractors submitting a proposal shall possess, at the time the contract is awarded, the following classes of contractor's license issued pursuant to Division 3, Chapter 9, of the Business and Professions Code of the State of California: Class "A", General Engineering Contractor's License or C-34 Pipeline Contractor. The Contractor shall certify that the license(s) specified are the classification(s) of contractor's license required by law to enable the Contractor to perform the Work contemplated under the Contract Documents. Contractor shall provide Owner with their Contractor's license number and expiration date as provided in the Proposal, and shall present satisfactory evidence that they are licensed in good standing.

Contractors submitting proposals shall be registered with the Department of Industrial Relations, as provided in Labor Code Section 1725.5, and shall include evidence that they are so registered with their proposal.

N-6 AWARD OF CONTRACT The Owner reserves the right, after opening bids, to reject any or all bids, or to make award to the lowest responsible bidder and reject all other bids. Bids will be compared on the basis of the Engineer's estimate of the quantities of the several items of work and bid Schedules shown on the Bid Proposal Sheet(s). A good faith determination by the Owner as to whether a bid is responsive or whether a bidder is responsible shall be final, conclusive and binding, and shall not be the basis of a claim for lost profits or other damages by a bidder to whom the contract is not awarded. The Owner reserves the right to waive or seek correction of immaterial errors in a bid, in its sole discretion.

N-7 SITE CONDITIONS. Each bidder shall carefully examine the drawings, read the specifications and the forms of the contract documents, and shall visit the site of the proposed Work so as to be fully informed as to all existing conditions and limitations that may affect the execution of work under the contract, including the location of underground facilities in the area, and shall include in the prices bid the cost of all incidentals and appurtenances. The failure or omission of any bidder to receive or examine any form, instrument, addendum, or other document, or their failure to visit and become acquainted with conditions at the construction site, shall in no respect relieve them from any obligation imposed by their bid or by the contract. The submittal of a bid shall be taken as prima facie evidence of compliance with all instructions contained herein.

N-8 BID SECURITY AND BONDS. (a) Each bid shall be under sealed cover and must be accompanied by cash, a certified or cashier's check, or by a corporate surety bond on the form furnished by the Owner (hereinafter "Bid Security"), as a guaranty that the bidder will, if awarded the contract in accordance with the terms of their bid, promptly secure worker's compensation insurance, liability insurance, and any other insurance required by the Contract Documents, execute a contract in the required form, and furnish satisfactory bonds for the faithful performance of the contract and for the payment of claims of all persons supplying labor and materials for the construction of the work. The Bid Security shall be in an amount not less than ten percent (10%) of the amount of the bid. The Faithful Performance Bond and Payment Bond shall each be not less than one-hundred percent (100%) of the total amount of the bid price named in the contract.

(b) The Owner reserves the right to reject any bond if, in the opinion of the Owner, its Engineer or Attorney, the Surety's acknowledgement is not legally sufficient. All sureties utilized by bidders shall be an admitted surety insurance carrier in the State of California, shall comply with such other requirements as may be established by the state or its subdivisions, and shall furnish such reports as to their financial condition, from time to time, as may be requested by the Owner, including the Financial Statement of Bonding Company furnished with the bonds. The premiums for all said bonds shall be paid by the bidder. If any surety becomes unacceptable to Owner in the absolute judgment and discretion of Owner, then the bidder/contractor shall promptly furnish at its own expense such additional bonds as may be required by the Owner to protect the Owner's interests and the interests of persons supplying labor or materials in the prosecution of the Work contemplated by these Contract Documents.

(c) In the event of any conflict between the terms of the Contract Documents and the terms of the bonds, the terms of the Contract Documents shall control and the bonds shall be deemed to be amended thereby. The Owner shall be entitled to exercise any and all rights granted by the Contract Documents in the event of default, without control by the surety, provided that Owner promptly notifies the surety at the time or before the exercise of such rights. The exercise by Owner of such rights shall not affect the liability of the surety under the bonds.

(d) The Bid Security of unsuccessful bidders shall be returned to the bidder within sixty (60) days of the time the award of contract is made.

N-9 CONTRACT RETENTION. At the request and expense of the Contractor and pursuant to Public Contract Code Section 22300, securities equivalent to any amount withheld by Owner to ensure the Contractor's performance under the contract shall be deposited with the Owner, or, at the

NOTICE INVITING BIDS

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Contractor's request, with a state or federally chartered bank as the escrow agent. Alternatively, and upon approval of the Owner, retention monies earned may be deposited directly with an escrow agent licensed under Division 6 (commencing with Section 17000) of the Financial Code. Escrow instructions shall conform to the requirements of Public Contract Code Section 22300. All securities deposited pursuant to this Section N-9 shall be accompanied by an unconditional assignment of such securities executed by the Contractor which will permit the Owner or the escrow agent to liquidate such securities in accordance with the provisions of said section 22300.

N-10 WAGE RATES. Bids shall be made in accordance with the prevailing hourly rate of per diem wages for this locality and project as determined by the Director of Industrial Relations pursuant to Labor Code Section 1770 et seq, a copy of which wage rate schedule is on file at the Office of Owner and by this reference incorporated herein. The Contractor shall post a copy of said document at each job site. The Contractor and any of its subcontractors shall pay not less than the specified prevailing rate of per diem wages for general, holiday and overtime work to all workers employed in the execution of this contract. Contractors failing to comply with the prevailing wage requirement are subject to debarment by the Labor Commissioner, as provided in Labor Code Section 1777.1. Debarred contractors are declared ineligible to perform work on any public works project, either as the prime contractor or as a subcontractor.

N-11 USE OF APPRENTICES. If the project requires the employment of workers in any apprentice able craft or trade, once awarded, the Contractor or Subcontractors must apply to the Joint Apprenticeship Council unless already covered by local apprenticeship standards under Labor Code Section 1777.5

N-12 CONTRACT DOCUMENTS. (a) The Contract Documents shall consist of this Notice Inviting Bids, the Instructions to Bidders, the accepted Proposal, the Bid Sheets, the Contractor's Licensing Statement, the List of Subcontractors, the applicable Bid Security Form and the Non-Collusion Affidavit (Bidder) attached to the Proposal, the Agreement, the Faithful Performance Bond, the Payment Bond, the Non-Collusion Affidavits (Subcontractors), the Notice to Proceed, the General Provisions, the Special Provisions, the Specifications and Drawings, and any change order or addenda and the Specifications and Drawings listed therein, all of which documents are on file in the office of the Owner and are hereby referred to and made a part of this Notice Inviting Bids.

(b) A full set of drawings and specifications is available for inspection without charge at the office of the Owner.

(c) Complete sets of said printed Contract Documents may be obtained from: the office of the Kinneloa Irrigation District for the price of \$50.00. No refund will be made of any charges for complete sets of Contract Documents.

N-13 ADDRESS AND MARKING OF PROPOSAL. The envelope enclosing the proposal shall be sealed and addressed as follows:

Kinneloa Irrigation District
1999 Kinclair Drive
Pasadena, CA 91107

The envelope shall be plainly marked in the upper left-hand corner with the name and address of the bidder, shall bear the words "Proposal for", followed by the title of the specifications for the work and the date and hour for opening of bids, and shall be delivered or mailed to the Owner. The Bid Security shall be made payable to or for the benefit of the Owner and shall be enclosed in the same envelope with the proposal.

Dated: **8-31-2026**

KINNELOA IRRIGATION DISTRICT

By: 

Tom Majich
General Manager

INSTRUCTIONS TO BIDDERS

I-1 FORM OF BID AND SIGNATURE - (a) The Proposal shall be submitted on the form attached hereto and shall be enclosed in a sealed envelope marked and addressed as provided in the Notice Inviting Bids.

(b) Each bidder shall state the unit price or the specific sums, as the case may be, for which they propose to supply the labor, materials, supplies, or equipment, and perform the Work required by the Contract Documents. If the unit price and the total amount named by a bidder for any items are not in agreement, the unit price times the estimated quantity will be considered as representing the bidder's intention and the totals will be corrected to conform thereto.

(c) If the Proposal is made by an individual, it shall be signed and his or her full name and his or her address shall be given; if it is made by a partnership firm, it shall be signed with the partnership name by a partner of the firm, who shall also sign his or her own name, and the name and address of each partner shall be given; and if it is made by a corporation, the Proposal shall be signed on behalf of the corporation by its duly authorized officer or officers and attested by the corporate seal.

I-2 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS - If any person or entity contemplating the submittal of a bid for the proposed contract is in doubt as to the true meaning of any requirement of the Contract Documents, or they find any discrepancies in or omissions from the Contract Documents, they shall submit to the Engineer a written request for an interpretation or correction thereof. The written request must be received at least five calendar days prior to the date fixed for opening of bids. The person or entity making the request will be responsible for its prompt delivery. Interpretations or corrections will be made only by addenda to specifications or by dated revisions of drawings with a copy of each addition or change being furnished, through the Owner, to each prospective bidder.

I-3 PREPARATION OF THE PROPOSAL - (a) Blank spaces in the Proposal and Bid Sheet(s) shall be properly filled. The phraseology of the Proposal must not be changed, and no additions shall be made to the items mentioned therein. Unauthorized conditions, limitations, or provisos attached to a Proposal will render it informal or nonresponsive and may cause its rejection. Alterations by erasure or interlineations must be explained or noted in the Proposal over the signature of the bidder. Alternative Proposals will not be considered unless specifically requested.

(b) Any bidder may withdraw their Proposal before the hour fixed for opening bids, without prejudice to such bidder, by submitting a written request to the Owner for its withdrawal, and their Proposal will be returned unopened when reached in the procedure of opening bids, or mailed to the bidder unopened, if they are not in personal attendance at the bid opening. No Proposal may be withdrawn after the hour fixed for opening of bids without rendering the Bid Security subject to retention by Owner as liquidated damages, and not as a penalty, in like manner as in the case of failure to execute the contract after award, as hereinafter provided. Unless otherwise specified in the Special Provision made a part of these Contract Documents, all bids shall be valid for a period of forty-five (45) days after Owner's bid opening date, notwithstanding any award of the contract by Owner to another bidder.

(c) No Proposal received after the time named or at any place other than the place stated in the Notice Inviting Bids will be considered. All Proposals will be opened and declared publicly. Bidders, their representatives, and others interested are invited to be present

at the opening. The Owner reserves the right to waive any informality in any Proposal, to reject any or all Proposals, to reject one part of a Proposal and accept the other, and to make award to the lowest responsible bidder as the interest of the Owner may require. Each bid shall identify the surety or sureties who have agreed to furnish the required bonds.

I-4 REGISTRATION OF CONTRACTORS - Before submitting bids, Contractors shall be licensed in accordance with the provisions of Division 3, Chapter 9, of the Business and Professions Code of the State of California, and shall provide proof of current licensing status as provided in the Proposal. The Contractor shall maintain the required license in good standing throughout the course of the Work. Contractors shall also be registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

I-5 CONTRACTORS EXPERIENCE - Contractors shall submit, along with their proposal, an all-inclusive list of projects performed by the Contractor within the past thirty-six (36) month period. This list shall include the size of the project in dollars, the agency or client for whom the work was performed, and the name and title of the agency or client contact person. The list must include at least five (5) jobs similar in size and scope to those contemplated herein. Failure to submit a complete list or to have that list include at least five (5) jobs similar in size and scope to that contemplated herein, will render a proposal informal or nonresponsive and may result in its rejection by Owner.

I-6 LIST OF SUBCONTRACTORS FILED WITH BID - In accordance with the provisions of Sections 4100 through 4114, inclusive, of the Public Contract Code of the State of California, each Proposal shall include the name and business address of each proposed subcontractor who will perform work or labor or render service to the principal Contractor in an amount greater than one-half of one percent (0.5%) of the principal Contractor's bid, and shall state the portions of the work which will be done by each such subcontractor. Any additional information required by the Owner regarding listed subcontractors may be provided by the bidder up to 24 hours after the hour set for opening bids. The Contractor shall not enter into any subcontract with a subcontractor which has been debarred by the Labor Commissioner pursuant to Sections 1777.1 and 1777.7 of the Labor Code.

I-7 BIDDERS INTERESTED IN MORE THAN ONE BID - No person, firm, or corporation shall make, file, or be interested in more than one Proposal for the same work; provided, however, that a person, firm, or corporation who has submitted a sub-proposal to a bidder, or who has quoted prices of materials to a bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other bidders.

I-8 LOWEST RESPONSIBLE BIDDER - In selecting the lowest responsible bidder, consideration will be given to the general competency of the bidder for the performance of the work covered by the bid. To receive favorable consideration, a bidder shall be required to present evidence that they or their associates are personally competent to manage the proposed undertaking and to carry it forward to a successful conclusion. Professional integrity and honesty shall be essential requirements. The Owner shall have absolute discretion as to the evaluation of past work performance of any bidder, and its decision relating thereto shall be deemed correct and shall be conclusive and binding.

I-9 BID SECURITY - Each bidder shall submit with their bid cash, an unconditional certified or cashier's check drawn on a solvent state or national bank, or a bidder's bond with a responsible corporate surety, on the form attached to the proposal, subject to the provisions of the Notice Inviting Bids. Said Bid Security shall be in a sum not less than ten percent (10%) of the amount of the bid, and shall be made payable to or for the benefit of the Owner as a guaranty that the bidder will, if an award is made to them in accordance with the terms of their Proposal,

promptly execute a contract in the required form, secure payment of worker's compensation, and furnish satisfactory Performance and Payment Bonds and proof of insurance coverage, and such other information as may be required of bidder.

I-10 LOCAL CONDITIONS - (a) Bidders shall read the specifications, examine the drawings, and make their own estimates of the existing facilities and the difficulties which will attend the execution of the work called for by the proposed contract, including local conditions, uncertainty of weather, and all other contingencies. Bidders shall make such investigation and review such records and drawings as they deem necessary to satisfy themselves that they are familiar with the condition and location of existing underground facilities and other potential sources of interference with the work contemplated under the Contract Documents. By providing access to drawings or other records in its possession, the Owner makes no representations or guarantees as to the accuracy of such drawings or records.

(b) Bidders shall satisfy themselves by personal examination of the location of the proposed work and by such other means as they may choose as to actual conditions and requirements and as to the accuracy of the quantities stated in the Bidding Sheet(s). Information derived from the maps, plans, specifications, profiles, or drawings, or from the Engineer or its assistants, shall not relieve the bidder of this responsibility, and the interpretation of the data disclosed by borings or other preliminary investigations is not guaranteed by the Owner.

(c) The quantities of work or material stated in the unit-price items of the Bidding Sheet(s) are supplied only to give an indication of the general scope of the work; the Owner does not expressly or by implication agree that the actual amount of work or material will correspond therewith, but reserves the right to increase the amount of any unit-price item of the work by an amount up to and including twenty-five percent (25%) of any bid item(s), or to omit portions, or all of such work as may be deemed necessary or expedient by the Engineer without a change in the unit price. The Owner, likewise, reserves the absolute right to delete quantities of work or material which are the subject of "lump sum" bids.

(d) Bidders shall not at any time after the submittal of a bid make or have any claim for damages or anticipated profits or loss of profit or otherwise because of any difference between the quantities of work actually done and material furnished and those stated in said unit-price items or lump sum items of the Bidding Sheet(s).

I-11 EXECUTION OF CONTRACT - A bidder to whom award is made shall execute a written contract with the Owner on the form of Agreement provided in the Contract Documents, secure the payment of worker's compensation, furnish good and approved bonds as required in the following paragraph, provide evidence of insurance, and provide a financial statement of other information requested by Owner pursuant to the Contract Documents, all in accordance with the provisions hereof within ten (10) days (not including Sundays or holidays), or such additional time as may be allowed by the Owner, from the date the Owner mails notice to the bidder, at the address provided in the proposal, that their proposal has been accepted. The failure or refusal of a bidder to whom award is made to enter into contract as herein provided, or to conform to any of the stipulated requirements in connection therewith will result in damages being sustained by the Owner. Such damages are, and will continue to be, impracticable and extremely difficult to ascertain. In the event of such failure or refusal to comply with the requirements of the Contract Documents, the Bid Security shall become the property of the Owner as liquidated damages and not as a penalty, and the award will be annulled. At the discretion of the Owner, a new award may be made to the second lowest responsible bidder and such bidder shall fulfill every stipulation embraced herein as if they were the party to whom the first award was made. A corporation to which an award is made shall be required, before the contract is finally executed, to furnish evidence of its corporate existence, of its right to do business in California, and of the authority of the officer signing the contract and bonds for the corporation.

I-12 BONDS - (a) In conformance with the Notice Inviting Bids, a bidder to whom the contract is awarded shall, within the time specified in Section I-11 hereof, furnish a bond with a responsible corporate surety or corporate sureties conditioned upon the faithful performance of said bidder of all covenants and stipulations in the Contract Documents. Said bond, hereinafter referred to as the Faithful Performance Bond, shall be on the mandatory form included as a part of these Contract Documents, and shall be in an amount that is not less than one hundred percent (100%) of the total amount payable under the Contract Documents.

(b) Within the time specified in Section I-11 hereof, the bidder to whom the contract is awarded shall also furnish a Payment Bond, approved by the Owner, in accordance with the provisions of Civil Code Sections 3225-3228, inclusive, and Sections 3247-3252, inclusive. Said Payment Bond shall be in a sum not less than one hundred percent (100%) of the total amount payable under the Contract Documents. The form of Payment Bond set forth in these Contract Documents is a mandatory form.

(c) The surety or sureties on all bonds furnished must be satisfactory to the Owner. The bidder to whom the contract is awarded shall provide copies of the surety insurer's most recent annual and quarterly statement filed with the California Department of Insurance, and a certified copy of the Certificate of Authority issued by the Department of Insurance. Any power of attorney provided, evidencing the authority of the person executing the bonds to bind the surety, shall be an unrevoked power, and shall be an original or a certified copy of the original. If during the continuance of the contract any of the sureties in the sole discretion of the Owner are or become insufficient, the Owner may require additional sufficient sureties which the Contractor shall furnish to the satisfaction of the Owner within fifteen (15) days after written notice, and in default thereof the contract may be suspended and the work completed as provided in the General Conditions. The party required to furnish bonds pursuant to these instructions shall furnish such bonds at their own cost and expense.

I-13 LIABILITY INSURANCE - (a) A bidder to whom the contract has been awarded shall furnish to the Owner a policy or certificate of protective liability insurance in which the Owner, the Owner's Engineer and the Owner's Representative shall be named as additional insureds with the bidder. Where requested by the city, county or other governmental agency in whose jurisdiction the work is being performed, or in the discretion of the Owner, the city, county or other governmental agency shall be named as an additional insured. The policy shall insure the Owner, the Engineer and the Owner's Representative and each of their officers, employees, agents and volunteers as additional named insureds; the bidder, its employees and its subcontractors and each of their employees, and their heirs, agents, and employees, while acting within the scope of their duties, against all claims arising out of or in connection with the Work to be performed and shall remain in full force and effect until the Work is accepted by the Owner. The bidder shall also provide such additional named insured endorsements [Insurance Services Office (ISO) Form Number CG 2010 or equivalent] as may be required by the Owner, in the Owner's sole discretion.

The Owner, the Engineer and the Owner's Representative and each of their directors, officers, employees, agents and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor, products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded the additional insureds.

(b) The above-referenced insurance policy (or policies) shall be furnished at the bidder's expense, in a form and with insurance companies authorized to do business and have an agent for service of process in California and have a "A-" policyholder's rating and a Financial Size Category rating of at least VII in accordance with the most recent Best's Insurance Guide, or as otherwise approved by the Owner. If Best's is no longer published, comparable ratings must

be provided from a service acceptable to Owner. Such insurance, in addition to the multiple additional named insured endorsements set forth above, shall be commercial general liability insurance in the amounts set forth below, and shall contain additional endorsements as follows: (i) Providing blanket contractual liability coverage for the bidder's indemnification obligations to Owner and others pursuant to the Contract Documents; (ii) Providing coverage for explosion, collapse, underground excavation and removal of lateral support; (iii) Providing that the insurance may not be canceled or reduced until 30 days after the Owner and its Engineer have actually received written notice of such cancellation or reduction; (iv) Providing "cross liability" or "severability of interest" coverage for all insureds under the policy or policies; and (v) Providing that any other insurance maintained by Owner, the Engineer or any other named insured is excess insurance, and not contributing insurance with the insurance required herein. The amount of coverage shall be no less than the following:

- (1) General bodily injury and property damage -- \$5,000,000 per occurrence.
- (2) Automobile bodily injury and property damage -- \$5,000,000 per occurrence, including owned, non-owned and hired autos, and providing coverage for loading and unloading.

The bidder shall, within the time specified in Section I-11 hereof, file with the Owner evidence of insurance from an insurer or insurers certifying to the coverage of all required insurance. Such evidence shall include original copies of the ISO CG 2010 (or insurer's equivalent) signed by the insurer's representative and certificate(s) of insurance (Accord Form 25-S or equivalent) reflecting the existence of the required insurance. If required by the Owner, the bidder shall furnish a complete copy of the policy or policies, and all endorsements thereto. Commercial general liability insurance must include Owner's and Contractor's Protective Coverage, Products - Completed Operations Coverage, Premises - Operations Coverage, and must provide for coverage of Owner's facilities during the course of construction. Notwithstanding the foregoing, bidder is not hereby required to provide insurance with respect to liability for damages resulting solely from error or omission in design which is not due to or contributed to by negligence or fault of the contractor, its subcontractors, agents, employees or officers.

I-14 ASSIGNMENT OF CONTRACT - The Contractor shall not assign the Contract Documents or any part thereof, or any funds to be received thereunder, without the prior written approval of both the Owner and Surety. Notwithstanding the foregoing, and to the extent permitted by law, Owner has the absolute right to refuse, on any ground or no grounds, any and all assignments or attempted assignments of the Contract Documents or of any rights to payment pursuant thereto.

I-15 NON-COLLUSION AFFIDAVITS - In accordance with the provisions of Section 7106 of the Public Contract Code, each bidder shall execute and submit with their bid a Non-Collusion Affidavit in the form attached to the Proposal. Additionally, the principal contractor shall secure from each proposed subcontractor a Non-Collusion Affidavit in the form attached to the Agreement.

I-16 FINANCIAL STATEMENT - In the course of evaluating the capacity and competence of a bidder to perform the Work, the Owner may require any bidder to furnish a recent statement of their financial condition or such other evidence of their qualifications as may be requested by the Owner. If a bidder fails to promptly furnish the information requested, it shall be considered sufficient grounds for rejection of such bidder's entire bid.

Section 1771.4(a)(2) Contractor is required to post job site notices

Section 1773.3 District requirements to notice Department of Industrial Relations of any public works contract within (5) days of award per Online form PWC-100

PROPOSAL

BIDDER'S DECLARATION

Gentlepersons:

The undersigned hereby proposes to perform all work for which a contract may be awarded them and to furnish any and all plant, labor, services, material, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefor as provided in the Contract Documents, and to do everything required therein for the construction of water system facilities in Sierra Madre Villa Ave., Villa Highlands Dr., Villa Knolls Dr., Edgecliff Ln., and Lower Pasadena Glen.

as specifically set forth in documents entitled KINNELOA IRRIGATION DISTRICT plans for Sierra Madre Villa Ave., Villa Knolls Dr., and Edgecliff Ln., and Lower Pasadena Glen Water Line Improvements together with addenda thereto, all as set forth on the drawings and in the specifications and other Contract Documents (hereinafter the "Work"); and they further propose and agree that, if this Proposal is accepted, they will contract in the form and manner stipulated to perform all the Work called for by drawings, specifications, and other Contract Documents, and to complete all such Work in strict conformity therewith within the time limits set forth therein, and that the Contractor will provide security as payment therefor the prices set forth in the Bid Sheet(s) forming a part hereof.

(check one)

- ☐ Cash
- ☐ Cashier's check
- ☐ Certified check
- ☐ Bid Bond

properly made payable to KINNELOA IRRIGATION District, hereinafter designated as the Owner, for the sum of \$_____, which amount is not less than 10 percent of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds and insurance if awarded the contract and, in case of failure to do so within the time provided, the

(check one)

- ☐ cash shall be retained as liquidated damages by the Owner
- ☐ proceeds of said check shall be retained as liquidated damages by the Owner
- ☐ Surety's liability to the Owner for the face amount of the Bond shall be considered as

established.

It is understood and agreed that:

1. The undersigned has carefully examined all the Contract Documents, as defined in Section N-12 of the Notice Inviting Bids, including, but not limited to, the bid quantities, any specifications regarding materials to be used, the contract provisions relating to payment for extra work and the procedures for seeking extensions of time.

2. The undersigned, by investigation at the site of the work, by review of any records available for inspection at the offices of utilities in the area affected by the Work, at any applicable public works departments, and otherwise, is satisfied as to the nature and location of the work and is fully informed as to all conditions and matters which can in any way affect the work or the cost thereof, including the location of all underground facilities in the area affected by the Work.

3. The undersigned fully understands the scope of the Work and has checked carefully all words and figures inserted in this Proposal and further understands that the Owner will in no way be responsible for any errors or omissions in the preparation of this Proposal.

4. The undersigned will execute the Agreement and furnish the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Sundays and holidays) after Owner's notice of acceptance of this Proposal; and further, that, unless otherwise specified in the Special provisions, this Proposal may not be withdrawn for a period of forty-five (45) days after the date set for the opening thereof, notwithstanding the award of contract to another bidder. If the undersigned bidder withdraws this Proposal within said period, said bidder shall be liable under the provisions of the Bid Security, or said bidder and their surety shall be liable under the Bid Bond, as the case may be.

5. The undersigned hereby certifies that this Proposal is genuine and not sham or collusive or made in the interest or in behalf of any person not herein named, and the undersigned 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; the undersigned has not in any manner sought by collusion to secure for themselves an advantage over any other bidder.

6. In conformance with current statutory requirement of the Labor Code of the State of California, the undersigned certifies as follows:

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

NOW, in compliance with the Notice Inviting Bids and all the provisions hereinbefore stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the entire work for the prices set forth in the attached Bid Sheet(s) upon which award of contract will be made.

The undersigned bidder declares that the license held by them is theirs, is current and valid, and is in a classification appropriate to the work to be undertaken.

The undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed at _____, California.

Dated _____ 26 _____

Bidder: _____

By: _____

Title: _____

Bidder's post-office address:

Telephone No.: _____

Facsimile No.: _____

Corporation organized under the laws
of the State of _____

Contractor's License(s): _____

Expiration Dates: _____

Surety or sureties:

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT IS FILED WITHIN THREE YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

BID SCHEDULE

Schedule of Prices for Construction of
Water Line Improvement Project
For
Sierra Madre Villa Ave., Villa Knolls Dr., and Edgecliff Ln.

Kinneloa Irrigation District

Item No.	Description	Quantity	Unit Cost	Item Amount	
1	Mobilization, Demobilization, and Guarantee	L.S.	1	\$_____	\$_____
2	Safety, Traffic Control Measures and Traffic Control plans	L.S.	1	\$_____	\$_____
3	Provide Trench and Excavation Safety Measures	L.S.	1	\$_____	\$_____
4	Replace pavement striping and replace any survey monuments disturbed by the construction activities. Provide Construction Survey.	L.S.	1	\$_____	\$_____
5	Furnish and Install 12-inch Steel pipe in improved street r/w, including: fittings, removal and disposal of AC pavement material, excavation, removal and disposal of excavation material, sand bedding, slurry backfill, compaction, compaction testing, tracer wire, etc.	L.F.	671	\$_____	\$_____
6	Furnish and Install 12-inch Ductile Iron pipe in improved street r/w, pressure class 350, including: fittings, removal and disposal of AC pavement material, excavation, removal and disposal of excavation material, sand bedding, slurry backfill, compaction, compaction testing, tracer wire, etc.	L.F.	88	\$_____	\$_____
7	Furnish and Install 8-inch Ductile Iron pipe in improved street r/w, pressure class 350, including: fittings, removal and disposal of AC pavement material, excavation, removal and disposal of excavation material, sand bedding, slurry backfill, compaction,	L.F.	864	\$_____	\$_____

	compaction testing, tracer wire, etc.				
8	Remove existing Fire Hydrant, Furnish and Install 6-inch Fire Hydrant Assembly with valve box and cover, including fittings, gaskets, etc. per KID Std.	EA.	2	\$_____	\$_____
9	Furnish and Install 12-inch Butterfly Valve, valve box and cover, fittings, gaskets, etc.	EA.	6	\$_____	\$_____
10	Furnish and install 8-Inch RW gate Valve, valve box and cover or handwheel per KID Std.	EA.	7	\$_____	\$_____
11	Furnish and Install 3/4-inch Air Release valve Assembly, including fittings, gaskets, etc. per KID Std. Detail 4/4	EA	2	\$_____	\$_____
12	Furnish and Install sample station per detail 12/3, including fittings, gaskets, etc.	EA	1	\$_____	\$_____
13	Furnish and Install 8-inch Pressure Reducing Valve, vault and cover, retaining wall including piping, valves bends, fittings, gaskets, etc.	EA	1	\$_____	\$_____
14	Furnish and Install 2-inch Pressure Reducing Valve, including 2-inch copper pipe, 2-inch double strap saddles with corporation stop, copper bends, fittings, gaskets, etc.	EA	1	\$_____	\$_____
15	Furnish and install new 1-inch copper domestic service lateral (long and short) side, and reconnect to meter per details 13/5 and 14/5	EA	18	\$_____	\$_____
16	Furnish and install new 1-inch copper domestic service complete per detail 10/5	EA	1	\$_____	\$_____
17	Furnish and install temporary asphalt concrete trench resurfacing for water main and services per detail 5/4 as shown on the plans	L.F.	2,007	\$_____	\$_____
18	Furnish and Install permanent asphalt concrete trench resurfacing minimum 4 inches thick for water main and services per detail 5/4 as shown on the plans	L.F.	2,007	\$_____	\$_____

19	Furnish and Install slurry seal coat per detail 5/4 as shown on the plans	L.F.	763	\$_____	\$_____
20	Pressure test, disinfect, flush, sample, laboratory testing of, water lines.	L.S.	1	\$_____	\$_____
TOTAL BID PRICE THIS SCHEDULE					\$_____

Total Bid Price this schedule in Words _____

BID SCHEDULE

Schedule of Prices for Construction of
Water Line Improvement Project
For
North Pasadena Glen Road
Kinneloa Irrigation District

Item No.	Description	Quantity	Unit Cost	Item Amount	
1	Mobilization, Demobilization, and Guarantee	L.S.	1	\$_____	\$_____
2	Safety and Traffic Control Measures	L.S.	1	\$_____	\$_____
3	Provide Trench and Excavation Safety Measures	L.S.	1	\$_____	\$_____
4	Replace pavement striping and replace any survey monuments disturbed by the construction activities. Provide Construction Survey.	L.S.	1	\$_____	\$_____
5	Furnish and Install 4-inch Ductile Iron pipe in unimproved r/w, pressure class 350, including: fittings, excavation, removal and disposal of excavation material, sand bedding, Aggregate base backfill, compaction, compaction testing, tracer wire, etc.	L.F.	88	\$_____	\$_____
6	Furnish and Install 8-inch Ductile Iron pipe in improved street r/w, pressure class 350,	L.F.	739	\$_____	\$_____

	including: fittings, AC Pavement removal and disposal, excavation, removal and disposal of excavation material, sand bedding, Aggregate base backfill, compaction, compaction testing, tracer wire, etc.				
7	Remove existing Fire Hydrant assembly, Install blind flange on existing tee, Furnish and Install 6-inch Fire Hydrant Assembly with valve box and cover, including fittings, gaskets, etc. per KID Std.	EA.	2	\$_____	\$_____
8	Furnish and install 8-Inch Gate Valve, valve box and cover per KID Std.	EA.	1	\$_____	\$_____
9	Furnish and install 8-Inch Tapping Sleeve and 8-inch Tapping Gate Valve, valve box and cover per KID Std.	EA.	1	\$_____	\$_____
10	Furnish and Install 4-inch Wharf Head Assembly, including fittings, gaskets, etc. per KID Std. Detail 6/3	EA.	1	\$_____	\$_____
11	Furnish and install new 1-inch copper service lateral (long and short) side, and reconnect to meter per detail 4/3	EA.	17	\$_____	\$_____
12	Furnish and install temporary asphalt concrete trench resurfacing for water main, fire hydrants, and services per detail 5/4 as shown on the plans	L.F.	739	\$_____	\$_____
13	Furnish and install permanent asphalt concrete trench resurfacing minimum 4 inches thick for water main, fire hydrants and services per detail 5/3 as shown on the plans	L.F.	739	\$_____	\$_____
14	Pressure test, disinfect, flush, sample, laboratory testing of, water lines.	L.S.	1	\$_____	\$_____
TOTAL BID PRICE THIS SCHEDULE					\$_____

Total Bid Price this schedule in Words _____

**TOTAL BID PRICE BOTH
SCHEDULES**

\$_____

Total Bid Price both schedules in words _____

INFORMATION REQUIRED OF BIDDER

EQUIPMENT/MATERIAL SOURCE INFORMATION

The bidder shall indicate opposite each item of equipment or material listed below, the name of the manufacturer or supplier of the equipment or material proposed to be furnished under the bid. **Failure to comply with this requirement will render the proposal informal and may cause its rejection.** Awarding of a contract under this bid will not imply approval by the Owner of the manufacturers or suppliers listed by the bidder. No substitution will be permitted after award of contract unless equipment or material of the listed manufacturer or supplier cannot meet the specifications.

<u>Equipment/Material</u>		<u>Manufacturer/Supplier</u>
<u>EQUIPMENT / MATERIAL</u>		<u>MANUFACTURER / SUPPLIER</u>
<u>12-inch Steel Pipe</u>		
12-inch ductile Iron Pipe		
12-inch steel Pipe		
8-inch ductile Iron Pipe		
12-inch butterfly valve		
8-inch gate valve		
6-inch fire hydrant assembly		
Water Service materials		
Pressure Reducing Valve		<u>Cla Val</u>
A.C Pavement Materials		
Slurry seal materials		
<u>8-inch Tapping Sleeve</u>		
8-inch Tapping Gate Valve		
<u>Aggregate Backfill Material</u>		
<u>Sand bedding</u>		
<u>Slurry Backfill</u>		

INFORMATION REQUIRED OF BIDDER

SITE INSPECTION AND UNDERGROUND UTILITIES REVIEW -- Describe when, by whom, and in what manner (a) the site for this proposed work was inspected and (b) records of local utility providers were reviewed on behalf of the bidder (NOTE: Failure to demonstrate diligent effort in ascertaining local conditions which may affect the Work will render this Proposal informal or nonresponsive and may result in its rejection):

COMPARABLE PROJECT EXPERIENCE -- In accordance with Section I-5 of the Instructions to Bidders, describe at least six (6) comparable projects completed by bidder within past thirty-six (36) month period, including dates completed, location of work, size of project in dollars, names, addresses, and phone numbers of persons in charge of project construction, and the name and address of the public agency or firm for whom the project was constructed (NOTE: Failure to include at least six (6) jobs similar in size and scope to that contemplated under the Contract Documents will render this Proposal informal or non-responsive and may result in its rejection):

CONTRACTOR'S LICENSING STATEMENT

The undersigned is licensed in accordance with the laws of the State of California providing for the registration of Contractors.

Contractor's License Number(s), Type(s) and Expiration Date(s): _____

Expiration Date: _____

Name of Individual Contractor (print or type): _____

Signature of Owner: _____

Business Address: _____

or

Name of Partnership or Firm: _____

Business Address: _____

Signature, name, title and address of partners signing on behalf of the partnership:

Signed: _____ Name: _____

Title: _____ Address: _____

Signed: _____ Name: _____

Title: _____ Address: _____

Signed: _____ Name: _____

Title: _____ Address: _____

or

Name of Corporation: _____

Business Address: _____

Corporation organized under the laws of the State of _____

SEAL

Signature of Secretary of Corporation

NOTE: CURRENT COPIES OF ALL APPLICABLE LICENSES MUST BE ATTACHED TO THIS PROPOSAL.

LIST OF SUBCONTRACTORS

The bidder is required to furnish the following information in accordance with the provisions of Sections 4100 to 4114, inclusive of the Public Contract Code of the State of California.

Subcontractors must be listed if they will provide work, labor or service in an amount in excess of one-half (1/2) of one percent (1%) of the total bid.

THAT PORTION OF THE WORK TO BE PERFORMED BY SUBCONTRACTORS SHALL, IN THE AGGREGATE, NOT EXCEED 40% OF ALL WORK PERFORMED, BASED UPON THE TOTAL DOLLAR VALUE OF THE WORK.

Subcontractor	License No. & Type	Main Office Address	% of Total Dollar Value Work	Description of Subcontract

(NOTE: THE FOLLOWING FORM SHALL BE USED IN CASE CHECK OR CASH ACCOMPANIES BID.)

BID SECURITY FORM

(Check or Cash to Accompany Bid)

Accompanying this Proposal is

(check one)

- ☐ Cash
- ☐ Certified check payable to the order of <name> District ("Owner")
- ☐ Cashier's check payable to the order of <name> District ("Owner")

in the amount of \$_____, this amount being not less than ten percent (10%) of the total amount of the bid (hereinafter referred to as "Bid Security").

The Bid Security shall become the property of the Owner provided this Proposal is accepted by the Owner through action of its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Performance and Payment Bonds, proof of insurance coverage, and other information requested and set forth in the Instructions to Bidders within the time set forth in the Contract Documents; otherwise, the Bid Security shall be returned to the undersigned. The Bid Security shall also become the property of the Owner if the undersigned withdraws their bid within forty-five (45) days after the date set for bid opening, and notwithstanding the award of the contract to another bidder.

BIDDER

(NOTE: IF THE BIDDER DESIRES TO USE A BOND INSTEAD OF CHECK OR CASH, THE BID BOND FORM ON THE FOLLOWING PAGES SHALL BE EXECUTED -- THE SUM OF THIS BOND SHALL BE NOT LESS THAN 10 PERCENT OF THE TOTAL AMOUNT OF THE BID.)

MANDATORY FORM

(NOTE: THE FOLLOWING FORM SHALL BE USED WHERE THE BIDDER DESIRES TO FURNISH A BOND INSTEAD OF CHECK OR CASH.)

BID SECURITY FORM

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____ as principal
and _____ as surety, are held
and firmly bound unto Kinneloa Irrigation District (hereinafter "Owner,") in the sum of
\$ _____, to be paid to the Owner, its successors, and assigns, for which payment,
well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and
assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the certain Proposal of the above
Principal for construction of Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena
Glen Water Line Improvements as specifically set forth in documents entitled KINNELOA
IRRIGATION DISTRICT plans for Sierra Madre Villa Ave., Villa Knolls Dr., and Edgecliff Ln. Water
Line Improvements and Pasadena Glen all in accordance with the Contract Documents, including
specifications and drawings on file at the offices of the Owner, is not withdrawn within the period
of 45 days after the date set for the opening of bids or as otherwise provided in the Special
Provisions, notwithstanding the award of the contract to another bidder, and that if said
Proposal is accepted by the Owner through action of its legally constituted contracting authorities
and if the above bound principal, its heirs, executors, administrators, successors and assigns, shall
duly enter into and execute a contract for such construction and shall execute and deliver the
required Performance and Payment Bonds
and proof of insurance coverage within ten (10) days (not including Sundays and holidays) after
the date of notifications by and from said Owner, then this obligation shall become null and void,
otherwise it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we hereunto set our hands and seals this
day of _____, 26 ____

(Principal)
By _____

_____(SEAL)
(Surety)

By _____

NOTE:

- (1) This bid bond form is a **mandatory form**.
- (2) The bid bond form should specify an exact number of dollars which shall not be less than ten percent (10%) of the total amount of the bid.
- (3) The bid bond form must be acknowledged before notary publics, and a legally sufficient power of attorney must be attached to the bid bond to verify the authority of the party signing on behalf of the surety.

MANDATORY FORM

TO BE EXECUTED BY EACH BIDDER

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
)SS
COUNTY OF _____)

_____, being first duly sworn, declares that he/she is

[NAME]

of _____

(SOLE OWNER, A PARTNER, PRESIDENT, SECRETARY, ETC.)

[IDENTITY OF BIDDER]

the party submitting a bid for a contract covering KINNELOA IRRIGATION DISTRICT plans for Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvements that such a bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, nor that anyone shall refrain from bidding; and that said bidder has not in any manner, directly or indirectly, sought by agreement, communications or conference with anyone to fix the bid price of said bidder or any other bidder, nor to fix any overhead, profit, or cost element of such bid price, nor of that of any other bidder, nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not, directly or indirectly, submitted their bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in their general business.

Dated: _____

Signed: _____

[TITLE]

Subscribed and sworn to before me this ____ day of _____, 26 _____, by

_____, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Notary Public

SEAL

AGREEMENT

THIS AGREEMENT, made and entered into this ____ day of _____ in the year 2026 by and between Kinneloa Irrigation District, a public corporation organized and existing under the provisions of the Water Code of the State of California, hereinafter referred to as "Owner," and _____, hereinafter referred to as "Contractor."

The parties hereto mutually covenant and agree as follows:

1. The Contract Documents, as that term is defined in Section N-12 of the Notice Inviting Bids, are hereby incorporated in and made a part of this Agreement as though fully set forth herein.

2. For and in consideration of the payments and agreements to be made and performed by the Owner as set forth in said Contract Documents, the Contractor agrees with the Owner to construct **Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvement Project**, as specifically set forth in said Contract Document entitled **KINNELOA IRRIGATION DISTRICT Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvement Project** for which award of contract is made; to furnish at its own proper cost and expense all plant, labor, services, materials, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefore, as provided in the Contract Documents, and to do everything required therein. In accordance with the provisions of Section 3700 of the Labor Code, the Contractor will secure payment of compensation of its employees by acquisition of workers' compensation insurance or by qualification as a self-insurer.

3. The Contractor shall provide for payments on all required insurance policies, and shall obtain all necessary permits and licenses. The Contractor shall furnish and remove all plant, temporary work or structures, tools, and equipment necessary to accomplish the Work contemplated and embraced in this Agreement and the Contract Documents, and shall be responsible for all loss and damage arising out of the nature of the Work during its progress and prior to Owner's acceptance, from the action of the elements and from any unforeseen difficulties which may arise or be encountered in the prosecution of the Work, and for all other risks of any description connected with the Work. The Contractor shall also be responsible for all expenses incurred by or in consequence of the suspension or discontinuance of Work, except where the Contract Documents expressly stipulate otherwise. In consideration of the foregoing, and for well and faithfully completing the Work within the stipulated time and in the manner shown and described in the Contract Documents and in accordance with the requirements of the Engineer under them, the Owner shall pay, and the Contractor shall receive in full compensation therefore, the prices set forth in the accepted Proposal. The total compensation to be paid shall be computed on the basis of the units of work actually performed in accordance with the requirements of the Contract Documents and paid for at the prices stated by the Contractor in the Bid Sheet(s) for completion of the Work. All time limits stated in the Contract Documents are of the essence of this Agreement.

4. The Owner promises and agrees to employ, and does hereby employ, Contractor to provide the materials and to do the Work according to the terms and conditions herein contained and referred to, for the price aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in the Contract Documents; and the parties for themselves, their heirs, executors, administrators, successors and assigns do hereby agree to the full performance of the covenants herein contained in this Agreement.

5. No work, services, material, or equipment shall be performed or furnished under this Agreement unless and until a Notice to Proceed has been given to the Contractor by the Owner, in accordance with the Contract Documents. The Work under this Agreement shall be completed to the approval and entire satisfaction of the Owner and its Engineer.

6. The Contractor shall assume the defense of and indemnify and hold harmless the Owner, and its Engineer and their respective directors, officers, employees, agents and volunteers, and each of them from and against:

a. Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind and nature whatsoever for, but not limited to, injury to or death of any person including, the Owner, the Engineer, and/or the Contractor, or any of their directors, officers, employees, agents or volunteers, and damages to or destruction of property of any person, including but not limited to, the Owner, the Engineer and/or the Contractor and any of their directors, officers, employees, agents or volunteers, arising out of or in any manner directly or indirectly connected with the Work to be performed under this Agreement, however caused, regardless of any negligence of the Owner, its Engineer or any of their directors, officers, employees, agents or volunteers, except the sole negligence or willful misconduct or active negligence of the Owner, its Engineer, or any of their directors, officers, employees, agents or volunteers;

b. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or in equity, of every kind or nature whatsoever, arising out of, resulting from or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor.

Contractor shall defend, at the Contractor's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind arising out of or connected with the Work that may be brought or instituted against the Owner, its Engineer or any of their directors, officers, employees, agents or volunteers.

Contractor shall pay and satisfy any judgment, award or decree that may be rendered against the Owner, its Engineer or any of their directors, officers, employees, agents or volunteers, in any such suit, action or other legal proceeding.

Contractor shall reimburse the Owner, its Engineer or any of their directors, officers, employees, agents and/or volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided.

Contractor agrees to carry insurance for this purpose as set out in the specifications. See Section I-13 of the Instructions to Bidders, entitled LIABILITY INSURANCE, and Section A Article 7 of the General Provisions, entitled CONTRACTOR'S INSURANCE, for insurance specifications and coverage. Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the Owner, its Engineer or any of their directors, officers, employees, agents and/or volunteers.

7. If any provision of this Agreement is found by a court of competent jurisdiction to be invalid, void or unenforceable for any reason, the remaining provisions shall continue in full force and effect without being impaired or invalidated in any way. If the court finds that any provision of this Agreement is invalid or unenforceable, but that by limiting such provision it would then become valid and enforceable, then such provision shall be deemed written, construed and enforced as so limited taking into account the intent of the parties at the time of executing this Agreement.

8. In employing Contractor to perform the Work contemplated under the Contract Documents, the Owner has relied on the experience, expertise and integrity of the Contractor.

The rights and obligations of the Contractor under this Agreement shall therefore not be assignable without the prior express written consent of the Owner.

9. This Agreement constitutes the entire Agreement of the parties with respect to the subject matter, and no amendment, modification or alteration of the terms hereof shall be binding unless the same is in writing, dated subsequent to the date hereof and duly approved and executed by each of the parties.

10. This Agreement, and the application or interpretation hereof, shall be governed exclusively by its terms and by the laws of the State of California. Venue for all purposes shall be deemed to lie within Los Angeles County, California, and any action to enforce this Agreement or for any remedies, damages, or other relief shall only be brought in either the state courts of the State of California in and for the County of Los Angeles or in the United States District Court, Central District of California.

IN WITNESS WHEREOF: The parties hereto have caused this Agreement to be executed as of the day and year first above written.

"OWNER"

By: _____
Its _____
[TITLE]

By: _____
Its _____
[TITLE]

"CONTRACTOR"

License No(s) _____
Expiration Date(s) _____

by: _____
Its _____
[TITLE]

NOTE: Contractor shall furnish, to the satisfaction of Owner's Attorney, verification that the persons signing this Agreement as Contractor or on behalf of the Contractor have authority and legal authorization to bind the Contractor.

FAITHFUL PERFORMANCE BOND

Bond No. _____

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, hereinafter referred to as "Contractor," as principal, and _____, as surety, are held and firmly bound unto Kinneloa Irrigation District, hereinafter referred to as "Owner," in the sum of \$_____, lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and/or assigns, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into a contract with Owner for construction of, **Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvement Project** as specifically set forth in documents entitled **KINNELOA IRRIGATION DISTRICT Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvement Project** and is required under the terms of the Contract Documents to give this bond in connection with the execution of said contract:

NOW THEREFORE, if said Contractor shall well and truly do and perform all of the covenants and obligations of said contract on its part to be done and performed at the times and in the manner specified herein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect;

PROVIDED, that any alterations in the work to be done, or the material to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety there under, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such alterations or extensions of the contract is hereby waived by the surety.

FURTHER PROVIDED, that, as provided in Section 6-19 of Section A of the General Provisions entitled "Termination for Breach," and upon termination in accordance with said Section 6-19, if the direct and indirect costs of completing the Work, including, but not limited to, all costs to Owner arising from professional services and attorneys' fees and all costs generated to insure or bond the work of substituted contractors or subcontractors utilized to complete the Work, exceed the balance due the Contractor, on failure of Contractor to pay, the Surety shall pay on demand by Owner. Any portion of such difference not paid by Surety within thirty (30) days following the mailing of a demand for such costs by Owner shall earn interest at the rate of ten percent (10%) per annum or the maximum rate authorized by California law, whichever is lower.

If any action is brought upon this bond by said Owners and judgment is recovered (or settlement is made which is favorable to Owner), then said surety shall pay all costs incurred by said Owners in such action, including a reasonable attorney's fee.

WITNESS our hands this _____ day of _____, 2026_____.

Contractor: _____

MANDATORY FORM

Surety: _____

By: _____

By: _____

Title: _____

Title: _____

By: _____

Home Office Address: _____

Title: _____

Phone: _____

Attorney-in-Fact: _____

Address: _____

SEAL

Phone: _____

NOTE: This bond must be acknowledged before notary publics, and a legally sufficient power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, hereinafter referred to as "Contractor," as principal, and _____, as surety, are held and firmly bound unto Kinneloa Irrigation District, hereinafter referred to as "Owner," in the sum of \$_____, lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and/or assigns, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into a contract with Owner for construction of Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvement Project, as specifically set forth in documents entitled KINNELOA IRRIGATION DISTRICT Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line Improvement Project and is required under the terms of the Contract Documents to give this bond in connection with the execution of said contract:

NOW, THEREFORE, if Contractor or any of its subcontractors, 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 work or labor thereon of any kind, or fails to pay any of the persons named in Section 3181, California Civil Code or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant or for any amounts required to be deducted, withheld and paid to the Employment Development Department from the wages of employees of the Contractor and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor and all other applicable laws of the state of California and rules and regulations of its agencies, then said Surety will pay for the same in an amount not exceeding the sum specified above. This bond shall inure to the benefit of any persons named in Civil Code Section 3181, so as to give a right of action to them or their assigns in any suit brought upon this bond. This bond shall be subject to and include all of the provisions of Title XV of Part 4 of Division 3 of the Civil Code of the State of California relating to Payment Bond for Public Works, including but not limited to Civil Code Sections 3225-3226 and 3247-3252, inclusive.

PROVIDED, that any alterations in the work to be done, or the material to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety there under, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such alteration or extensions of the contract is hereby waived by the surety.

WITNESS our hands this _____ day of _____, 26 ____.

Contractor: _____ Surety: _____

By: _____ By: _____

Title: _____ Title: _____

By: _____ Home Office Address: _____

Title: _____

MANDATORY FORM

Phone: _____

Attorney-in-Fact: _____

Address: _____

SEAL

Phone:

NOTE: This bond must be acknowledged before notary publics, and a legally sufficient power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety submitting separate sub-proposals or quoting prices for materials or work to other bidders.

Dated: _____

Signed: _____

[TITLE]

Subscribed and sworn to before me this ____ day of _____, 2026.

Notary Public

SEAL

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
)SS
COUNTY OF _____)

_____, being first duly sworn,
[NAME]
deposes and says that he/she is _____ of
[SOLE OWNER, A PARTNER, PRESIDENT, SECRETARY, ETC.]
_____, the party submitting a bid for a
_____, the party submitting a bid for a [IDENTITY
OF SUBCONTRACTOR]
subcontract covering _____

[DESCRIBE NATURE OF SUBCONTRACT]

that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, not that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communications or conference with anyone to fix the bid price of said bidder or any other bidder, nor to fix any overhead, profit, or cost element of such bid price, nor of that of any other bidder, nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his or her general business.

The provisions of this affidavit shall not be held as disqualifying a person, firm or corporation who has submitted a sub-proposal to one bidder from submitting separate sub-proposals or quoting prices for materials or work to other bidders.

Dated: _____ Signed: _____

MANDATORY FORM

[TITLE]

Subscribed and sworn to before me this ____ day of _____, 2026, by

_____, proved to me on the basis of
satisfactory evidence to be the person who appeared before me.

Notary Public

SEAL

TO: _____

[CONTRACT AWARDEE]

NOTICE TO PROCEED

TO BE EXECUTED BY EACH AWARDEE OF A SUBCONTRACT

FROM: Board of Directors
Kinneloa Irrigation District

NOTICE IS HEREBY GIVEN that you are authorized and directed to proceed with the following project in accordance with the Contract Documents:

**KINNELOA IRRIGATION DISTRICT Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln.
and Pasadena Glen Water Line Improvement Project**

The documents checked off below have been received and are on file with the General Manager of the Kinneloa Irrigation District:

<u>Document</u>	<u>*</u>	<u>Spec. Form</u>
The Agreement, fully executed	A-1 to A-4	[]
Faithful Performance Bond (100%)	A-5 to A-6	[]
Payment Bond	A-7	[]
Worker's Compensation Insurance Certificate	7-4	[]
Liability Insurance Policy or Certificate	7-2	[]
Risk Transfer Agreement	P-18	[]
Additional Insured – Owners Lessees or Contractors – Form B	P-19	[]
Non-Collusion Affidavit	P-10 to P-11	[]
Construction Schedule	5-2	[]
Builder's Insurance	Per G-3A	[]

A copy of the Award of Contract has been mailed by this District to the California Division of Apprenticeship Standards, Department of Industrial Relations.

Under the terms of the Contract Documents, work is to start within fifteen (15) calendar days after the date set forth below and is to be completed within the time set forth in the Special Provisions.

KINNELOA IRRIGATION DISTRICT

Dated: _____ by: _____

Title: _____

* Applicable section of Standard Specifications for Public Works Construction, latest edition, and all supplements.

RISK TRANSFER AGREEMENT

Precedence This risk transfer agreement shall take precedence over any conflicting sections of the specifications or contract documents.

Workers' Compensation Insurance - By his/her signature hereunder, Contractor certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing the performance of the work of this agreement.

Indemnification - To the fullest extent permitted by law, Contractor shall immediately defend, indemnify and hold harmless KINNELOA IRRIGATION DISTRICT, its directors, officers, employees, or authorized volunteers (collectively the District), and each of them from and against:

- a) Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind or nature whatsoever for, but not limited to, injury to or death of any person including KINNELOA IRRIGATION DISTRICT and/or Contractor, or any directors, officers, employees, or authorized volunteers of KINNELOA IRRIGATION DISTRICT or Contractor, and damages to or destruction of property of any person, including but not limited to, KINNELOA IRRIGATION DISTRICT and/or Contractor or their directors, officers, employees, or authorized volunteers, arising out of or in any manner directly or indirectly connected with the work to be performed under this agreement, however caused, regardless of any negligence of KINNELOA IRRIGATION DISTRICT or its directors, officers, employees, or authorized volunteers (including passive negligence), except the sole negligence or willful misconduct or active negligence of KINNELOA IRRIGATION DISTRICT or its directors, officers, employees, or authorized volunteers. Contractor shall immediately defend upon the Member Water District's tender, at Contractor's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against Member Water District, its officials, officers, agents, employees and representatives, notwithstanding whether Contractor's liability is or can be established; Contractor's obligation to indemnify shall survive the termination or completion of this agreement for the full period of time allowed by law and shall not be restricted by the insurance requirements of this Contract or to insurance proceeds, if any received by KINNELOA IRRIGATION DISTRICT, or its directors, officers, employees, or authorized volunteers.
- b) Contractors defense and indemnity obligation herein includes, but is not limited to damages, fines, penalties, attorney's fees and costs arising from claims under the Americans With Disabilities Act (ADA) or other federal or state disability access or discrimination laws arising from Contractor's Work during the course of construction of the improvements or after the Work is complete, as the result of defects or negligence in Contractor's construction of the improvements.
- a) Any and all actions, proceedings, damages, costs, expenses, fines, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account

MANDATORY FORM

of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor;

- b) Any and all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the work and all of the Contractor's obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

Contractor shall pay and satisfy any judgment, award or decree that may be rendered against KINNELOA IRRIGATION DISTRICT or its directors, officers, employees, or authorized volunteers, in any and all such suits, actions, or other legal proceedings.

Contractor shall reimburse KINNELOA IRRIGATION DISTRICT or its directors, officers, employees, or authorized volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by KINNELOA IRRIGATION DISTRICT, or its directors, officers, employees, or authorized volunteers.

GENERAL CONDITIONS

Laws, Regulations and Permits - The Contractor shall give all notices required by law and comply with all laws, ordinances, rules and regulations pertaining to the conduct of the work. The Contractor shall be liable for all violations of the law in connection with work furnished by the Contractor. If the Contractor observes that the drawings or specifications are at variance with any law or ordinance, rule or regulation, he/she shall promptly notify KINNELOA IRRIGATION DISTRICT engineer in writing and any necessary changes shall be made by written instruction or change order. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules or regulations and without giving notice to KINNELOA IRRIGATION DISTRICT engineer, the Contractor shall bear all costs arising therefrom.

Safety - In the performance of this contract the contractor shall comply with all applicable federal, state and local statutory and regulatory requirements including 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

MANDATORY FORM

are necessary or lawfully required to prevent accidents, injuries, or illnesses; 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 which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under Cal/OSHA safety and health standards.

The Contractor shall be responsible for the safeguarding of all utilities. At least two 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 KINNELOA IRRIGATION 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 KINNELOA IRRIGATION DISTRICT specific plans to show details of provisions for worker protection from caving ground during excavations of trenches of five feet or more in depth. The excavation/trench safety plan shall be submitted to and accepted by KINNELOA IRRIGATION 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 KINNELOA IRRIGATION DISTRICT before work begins.

Commercial General Liability and Automobile Liability Insurance - The Contractor shall provide and maintain the following commercial general liability and automobile liability insurance:

Coverage - Coverage for commercial general liability and automobile liability insurance shall be at least as broad as the following:

1. Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001)

2. Insurance Services Office (ISO) Business Auto Coverage (Form CA 0001), covering Symbol 1 (any auto)
3. Insurance Service Office (ISO) Excess Liability (if necessary)

Limits - The Contractor shall maintain limits no less than the following:

1. General Liability - Five million dollars (\$5,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to KINNELOA IRRIGATION DISTRICT) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability - One million dollars (\$1,000,000) for bodily injury and property damage each accident limit.
3. Excess Liability (if necessary) - The limits of Insurance required in this agreement may be satisfied by a combination of primary and umbrella or excess Insurance. Any umbrella or excess Insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non contributory basis for the benefit of the District (if agreed to in a written contract or agreement) before the District's own primary or self Insurance shall be called upon to protect it as a named insured

Required Provisions - The general liability, auto liability and excess liability policies are to contain, or be endorsed to contain, the following provisions:

1. KINNELOA IRRIGATION DISTRICT, its directors, officers, employees, and authorized volunteers are to be given insured status at least as broad as ISO endorsement CG 2010 11 85; or both CG 20 37 and CG 20 38 04 13 (or the CG 20 10 04 13 (or earlier edition date) specifically naming all of the District parties required in this agreement, or using language that states "as required by contract"). All Subcontractors hired by Contractor must also have the same forms or coverage at least as broad; as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises

owned, occupied or used by the Contractor; and automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to KINNELOA IRRIGATION DISTRICT, its directors, officers, employees, or authorized volunteers.

2. It is understood and agreed to by the parties hereto and the insurance company(s), that the Certificate(s) of Insurance and policies shall so covenant and shall be construed as primary, and KINNELOA IRRIGATION DISTRICT insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory using the ISO endorsement CG 20 01 04 13 or coverage at least as broad.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to KINNELOA IRRIGATION DISTRICT, its directors, officers, employees, or authorized volunteers.
4. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the KINNELOA IRRIGATION DISTRICT..

Such liability insurance shall indemnify the Contractor and his/her sub-contractors against loss from liability imposed by law upon, or assumed under contract by, the Contractor or his/her sub-contractors for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, underground excavation, and removal of lateral support.

The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

All of the insurance shall be provided on policy forms and through companies satisfactory to KINNELOA IRRIGATION DISTRICT.

Deductibles and Self-Insured Retentions - Insurance deductibles or self-insured retentions must be declared by the Contractor, and such deductibles and retentions shall have the prior written consent from KINNELOA IRRIGATION DISTRICT. At the election of KINNELOA IRRIGATION DISTRICT the Contractor shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by

either the named or additional insureds, co-insurers, and/or insureds other than the First Named Insured.

Acceptability of Insurers -

Any insurance carrier providing insurance coverage required by the Contract Documents shall be admitted to and authorized to do business in the State of California unless waived, in writing, by KINNELOA IRRIGATION DISTRICT Risk Manager. Carrier(s) shall have an A.M. Best rating of not less than an A-: VII or better.

Workers' Compensation and Employer's Liability Insurance -

The Contractor shall Provide, during the life of this Contract, workers' compensation insurance for all of the employees engaged in Work under this Contract, on or at the Project site, and, in case any of sublet Work, the Contractor shall require each subcontractor similarly to provide workers' compensation insurance for all the latter's employees as prescribed by State law. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in work under this Contract, on or at the Project site, is not protected under the Workers' Compensation Statutes, the Contractor shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected. The Contractor is required to secure payment of compensation to his employees in accordance with the provisions of Section 3700 of the Labor Code. The Contractor shall file with KINNELOA IRRIGATION DISTRICT certificates of its insurance protecting workers and shall provide certificates at any time upon request. Company or companies providing insurance coverage shall be acceptable to KINNELOA IRRIGATION DISTRICT, if in the form and coverage as set forth in the Contract Documents.

Contractor shall assume the immediate defense of and indemnify and save harmless KINNELOA IRRIGATION DISTRICT and its officers and employees, agents, and consultants from all claims, loss, damage, injury, and liability of every kind, nature, and description brought by any person employed or used by Contractor, or any subcontractor, to perform the Work under this contract regardless of responsibility or negligence. Contractor hereby agrees to waive rights of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation Policy shall be endorsed with a waiver of subrogation in the favor of the Member Water District for all work performed by the Contractor, its employees, agents and subcontractors.

Responsibility for Work - Until the completion and final acceptance by KINNELOA IRRIGATION 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-erections, and repairs occasioned or rendered necessary by causes of any nature whatsoever.

The Contractor shall provide and maintain builder's risk insurance (or installation floater) covering all risks of direct physical loss, damage or destruction to the work in the amount specified in the General Conditions, to insure against such losses until final acceptance of the work by KINNELOA IRRIGATION DISTRICT. Such insurance shall insure at least against the perils of fire and extended

MANDATORY FORM

coverage, theft, vandalism and malicious mischief, and collapse.¹ KINNELOA IRRIGATION DISTRICT, its directors, officers, employees, and authorized volunteers shall be named insureds on any such policy. The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for KINNELOA IRRIGATION DISTRICT or be construed as relieving the Contractor or his/her subcontractors of responsibility for loss from any direct physical loss, damage or destruction occurring prior to final acceptance of the work by KINNELOA IRRIGATION DISTRICT..

The Contractor shall waive all rights of subrogation against KINNELOA IRRIGATION DISTRICT, its directors, officers, employees, or authorized volunteers.

Evidences of Insurance - Prior to execution of the agreement, the Contractor shall file with KINNELOA IRRIGATION DISTRICT a certificate of insurance (Acord Form 25 or equivalent) signed by the insurer's representative evidencing the coverage required by this agreement. Such evidence shall include an additional insured endorsement signed by the insurer's representative and evidence of waiver of rights of subrogation against KINNELOA IRRIGATION DISTRICT (if builder's risk insurance is applicable). Such evidence shall also include (1) attached additional insured endorsements with primary & non-contributory wording, (2) Workers' Compensation waiver of subrogation, and (3) a copy of the CGL declarations or endorsement page listing all policy endorsements, and confirmation that coverage includes or has been modified to include Required Provisions 1-5 above. The District reserves the right to obtain complete, certified copies of all required insurance policies, 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 Member Water District deliver evidence of coverage showing continuation of coverage for at least (10) 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 KINNELOA IRRIGATION DISTRICT (if builder's risk insurance is applicable) to KINNELOA IRRIGATION 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. The Contractor shall, upon demand of Member Water District, deliver to Member Water District copies such policy or policies of insurance and the receipts for payment of premiums thereon.

Member Water District reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage or other circumstances.

DATE: _____
SIGNED: _____

CONTRACTOR

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COMPANY: _____

GENERAL PROVISIONS

ARTICLE 1. DEFINITIONS, TERMS, AND ABBREVIATIONS

1-1 DEFINITIONS

Whenever the following terms occur in the Contract Documents, the meaning shall be interpreted as follows:

ACCEPTANCE, FINAL ACCEPTANCE. The formal action by the Owner accepting the work as being complete.

ACCEPTED BID. The bid (proposal) accepted by the Owner.

ADDENDUM. Written or graphic instrument issued prior to the opening of bids which clarifies, corrects, or changes the bidding or Contract Documents. The term Addendum shall include bulletins and all other types of written notices issued to potential bidders prior to opening of bids.

BID (PROPOSAL). The set of documents submitted by a bidder on the form provided as part of the Contract Documents, setting forth the amount for which the bidder is willing to perform the work contemplated under the Contract Documents, and including a price breakdown by contract item as shown on the Bid Schedule. The Bid or Proposal shall include the following documents: the signed Bidder's Declaration, Bid Schedule, Information Required of Bidder, the properly completed and executed Contractor's Licensing Statement, List of Subcontractors, Bid Security Forms (including the Bidder's Bond) and Non-Collusion Affidavit. The terms "Bid" or "Proposal" are used interchangeably throughout the Contract Documents, and each shall carry the same meaning.

BIDDER. Any individual, partnership, corporation, joint venture, or other combination thereof submitting a proposal for the work contemplated, acting directly or through an authorized representative.

CLAIM. A separate demand by the Contractor for (A) a time extension, (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the Contractor is not otherwise entitled to, or (C) an amount the payment of which is disputed by the Owner.

CONTRACT. The written agreement executed between the Owner and the Contractor covering the performance of the work.

CONTRACTOR. The individual, partnership, corporation, joint venture, or other combination thereof that has entered into the contract with the Owner for the performance of the work. The term "Contractor" means the Contractor or his authorized representative.

CONTRACT DOCUMENTS. The Contract Documents set forth in Section N-12 of the Notice Inviting Bids; also any and all supplemental agreements amending or extending the work contemplated. Supplemental agreements are written agreements covering alterations, amendments, or extensions to the contract and include contract change orders.

DAYS. Unless otherwise specified, days shall mean consecutive calendar days.

ENGINEER. The engineer identified as such in the Notice Inviting Bids and its subsidiaries. The term "Engineer" means the Engineer or his authorized representative.

OWNER. The public entity identified as such in the Agreement. The term "Owner" means the Owner or its authorized representative.

OWNER'S REPRESENTATIVE. The person or firm or employee of the Owner authorized by the Owner to represent it during the performance of the work by the Contractor. The Owner's Representative means the Owner's Representative or its assistants, and includes those identified as "inspector" by the Owner.

PLANS, DRAWINGS. The plans (drawings), or reproductions thereof, which show the location, character, dimensions, and details of the work to be done.

SPECIAL PROVISIONS. Additions, deletions, and changes to the Notice Inviting Bids, the Instructions to Bidders, and the General Provisions.

SPECIFICATIONS. The directions, provisions, and requirements contained in the General Provisions and Special Provisions as supplemented by the Detailed Specifications and drawings.

SUBCONTRACTOR. An individual, partnership, corporation, joint venture, or other combination thereof that has a contract with the Contractor to perform any of the work at the site. Subcontractor also means an individual, partnership, corporation, joint venture, or other combination thereof that has a contract with another subcontractor to perform any of the work at the site.

UTILITY. Public or private fixed works for the transportation of fluids, gases, power, signals, or communications.

WORK. Any and all obligations, duties, and responsibilities necessary to complete the construction assigned to, or undertaken by, the Contractor pursuant to the Contract Documents, including the furnishing of all labor, materials, equipment and supplies. Also, the completed construction or parts thereof required to be provided under the Contract Documents, including all labor, materials, equipment, and supplies incorporated or to be incorporated in the construction.

1-2 TERMS

Wherever the terms "required", "permitted", "ordered", "designated", "prescribed", or terms of like import are used, it shall be understood that the requirements, permission, order designation, or prescription of the Owner's Representative is intended. Similarly, the terms "acceptable", "satisfactory", "or equal", or terms of like import shall mean acceptable to or satisfactory to the Owner's Representative, unless otherwise expressly stated. The word "provide" shall be understood to mean furnish and install.

1-3 ABBREVIATIONS

Wherever the following abbreviations are used, they shall have the meanings indicated:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron & Steel Institute
ANSI	American National Standards Institute (formerly USASI, USAS, ASA)

API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	American Standards Association (Now ANSI)
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
IEEE	Institute of Electrical and Electronics Engineers
NBFU	National Board of Fire Underwriters
NEMA	National Electrical Manufacturers Association
PCA	Portland Cement Association
State Specification	California Standard Specifications, State of California, Department of Transportation, Division of Highways
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code, Pacific Coast Building Officials Conference of the International Conference of Building Officials
U/L or UL	Underwriters' Laboratories, Inc.

1-4 CITATIONS

Whenever reference is made in the Contract Documents to specific statutes, regulations, orders or other cited materials, such reference shall be read to incorporate any subsequent statutes, regulations, orders or other cited materials which amend, modify or supersede such originally cited reference.

ARTICLE 2. PROPOSAL REQUIREMENTS AND CONDITIONS

2-1 CONTRACT DOCUMENTS

The Notice Inviting Bids, the Instructions to Bidders, the Proposal and Bid Schedule, the General Provisions, the Special Provisions, the Specifications and the Drawings, together with the Bonds and Agreement, constitute the contract. These Contract Documents are complementary, and what is called for in any one shall be as binding as if called for in all. The intention of the documents is to require a complete and finished piece of work including all labor, materials, equipment and transportation necessary for the proper execution of the work, with the exception of such items as are definitely stipulated in the specifications or the drawings to be furnished by the Owner. Anything shown in the drawings and not in the specifications, or in the specifications and not in the drawings, or neither in the specifications nor in the drawings but necessary to properly complete the structure in accordance with the law and governmental rules and regulations, shall be performed by the Contractor as though shown in both the drawings and the specifications. Material or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards. In the event of a conflict between one portion of the Contract Documents and another, the more particular shall prevail over the more general, such that, for example, Special Provisions shall govern over General Provisions and Detail Specifications and Drawings over Standard Specifications.

2-2 LICENSE

No bid will be accepted from a bidder who is not licensed to conduct business in the state of California and licensed to perform the class of work defined by the Contract Documents, as

specified in the Notice Inviting Bids. In the event between the time of bid and the award of the contract the successful bidder is no longer licensed in good standing to perform the class of work defined by the Contract Documents, that bidder's Bid Security shall be forfeited to the Owner as liquidated damages and the Contract shall be awarded to the next lowest responsible bidder. Should the Contractor's license status change or their license expire after construction of the work has begun, the Contractor shall immediately terminate all activity on the work, except that necessary to ensure the safety of persons or property. In such event, the Agreement shall be deemed terminated and the provisions of Section 6-19, entitled TERMINATION FOR BREACH, shall Apply.

2-3 PROPOSALS

Bids shall be made upon the bid form furnished by the Owner and a part of the Contract Documents. All bids shall be properly executed and with all items filled in; the signatures of all persons signing shall be in longhand. Erasures, interlineations, or other corrections shall be authenticated by affixing in the margin immediately opposite the correction the initials of a person signing the bid. If the unit price and the total amount named by a bidder for any item are not in agreement, the unit price alone shall be considered as representing the bidder's intention, the totals shall be corrected to conform thereto.

Bids shall not contain any recapitulation of the work to be done. Alternative proposals will not be considered, except as called for. No oral, telegraphic, or telephonic proposals or modifications will be considered. Bids shall be accompanied by "Bid Security" in the form of cash, a cashier's or certified check, or bidder's bond, in an amount not less than 10% of the amount of bid, made payable to or for the benefit of the Owner. Said Bid Security shall be given as a guarantee that the bidder will enter into a contract and furnish the required bonds and insurance certificates and endorsements if awarded the contract. The refusal or failure of the bidder to enter into the contract and furnish the required bonds, insurance certificates and endorsements, and any other information required under the instructions to bidders within ten (10) days (not including Sundays and holidays) after the date of notification of award by the Owner in writing will result in damages being sustained by the Owner, which damages are, and will continue to be, impracticable and extremely difficult to ascertain. In the event of such failure to enter into the Contract and comply with the requirements thereof, the Bid Security shall be forfeited to the Owner, as liquidated damages and not as a penalty. Forfeiture does not preclude the Owner from seeking all other remedies provided by law to recover losses sustained as a result of the Contractor's failure to enter into the contract or to furnish the required bonds, insurance certificates and endorsements, or other information required of bidder.

Bids shall be sealed in an envelope marked and addressed as set forth in the Notice Inviting Bids. Bids shall be delivered to the addressee at the location designated in the Notice Inviting Bids on or before the day and hour set for the opening of bids in the Notice Inviting Bids, and shall bear the name of the bidder. A bid will not be accepted after the date and time designated in the Notice Inviting Bids. It is the sole responsibility of the bidder to see that their bid is delivered and received in proper time. Any bid received after said designated date and time shall be returned to the bidder unopened.

2-4 ADDENDA

Addenda issued by the Owner before the time set for opening bids shall be included in the bid and shall be made a part of the contract. However, where any addendum to the Contract Documents includes a material change in, addition to or deletion from the bid specifications, as defined in Public Contract Code Section 4104.5, and that addendum is issued later than seventy-two (72) hours prior to the bid opening date, the bid opening date will be extended by at least seventy-two (72) hours. Notification of such extension of the bid opening date will be included in the addendum.

2-5 EXISTING CONDITIONS AND EXAMINATION OF CONTRACT DOCUMENTS

The bidder represents that they have carefully examined the Contract Documents and the site where the Work is to be performed and that they have familiarized himself with all local conditions and federal, state and local laws, ordinances, rules, and regulations that may affect in any manner the performance of the Work. The bidder further represents that they have studied all surveys and investigation reports about subsurface and latent physical conditions pertaining to the area affected by the Work, including the location of underground facilities, that they have performed such additional surveys and investigations as they deem necessary to complete the Work at their bid price, and that they have correlated the results of all such data with the requirements of the Contract Documents. The submittal of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, including locality, uncertainty of weather and all other contingencies, and as to the character, quality, quantities, and scope of the Work.

The plans and specifications for the Work show subsurface conditions or otherwise hidden conditions as they are supposed or believed by the Engineer to exist; but it is not intended or to be inferred that the conditions as shown thereon constitute a representation that such conditions are actually existent. Except as otherwise specifically provided in the Contract Documents, the Owner, the Engineer, and their consultants shall not be liable for any loss sustained by the Contractor as a result of any variance of such conditions as shown on the plans and the actual conditions revealed during the progress of the Work or otherwise.

Where the Owner or the Engineer or their consultants have made investigations of subsurface conditions in areas where the Work is to be performed, such investigations were made only for the purpose of study and design. The conditions indicated by such investigations apply only at the specific location of each boring or excavation at the time the borings or excavations were made. Where such investigations have been made, bidders or Contractors may inspect the records as to such investigations subject to and upon the conditions hereinafter set forth. The inspection of the records shall be made at the office of the Engineer.

When a log of test borings showing a record of the data obtained by the investigation of subsurface conditions by the Owner, the Engineer, or their consultants is included with the plans or other documents, it is expressly understood and agreed that said log of test borings does not constitute a part of the contract, represents only the opinion of the Owner or the Engineer or their consultants as to the character of the materials encountered by them in the test borings, is included in the plans or other documents only for the convenience of bidders, and its use is subject to all of the conditions and limitations set forth in this article.

The records of such investigations are not a part of the contract and are shown solely for the convenience of the bidder or Contractor. It is expressly understood and agreed that the Owner, the Engineer, and their consultants assume no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations; the records thereof; or of the interpretations set forth therein or made by the Owner's consultants, the Engineer or its consultants in the use thereof by the Engineer, and there is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions, densities, or other characteristics different from, those indicated may not be encountered.

The availability or use of information described in this Section 2-5 is not to be construed in any way as a waiver of the provisions of the first paragraph in this Section and a bidder or Contractor is cautioned to make such independent investigations and examination as they deem necessary to satisfy themselves as to conditions to be encountered in the performance of the work.

No information derived from such inspection of records of investigations or compilation thereof made by the Owner, the Engineer, or their consultants will in any way relieve the bidder or

Contractor from any risk or from properly fulfilling the terms of the contract nor entitle the Contractor to any additional compensation, except as otherwise provided in Section 3-5, entitled UTILITIES.

ARTICLE 3. SCOPE OF WORK

3-1 WORK TO BE DONE

The work to be done consists of furnishing all transportation, labor, materials, tools, equipment, services, permits, utilities and all other items which are necessary or appurtenant to construct and complete the entire project and construct the project designated in the Contract Documents, in accordance with the plans and specifications and subject to the requirements of the Contract Documents, and to leave the grounds in a neat and presentable condition.

3-2 CHANGES IN THE WORK

The Owner may require changes in, additions to, or deductions from the Work, including complete termination thereof. Adjustment, if any, in the amounts to be paid to the Contractor by reason of any such change, addition, or deduction shall be determined as set forth in Article 8 hereof, entitled ESTIMATES AND PAYMENTS.

The Owner's Representative may order minor changes in the Work not involving an increase or decrease in the contract amount, not involving a change in the time for completion, and not inconsistent with the purposes for which the Work is being constructed. If the Contractor believes that any order for minor changes in the Work involves changes in the contract amount or time for completion, they shall not proceed with the minor changes so ordered and shall within seven days of the receipt of such order notify the Owner's Representative in writing of their estimate of the changes in the contract amount and time for completion they believe to be appropriate.

No payment for changes in the Work will be made and no change in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner in advance of the Contractor's proceeding with the changed Work. Changes in the Work shall not constitute the basis for a claim for damages or anticipated profits due to an increase or diminution in work done.

Any dispute between the Owner and the Contractor regarding payment for changes in the work or a change in the time for completion shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

3-3 EXTRA WORK

The Owner may determine, in the Owner's sole discretion, that it is necessary or desirable for the proper completion of the contract to order work done or materials or equipment furnished which in the opinion of the Owner are not susceptible of classification under the unit-price items named in the Bid Schedule, and are not included in any item for which a lump sum is bid. The Contractor shall do and perform such work and furnish such materials and equipment. Such labor, materials, and/or equipment will be classed as extra work and shall be ordered in writing before such work is started. No extra work shall be paid for unless ordered in writing.

Extra work and material will be paid for at a lump sum or unit price agreed on in writing by the Owner and the Contractor before the extra work shall be ordered.

Performance of any extra work or the furnishing of any extra materials which in the judgment of the Owner is of like character to and susceptible of classification under the unit-price items of the contract shall, at Owner's discretion, be paid for at the unit price named for such work in the Bid Schedule.

Whenever, in the Owner's sole discretion, such extra work or such extra material, as the case may be, is not of like character to and susceptible of classification under the unit-price items of the contract as specified, and it is impracticable because of the nature of the work or for any other reason to fix the price before the extra work order shall be issued, extra work and material, when furnished by the Contractor, shall be paid for at actual necessary cost of materials, supplies, labor, workers' compensation insurance, contributions made to the State as required by the provisions of the Unemployment Insurance Act, Chapter 352, Statutes of 1935, as amended, taxes paid to the Federal Government as required by the Social Security Act, approved August 14, 1935, as amended, and the reasonable value of the use of equipment for the actual time it is used, all as determined by the Owner, plus fifteen percent (15%) for profit, general expenses, excise taxes, property taxes, bond premiums, license and inspection fees imposed by any governmental authority and all other items of expense, whether of the kind enumerated herein or otherwise.

If any work or material is ordered under this section on a cost-plus basis, the Contractor shall, at the times directed during the performing of the work or the furnishing of the materials, render to the Owner written reports in prescribed form, showing the name and number of each worker employed thereon, the number of hours employed thereon, the character of work that worker is doing, and the wages paid or to be paid to him or her, also showing the equipment utilized, the materials delivered and the type and rental cost of equipment, the quantity and character of each such material, from whom purchased and the net amount paid or to be paid therefor, any other items that may enter into the cost, and such other information as directed. If required, the Contractor shall produce any books, vouchers, other records, or memoranda which will assist the Owner in determining the true, necessary cost of work and materials to be paid for.

Any extra work performed hereunder shall be subject to all of the provisions of the contract and the Contractor's sureties shall be bound with reference thereto as under the original contract.

Any dispute regarding payment for extra work shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

3-4 OBSTRUCTIONS

The Contractor shall remove and dispose of all structures, debris, or other obstructions of any character necessary to accommodate the Work. Where such obstructions consist of improvements required by law, they shall be removed, maintained and permanently replaced by the Contractor at the Contractor's expense except as otherwise specifically provided in the Contract Documents.

3-5 UTILITIES

The Owner or the Engineer has endeavored to determine the existence of utilities at the site of the Work from the records of the owners of known utilities in the area affected by the Work. The positions of these utilities as derived from such records are shown on the plans. The service connections to these utilities may not be shown on the plans.

The Contractor shall make their own investigations, including exploratory excavation, and inquiries with area utility providers, to determine the locations and type of existing service laterals or appurtenances when their presence can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the Work. If the Contractor discovers utility facilities not identified in the plans or specifications or in a position different from that shown in the plans and specifications, they shall immediately notify in writing the Owner's Representative and the owner of the utility facility.

Prior to excavation, the Contractor shall contact the appropriate regional notification center, such as Underground Service Alert, as provided in Government Code Sections 4216 et. seq.

In case it should be necessary to remove, relocate, protect, or temporarily maintain a utility because of interference with the Work, the work on such utility shall be performed and paid for as follows:

When it is necessary to remove, relocate, protect, or temporarily maintain an existing main or trunkline utility facility not indicated in the plans and specifications with reasonable accuracy, the Owner will compensate the Contractor for the costs of locating, for the costs of repairing damage not due to the failure of the Contractor to exercise reasonable care, for the costs of removing, relocating, protecting, or temporarily maintaining such utility facilities, and for the costs for equipment on the project necessarily idled during such work. These costs, the work to be done by the Contractor in location, removing, relocating, protecting, or temporarily maintaining such utility facilities shall be covered by a written change order conforming to the provisions herein pertaining to changes in the Work. The Owner may make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, protect, or temporarily maintain such utility facilities or to reduce the costs of the work involved in removing, relocating, protecting, or temporarily maintaining such utility facilities. Changes in alignment and grade will be ordered in accordance with the provisions herein pertaining to changes in the Work.

When it is necessary to remove, relocate, protect, or temporarily maintain a utility (other than [1] existing main or trunkline utility facilities not indicated in the plans and specifications with reasonable accuracy, or [2] existing service laterals or appurtenances when their presence cannot be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the Work) the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the utility or damage thereto. The work on the utility shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with its own forces, or permitting the work to be done by the Contractor. No representations are made that the obligations to remove, relocate, protect, or temporarily maintain any utility and to pay the cost thereof is or is not required to be borne by the owner of such utility, and it shall be the responsibility of the Contractor to investigate to find out whether or not said cost is required to be borne by the owner of the utility.

The Contractor shall not be assessed liquidated damages for delay in completion of the Work, when such delay was caused by the failure of the Owner, the Engineer or the owner of the utility to provide for removal or relocation of utility facilities.

3-6 PLANS AND SPECIFICATIONS FURNISHED BY THE OWNER

The Owner will furnish to the Contractor free of charge all copies of plans and specifications reasonably necessary for the execution of the Work. The Contractor shall keep one set of plans and specifications in good order available to the Owner's Representative at the site of the Work.

3-7 FINAL CLEANUP

Upon completion and before making application for acceptance of the Work, the Contractor shall clean all rights-of-way, streets, borrow pits, and all other grounds occupied in connection with the Work of all rubbish, excess materials, temporary structures, and equipment, and shall suitably dispose of all rubbish, excess materials, temporary structures and equipment (including, but not limited to, any pipe (including asbestos-concrete pipe) and related facilities removed by the contractor in connection with the Work), and all parts of the Work and grounds occupied shall be

left in a neat and presentable condition. In the event the Contractor fails to clean up as specified herein, clean up may be performed by the Owner at the Contractor's expense.

3-8 PROTESTS

If the Contractor considers any work required by the Owner to be outside the requirements of the Contract Documents, or if the Contractor considers any record or ruling of the Owner, the Owner's Representative or any governmental inspector to be unfair, the Contractor shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or decision, and within ten (10) days after receipt thereof file a written protest with the Owner, stating clearly and in detail each objection and the reasons therefor. The Contractor shall, whether or not a written protest will be filed, immediately upon receipt of written instructions or decision proceed without delay to perform the work or conform to the record or ruling. The Contractor hereby agrees that, unless a specific objection or protest has been made as provided herein, the Contractor waives all grounds for protests or objections to the records, rulings, instructions, or decisions of the Owner or the Owner's Representative, and further agrees that as to all matters not included in such objections or protests the records, instructions and decisions of the Owner or Owner's Representative shall be final and conclusive. Such protests shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

3-9 CLAIMS

As provided in Article 1.5 of Chapter 1 of Part 3 of Division 2 of the Public Contract Code, claims by the Contractor shall be in writing and include the documents necessary to substantiate the claim. Prior to submitting a claim under this Section 3-9, the Contractor shall comply with all applicable notification requirements under the Contract Documents. By way of example, but in no way intended to be an exhaustive list of all situations where notice is required to preserve the Contractor's claim rights, where the Contractor believes that an order for minor changes in the Work involves changes in the Contract amount or time for completion, the Contractor must notify the Owner's Representative in writing within seven (7) days of the receipt of an order for changes in the Work in order to preserve the Contractor's right to claim such additional compensation or time for completion, as set forth in Section 3-2 entitled "CHANGES IN THE WORK". As provided in Section 4-2 entitled "SUPPLEMENTAL DRAWINGS", if the Contractor believes that any supplemental drawings call for changes in the Work for which the Contract amount or time for completion should be changed, the Contractor must notify the Owner's representative in writing within seven (7) days of the receipt of the supplemental drawings. Requests for an extension of time must be delivered to the Owner's representative within ten (10) days following the date of the occurrence which necessitated the extension of time. In all events, and subject to the deadlines for submitting claims specified above, and any other deadlines for submitting claims required under the Contract Documents, all claims must be filed with the Owner on or before the date of final payment.

For claims of less than fifty thousand dollars (\$50,000.00), the Owner shall respond in writing to any written claim within forty-five (45) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim any additional documentation supporting the claim or relating to defenses to the claims the Owner may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the Owner and the Contractor. The Owner's written response to the claim, as further documented, shall be submitted to the Contractor within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

For Claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the Owner shall respond in writing to all written claims within sixty (60) days of receipt of the claim, or may request, in writing, within thirty (30) days of

receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the Owner may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the Owner and Contractor. The Owner's written response to the claim, as further documented, shall be submitted to the Contractor within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or request documentation, whichever is greater.

If the Contractor disputes the Owner's written response, or the Owner fails to respond within the time prescribed, the Contractor may so notify the Owner, in writing, either within fifteen (15) days of receipt of the Owner's response or within fifteen (15) days of the Owner's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the Owner shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute. Except as provided in Section 8-3 entitled PROGRESS PAYMENTS, Section 8-4 entitled FINAL ESTIMATE AND PAYMENT, and Section 8-5 entitled OWNERS' RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF, the Owner shall pay that portion of the claim which it has determined to be undisputed.

If following the meet and confer conference the claim or any portion remains in dispute, the Contractor may file a claim pursuant to Government Code Sections 900 et seq. and a lawsuit on the claim may thereafter be filed in the appropriate state court. The court is to order non-binding mediation, (unless waived by both parties) under strict time constraints (within sixty (60) days following the filing of responsive pleadings). The parties are to select a mediator within fifteen (15) days and the mediation must be commenced within thirty (30) days of the submittal, and shall be concluded within 15 days from its commencement. These time requirements may be extended upon a showing of good cause to the Court, or by stipulation of the parties.

If the matter remains in dispute, the parties may agree to submit the matter to binding arbitration, on such terms as may be established by stipulation. Otherwise, the case shall be submitted to judicial (non-binding) arbitration pursuant to Code of Civil Procedure Section 1141.10 et seq. Fees and expenses shall be paid equally by the parties, unless the arbitrator finds good cause for a different division of fees and expenses. If either party objects to the arbitrator's award, the matter can then go to trial de novo in the trial court, subject to the usual rules of litigation.

Should the party requesting trial de novo fail to obtain a more favorable judgment than that received through arbitration, such party shall pay the attorney's fees arising out of trial de novo.

ARTICLE 4. QUALITY OF THE WORK

4-1 AUTHORITY OF THE OWNER'S REPRESENTATIVE

The Owner's Representative shall decide any and all questions which may arise as to the interpretation of the plans and specifications and shall have authority to disapprove or reject materials and equipment furnished and work performed which, in its opinion, is not in accordance with the Contract Documents, and its decision shall be binding and conclusive.

4-2 SUPPLEMENTAL DRAWINGS

The plans shall be supplemented by such drawings as are necessary to define the Work adequately. All such drawings delivered to the Contractor by the Owner's Representative shall be deemed written instructions to the Contractor. If the Contractor believes that any supplemental drawings call for changes in the Work for which the contract amount or time for completion should be changed, the Contractor shall not proceed with the changes in the Work so called for and shall within seven (7) days of the receipt of the supplemental drawings notify the Owner's Representative in writing of their estimate of the changes in the contract amount and time for completion they believe to be appropriate.

No payment for changes in the Work will be made and no change in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner prior to commencement of the changed Work.

4-3 CONFORMITY WITH THE CONTRACT DOCUMENTS AND ALLOWABLE DEVIATIONS

The Work shall conform to the lines, grades, dimensions, tolerances, and material and equipment requirements shown on the plans or set forth in the specifications. Although measurement, sampling, and testing may be considered evidence as to such conformity, the Owner's Representative shall be the sole judge as to whether the work or materials deviate from the plans and specifications, and its decision as to any allowable deviations therefrom shall be final.

If specific lines, grades, and dimensions are not shown on plans, those furnished by the Owner's Representative shall govern.

4-4 MANUFACTURER'S INSTRUCTIONS

All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, supplier or distributor, except as otherwise specifically provided in the Contract Documents.

4-5 INTERPRETATION OF PLANS AND SPECIFICATIONS

Figured dimensions on drawings shall govern but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large scale details shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials and workmanship. Drawings and specifications are intended to be fully complementary and to agree. The specification calling for the higher quality material or workmanship shall prevail. Materials or work described in words which so applied have a well known technical or trade meaning shall be deemed to refer to such recognized standards. In the event of any discrepancy between any drawings and the figures thereon, the figures shall be taken as correct. In the event of any doubt or question arising respecting the true meaning of the plans or specifications, the Contractor shall, within five (5) days of discovering such doubt or question, request clarification of the matter from the Owner's

Representative, who shall respond within two (2) working days (Saturdays, Sundays and holidays excluded) after receipt of the request. The decision of the Owner's Representative shall be final.

4-6 ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR

It is the duty of the Contractor to promptly notify the Owner's Representative in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified method and fails to notify the Owner's Representative in writing of this belief within three (3) days of discovering the defect or insufficiency, the Contractor waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the Owner, or in any subsequent arbitration or settlement conference between the Owner and the Contractor. The Owner's Representative, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after they come to the belief that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and they shall bear all cost arising therefrom.

If the Contractor, either before commencing work or in the course of the Work, finds any discrepancy between the specifications and the plans or between either of them and physical conditions at the site of the Work or finds any error or omission in any of the plans or in any survey, the Contractor shall promptly notify the Owner's Representative of such discrepancy, error, or omission. If the Contractor observes that any plans or specifications are at variance with any applicable law, ordinance regulation, order, or decree, they shall promptly notify the Owner's Representative in writing of such conflict. The Owner's Representative, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after their discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, or conflict will be at the Contractor's own risk and they shall bear all cost arising therefrom.

4-7 SUPERVISION AND SUPERINTENDENCE

The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but the Contractor shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents except as otherwise provided in Section 4-6, entitled ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR.

The Contractor shall be responsible to see that the completed Work complies with the Contract Documents.

The Contractor shall designate and keep on the Work at all times during its progress a competent superintendent, who shall not be replaced without written notice to the Owner's Representative. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor. During periods when the Work is suspended, the Contractor shall make appropriate arrangements for any emergency work which may be required.

Whenever the superintendent is not present on any particular part of the Work where the Owner's Representative may desire to inform the Contractor relative to interpretation of the plans and

specifications or to disapproval or rejection of materials or work performed, the Owner's Representative may so inform the foreman or other worker in charge of the particular part of the Work in reference to which the information is given. Information so given shall be as binding as if given to the superintendent.

4-8 SHOP DRAWINGS

Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data which are prepared by the Contractor or any subcontractor, manufacturer, supplier, or distributor and which illustrate some portion of the Work.

The Contractor shall review, mark as approved, and submit for review by the Owner's Representative, shop drawings as called for in the Special Provisions and Standard Specifications or requested by the Owner's Representative. Drawings shall be submitted in sextuplet to the Owner's Representative and be accompanied by a letter of transmittal listing the drawings submitted. Drawings shall show the name of the project, the name of the Contractor, and, if any, the names of suppliers, manufacturers, and subcontractors. Shop drawings shall be submitted with promptness and in orderly sequence so as to cause no delay in prosecution of the Work.

Shop drawings shall be complete in all respects. If the shop drawings show any deviations from the requirements of the plans and specifications because of standard shop practices or other reasons, the deviations and the reasons therefor shall be set forth in the letter of transmittal.

By submitting shop drawings, the Contractor represents that material, equipment, and other work shown thereon conform to the plans and specifications, except for any deviations set forth in the letter of transmittal.

Within 30 days after receipt of said drawings, the Owner's Representative will return two of the copies of the drawings to the Contractor with any comments noted thereon. If so noted by the Owner's Representative, the Contractor shall correct the drawings and resubmit them in the same manner as specified for the original submittal. The Contractor in the letter of transmittal accompanying resubmitted shop drawings shall direct specific attention to revisions other than the corrections requested by the Owner's Representative on previous submittals.

The review by the Owner's Representative is for the limited purpose of ensuring general conformity with the design concept of the project, and general compliance with the plans and specifications only, and shall not be construed as relieving the Contractor of the full responsibility for: providing materials, equipment, and work required by the Contract; the proper fitting and construction of the Work; the accuracy and completeness of the shop drawings; selecting fabrication processes and techniques of construction; and performing the Work in a safe manner.

No portion of the Work requiring a shop drawing submittal shall be commenced until the submittal has been reviewed by the Owner's Representative and returned to the Contractor with a notation indicating that resubmittal is not required.

If the Contractor believes that any shop drawing or communication relative thereto calls for changes in the Work for which the contract amount or time for completion should be changed, they shall not proceed with the changes in the Work so called for and shall promptly submit to the Owner's Representative a written estimate of the changes in the contract amount and time for completion the Contractor believes to be appropriate. No payment for changes in the Work will be made and no change in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner prior to commencement of the changed Work.

4-9 QUALITY AND SAFETY OF MATERIALS AND EQUIPMENT

All equipment, materials, and supplies to be incorporated in the Work shall be new, unless otherwise specified. All equipment, materials, and supplies shall be produced in a good and workmanlike manner. When the quality of a material, process, or article is not specifically set forth in the plans and specifications, the best available quality of the material, process, or article shall be provided.

Whenever any material, process, or article is indicated or specified by grade, patent or proprietary name, or by name of manufacturer, such specification is for the purpose of facilitating description of the materials, process, or articles desired and the Contractor may offer any material, process, or article which shall be substantially equal or better in every respect to that indicated or specified; provided, however, that if the material, process, or article offered by the Contractor is not, in the sole discretion of the Owner's Representative, equal or better in every respect to that specified, then the Contractor must furnish the material, process, or article specified or one that in the sole discretion of the Owner's Representative is the substantial equal or better in every respect. In the event that the Contractor-furnished material, process, or article is more expensive than that specified, or involves additional labor or other cost, such difference in cost shall be borne by the Contractor.

In accordance with Section 3400 of the Public Contract Code, the Contractor shall submit data substantiating requests for substitution of "equal" items within thirty-five (35) days after award of the contract. This 35-day period of time is included in the number of days allowed for the completion of the Work.

All materials, equipment, and supplies provided shall, without additional charge to Owner, fully conform with all applicable state and federal safety laws, rules, regulations, and orders, and it shall be Contractor's responsibility to provide only such materials, equipment, and supplies notwithstanding any omission in the Contract Documents therefor or that a particular material, equipment, or supply was specified.

4-10 STANDARDS, CODES, SAMPLES, AND TESTS

Wherever reference is made to a standard, code, specification, or test and the designation representing the date of adoption or latest revision thereof is omitted, it shall mean the latest revision of such standard, code, specification, or test in effect on the day the Notice Inviting Bids is dated.

Tests shall be made in accordance with commonly recognized procedures of technical organizations and such special procedures as may be prescribed elsewhere in the plans and specifications. The Contractor shall furnish without charge such samples for testing as may be required by the Owner's Representative.

4-11 OBSERVATION OF WORK BY OWNER'S REPRESENTATIVE

The Owner's Representative shall at all times have access to the Work during construction and shall be furnished with every reasonable facility for ascertaining full knowledge respecting the progress, workmanship, and character of materials and equipment used and employed in the Work.

Whenever the Contractor varies the normal period during which work or any portion of it is carried on each day, as provided in the construction progress schedule submitted by the Contractor pursuant to Section 5-2 entitled CONTRACTOR'S CONSTRUCTION SCHEDULE AND COST BREAKDOWN, they shall give timely notice to the Owner's Representative so that the Owner's Representative may, if desired, be present to observe the work in progress. If the Contractor fails to obtain prior authorization, any work done in the absence of the Owner's Representative will be

subject to rejection. Where the Contractor performs any part of the Work on a Saturday, Sunday, or holiday designated by the Owner, or for more than eight (8) hours in a workday, the Contractor shall, upon demand by the Owner, reimburse the Owner for the cost of employing inspectors or otherwise providing inspection of the Work. The Owner shall be entitled to withhold such costs from payments due the Contractor.

The Contractor shall give timely notice to the Owner's Representative in advance of backfilling or otherwise covering any part of the Work so that the Owner's Representative may, if desired, observe such part of the Work before it is concealed.

The observation, if any, by the Owner's Representative of the Work shall not relieve the Contractor of any of their obligations to fulfill the contract as prescribed. Defective work shall be made good, and materials and equipment furnished, and work performed which is not in accordance with the Contract Documents may be rejected notwithstanding the fact that such materials, equipment, and work have been previously observed by the Owner's Representative or that payment therefor has been included in an estimate for payment.

4-12 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Any work which does not conform to the requirements of the Contract Documents shall be remedied or removed and replaced by the Contractor, together with any other work which may be displaced in so doing, and no compensation will be allowed for such removal, replacement, or remedial work. All nonconforming materials shall be immediately removed from the site.

Any work done beyond the lines and grades shown on the plans or established by the Owner's Representative or any changes in, additions to, or deductions from the work done without written authority will be considered as unauthorized and will not be paid for. Work so done may be ordered remedied, removed, or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply promptly with any order of the Owner's Representative made under the provisions of this article, the Owner's Representative shall have authority to cause nonconforming materials, rejected work, or unauthorized work to be remedied, removed, or replaced at the Contractor's expense and to deduct the costs from any monies due or to become due the Contractor.

4-13 ONE-YEAR GUARANTEE

In addition to guarantees otherwise required, the Contractor shall and hereby does guarantee the Work against defects in workmanship or materials for a period of one year after the Owner's acceptance of the Work, except for any portion of the Work that is utilized or placed into service by the owner in accordance with the provisions of Section 5-6, entitled USE OF COMPLETED PORTIONS. The guarantee period for portions of the Work so utilized or placed into service shall be one year from the date of written notification to the Contractor described in said Section 5-6. The Contractor shall repair or remove and replace any and all such work, together with any other work which may be displaced in so doing, that is found to be defective in workmanship and/or materials within said one year period, without expense whatsoever to the Owner, ordinary wear and tear and unusual abuse or neglect excepted. In the event of a failure to comply with the above-mentioned conditions within three (3) business (i.e., days other than Saturday, Sunday, or legal holidays recognized by the State of California), days after being notified in writing, the Owner is hereby authorized to proceed to have the defects remedied and made good at the Contractor's expense. The Contractor agrees to pay all such expenses immediately on demand therefor by the Owner. Such action by the Owner will not relieve the Contractor of the guarantees required by this article or elsewhere in the Contract Documents.

The performance bond and the payment bond shall continue in full force and effect for the guarantee period.

If, in the opinion of the Owner, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the Owner or to prevent interruption of its operations, the Owner will attempt to give the notice required by this article. If the Contractor cannot be contacted or does not comply with the Owner's request for correction within a reasonable time as determined by the Owner, the Owner may, notwithstanding the provisions of this article, proceed to make such correction or provide such attention; and the costs of such correction or attention shall be charged against the Contractor, and shall be paid immediately upon demand therefor by the Owner. Such action by the Owner will not relieve the Contractor of the guarantees required by this article or elsewhere in the Contract Documents.

This article does not in any way limit the guarantee on any items for which a longer guarantee is specified or on any items for which a manufacturer or supplier gives a guarantee for a longer period. The Contractor agrees to act as a co-guarantor with such manufacturer or supplier and shall furnish the Owner all appropriate guarantees or warranty certificates upon completion of the project. No guarantee period, whether provided for in this article or elsewhere, shall in any way limit the liability of Contractor or his sureties or insurers under the indemnity or insurance provisions of the Contract Documents.

ARTICLE 5. PROSECUTION AND PROGRESS

5-1 SUBCONTRACTING

Subcontracts may be permitted to such extent as shall be shown to be necessary or definitely advantageous to the Contractor in the prosecution of the Work, in the sole discretion of the Owner. No subcontract will be permitted which has the effect of avoiding the residence or wage requirements or any other provisions of the contract. The Contractor shall not enter into any subcontract with a subcontractor which has been debarred by the Labor Commissioner pursuant to sections 1777.1 and 1777.7 of the Labor Code. In the event the Contractor subcontracts any part of this contract, the Contractor shall be as fully responsible to the Owner for the acts and omissions of each subcontractor and anyone either directly or indirectly employed by them as the Contractor is responsible to the Owner for the acts and omissions of their employees. Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the Owner. The Contractor shall include in every subcontract a provision incorporating the terms and conditions of the Contract Documents into the subcontract. All Subcontracts must be in writing

5-2 CONTRACTOR'S CONSTRUCTION SCHEDULE AND COST BREAKDOWN

Within ten days after execution of the contract, the Contractor shall deliver to the Owner's Representative a construction progress schedule and cost breakdown in bar chart form showing the proposed dates of commencement and completion and cost of each of the various parts of the Work and the anticipated amount of each monthly payment that will become due the Contractor in accordance therewith. The construction progress schedule shall specify the normal period during which work will be carried on each day, and whether any overtime, weekend or holiday work is anticipated.

5-3 TIME FOR COMPLETION AND FORFEITURE DUE TO DELAY

The Contractor shall begin and complete all or any designated portion of the Work called for under the contract within the time set forth in the Special Provisions. Time is of the essence in this contract.

Failure of the Contractor to perform any covenant or condition contained in the Contract Documents within the time period specified shall constitute a material breach of this contract

entitling the Owner to terminate the contract unless the Contractor applies for, and receives, an extension of time in accordance with the procedures set forth in this article and Section 5-5 entitled EXTENSION OF TIME.

Failure of the Owner to insist upon the performance of any covenant or condition within the time period specified in the Contract Documents shall not constitute a waiver of the Contractor's duty to complete performance within the designated periods unless the waiver is in writing.

The Owner's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provisions contained in the Contract Documents. Failure of the Contractor to complete performance promptly within the additional time authorized in the waiver or extension of time agreement shall constitute a material breach of this contract entitling the Owner to terminate.

In accordance with Government Code 53069.85, Contractor agrees to forfeit and pay Owner the amount per day set forth in the Special Provisions for each and every day of delay which shall be deducted from any payments due or to become due the Contractor.

The Contractor shall not be deemed in breach of this contract and no forfeiture due to delay shall be made because of any delays in the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor provided the Contractor requests an extension of time in accordance with the procedures set forth in this article and in Section 5-5 entitled EXTENSION OF TIME. Unforeseen causes of delay beyond the Contractor's control shall include acts of God, acts of a public enemy, acts of the government, acts of the Owner, or acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather, or delays of subcontractors due to such causes, or delays caused by failure of the owner of a utility to provide for removal or relocation of existing utility facilities. Delays caused by actions or neglect of Contractor or his agents, servants, employees, officers, subcontractors, directors, or of any party contracting to perform part or all of the Work or to supply any equipment or materials shall not be excusable delays. Excusable delays (those beyond Contractor's control) shall not entitle the Contractor to any additional compensation. The Contractor's sole remedy shall be to request an extension of time.

5-4 SUSPENSION OF WORK

The Work may be suspended in whole or in part when determined by the Owner's Representative or the Engineer that the suspension is necessary in the interests of the Owner. The Contractor shall comply immediately with any written order of the Owner, the Owner's Representative or the Engineer to suspend the Work. The Contractor shall be responsible for taking reasonable steps to protect the Work in progress, any materials and equipment on the site of the Work, and any materials delivered to the Contractor which are to be incorporated into the Work during the period of the suspension. Such suspension shall not form the basis of any claim by the Contractor against the Owner, except as provided in Section 5-5 entitled EXTENSION OF TIME.

5-5 EXTENSION OF TIME

The time specified for completion of all or any part of the Work may be extended only by a written change order executed by or on behalf of the Owner.

Requests for an extension of time must be delivered to the Owner's Representative within ten (10) consecutive days following the date of the occurrence which caused the delay. The request must be submitted in writing and must state the cause of the delay, the date of the occurrence causing the delay, and the amount of additional time requested. Requests for extensions of time shall be supported by all evidence reasonably available or known to the Contractor which would

support the time extension requested. Requests for extensions of time which fail to include the specified information or which are untimely may be rejected by the

Requests for a time extension due to weather or other conditions beyond the Contractor's control shall include daily written reports to the Owner's Representative describing such weather or conditions and specifying the work which, but for such weather or conditions, the Contractor would otherwise have performed.

When the Contractor has submitted a request for an extension of time the Owner will ascertain the facts and extent of the delay and extend the time for completing the Work if, in its judgment, the findings of fact justify such an extension. Should the Contractor disagree with the decision of the Owner, the Contractor may appeal that decision to the governing body of the Owner, which shall review the basis for the decision of its staff and make appropriate findings regarding the Contractor's request for an extension of time. The findings of facts by the governing body of the Owner shall be final and conclusive

Any extension of time shall not release the sureties upon any bond required under the contract.

Any further dispute regarding an extension of time shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS, provided, however, that the Contractor first has exhausted its remedies pursuant to the procedure set forth in this Section 5-5.

5-6 USE OF COMPLETED PORTIONS

When the Work or any portion of it is sufficiently complete to be utilized or placed into service, the Owner shall have the right, upon written notification to the Contractor, to utilize such portions of the Work and to place the operable portions into service and to operate same.

Once the Owner has given notice and commenced utilization or operation of any part of the Work, the Contractor shall be relieved of the duty of maintaining the portions so utilized or placed into operation; provided, however, that nothing in this article shall be construed as relieving the Contractor of the full responsibility for completing the Work in its entirety, for making good defective work and materials, for protecting the Work from damage, and for being responsible for damage and for the Work as set forth in the General Provisions and other Contract Documents; nor shall such action by the Owner be deemed final acceptance, and such action shall not relieve the Contractor, their sureties, or insurers of the provisions of Article 7, entitled CONTRACTOR'S INSURANCE, and Section 6-10, entitled INDEMNITY.

5-7 CHARACTER OF WORKERS

None but skilled workers shall be employed where the Work requires special qualifications. When required in writing by the Owner, the Contractor or any subcontractor shall discharge any person who is, in the sole discretion of the Owner, incompetent, unfaithful, disorderly or otherwise unsatisfactory, and shall not again employ such discharged person on the Work except with the prior written consent of the Owner.

5-8 ENFORCEMENT OF ORDER

The Contractor shall be responsible for maintaining good order at all locations where work is performed under this contract and to that end shall employ such watchmen or other persons as may be required. Unauthorized persons shall be excluded from any of the sites affected by the Work.

5-9 USE OF OWNER'S PROPERTY DURING CONSTRUCTION

Where necessary for the prosecution of the work, and upon application to and approval by the Owner, the Contractor may use property or facilities of the Owner during construction of the Work

for storage of equipment or materials, to fabricate materials to be incorporated into the Work, or for any other reason related to the prosecution of the Work.

In the event the Contractor is afforded the use of the Owner's property as provided herein, the Contractor shall be responsible for ensuring that any materials or equipment stored thereon are kept safe from theft, vandalism, or damage due to any cause, and shall erect such temporary structures as are necessary to protect the material or equipment from damage, at the expense of the Contractor. The Contractor shall ensure that the insurance required under the Contract Documents includes coverage for the Contractor's use of the Owner's property in accordance with this Section 5-9.

ARTICLE 6. LEGAL RELATIONS AND RESPONSIBILITIES

6-1 OBSERVING LAWS AND ORDINANCES

The Contractor shall keep fully informed of all existing and future laws, ordinances, and regulations which in any manner affect those engaged or employed in the Work or the materials used in the Work or which in any way affect the conduct of the Work and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the Work. If any discrepancy or inconsistency is discovered in the plans, specifications, or contract for the Work in relation to any such law, ordinance, regulation, order, or decree, the Contractor shall promptly report the same to the Owner's Representative in writing and cease operations on the affected portion of the Work until the Owner's Representative has given appropriate instructions as provided for in Section 4-6, entitled **ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR**. No payment for changes in the Work will be made and no change in the time for completion by reason of such discrepancy or inconsistency will be made, unless the changes are covered by a written change order approved by the Owner in advance of the Contractor's proceeding with the changed Work.

The Contractor shall at all times observe and comply with and shall cause their agents, employees, subcontractors, and suppliers to observe and comply with all such existing and future laws, ordinances, regulations, orders, and decrees, and shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, agents and volunteers against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, by the Contractor, their employees, agents, subcontractors, or suppliers.

In the event the Contractor, after 72-hour written notice to comply, fails to comply with any law, ordinance, regulation, order or decree which in any way affects the conduct or prosecution of the Work, and the Owner takes reasonable steps to ensure compliance with such law, ordinance, regulation, order or decree, the costs and expenses incurred in effecting such compliance shall be paid by the Contractor. Should the Contractor fail to pay such costs and expenses, the Owner may deduct them from any amounts then due or that may become due to the Contractor. In the event such costs and expenses exceed the amounts deducted by the Owner, the Contractor shall pay the balance thereof immediately upon demand therefor by the Owner.

6-2 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. Permits obtained by Kinneloa Irrigation District and permit acquisition process required to be followed by the contractor are identified in section SP-18, page S-6 of the Special Provisions

6-3 INVENTIONS, PATENTS, AND COPYRIGHTS

The Contractor shall pay all royalties and assume all costs arising from the use of any invention, design, process, materials, equipment, product, or device which is the subject of patent rights or copyrights.

The Contractor shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, materials, equipment, product or device, and shall defend all such claims in connection with any alleged infringement of such rights.

6-4 SAFETY AND PUBLIC CONVENIENCE

The Contractor shall conduct their operations so as to avoid injury or damage to any person or property, and to minimize any obstruction and inconvenience to the public. The Contractor shall comply with the requirements of the Contract Documents relating to safety measures applicable in particular operations or kinds of work. The Contractor shall have under construction no greater amount of Work than can be prosecuted properly with due regard to the rights and safety of the public and the workers.

Convenient access to driveways, houses, and building along the line of Work shall be maintained and temporary crossings shall be provided and maintained in good condition. Not more than one crossing or intersecting street or road shall be closed at any one time.

The Contractor shall provide and maintain such fences, barriers, directional signs, lights, and flagmen as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the construction work and to give directions to the public.

In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the Work, and the Contractor shall fully comply with all state, federal and other laws, rules, regulations, and orders relating to safety of the public and workers, including State of California, Division of Industrial Safety (Cal/OSHA) regulations. Safety precautions as applicable shall include, but not be limited to, adequate life protection and life saving equipment; adequate illumination for underground and night operations; instructions in accident prevention for all employees such as machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accident or injuries; and adequate facilities for the proper inspection and maintenance of all safety measures.

The names and telephone numbers of at least two medical doctors practicing in the vicinity and the telephone number of the local ambulance service shall be prominently displayed adjacent to telephones.

The right of the Engineer or the Owner's Representative to conduct construction review or observation of the Contractor's performance will not include review or observation of the adequacy of the Contractor's safety measures in, on, or near the site of the Work. However, in the event that the Owner determines that the Contractor has failed to ensure the safety of the public and the workers, or has failed to take reasonable steps to protect the workers and the public, the Owner may give the Contractor 72-hours written notice to take appropriate action to

ensure their safety. In the event the Contractor fails to comply, and the Owner takes such steps as are reasonably necessary to ensure the safety and protection of the public and the workers, the Contractor shall pay the cost and expenses incurred in taking such action. Should the Contractor fail to pay, the Owner may deduct the costs and expenses incurred in taking such action from any amounts then due or that may become due to the Contractor. In the event such costs and expenses exceed the amounts deducted by the Owner, the Contractor shall pay the balance thereof immediately upon demand therefor by the Owner.

6-5 RESPONSIBILITY FOR LOSS, DAMAGE, OR INJURIES

The Contractor shall be responsible for all claims, demands, or liability from any cause arising out of or resulting from or in connection with the performance of the Work, excepting only those as may be caused solely and exclusively by the fault or negligence of the Owner, the Engineer, the Owner's Representative, or their consultants, or their directors, officers, employees, and agents. Such responsibility shall extend to claims, demands, or liability for loss, damage, or injuries occurring after completion of the Work as well as during the progress of the Work.

6-6 CONTRACTOR'S RESPONSIBILITY FOR THE WORK

Until the acceptance of the Work, the Contractor shall have the responsible charge and care of the Work and of the materials to be used therein (including materials for which partial payment has been made or materials which have been furnished by the Owner) and shall bear the risk of injury, loss, or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the Work.

The Contractor shall rebuild, repair, restore, and make good all injuries, losses, or damages to any portion of the Work or the materials occasioned by any cause before its completion and acceptance and shall bear the expense thereof. Where necessary to protect the Work or materials from damage, the Contractor shall at their expense provide suitable drainage and erect such temporary structures as are necessary to protect the Work or materials from damage. The suspension of the Work or the granting of an extension of time from any cause whatever shall not relieve the Contractor of the responsibility for the Work and materials as herein specified.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorizations, is authorized to act at their discretion to prevent such threatened loss or injury.

6-7 PRESERVATION OF PROPERTY

The Contractor shall exercise due care to avoid injury to existing improvements or facilities, utility facilities, adjacent property, and trees and shrubbery that are not to be removed.

All trees, shrubbery, and landscaping that are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and water lines, all highway or street facilities, and any other improvements or facilities within or adjacent to the Work shall be protected from injury or damage, and the Contractor shall provide and install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operation, they shall be replaced or restored at the Contractor's expense to a condition as good as when the Contractor entered upon the Work or as good as required by the plans and specifications if any such objects are a part of the work being performed.

The fact that any such pipe or other underground facility is not shown on the plans shall not relieve the Contractor of his responsibility under this article. In addition to any requirements imposed by law, the Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site of the Work which are in any way affected by the excavations or other operations connected with the performance of the Work. Whenever any notice is required to be given by the Owner or the Contractor to any adjacent or adjoining landowner or other party before commencement of any work, such notice shall be given by the Contractor.

6-8 EXCAVATION PLANS FOR WORKER PROTECTION REQUIRED BY LABOR CODE SECTION 6705

If the total amount of the contract is in excess of \$25,000, the Contractor shall submit to the Owner for acceptance, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches five feet or more in depth. The plan shall be prepared by a registered civil or structural engineer. As a part of the plan, a note shall be included stating that the registered civil or structural engineer certifies that the plan complies with all governmental regulations and 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 General Industry Safety Orders promulgated by the Department of Industrial Relations, Division of Industrial Safety, or by such other agency with responsibility therefor.

The Owner or the Engineer or their consultants may have made investigations of subsurface conditions in areas where the Work is to be performed. If so, these investigations are identified in the Special Provisions and the records of such investigations are available for inspection at the office of the Engineer. The detailed plan showing the design of shoring, etc., which the Contractor is required to submit to the Owner for acceptance in advance of excavation will not be accepted by the Owner if the plan is based on subsurface conditions which are more favorable than those revealed by the investigations made by the Owner or the Engineer or their consultants; nor will the plan be accepted if it is based on soils-related design criteria which is less restrictive than the criteria set forth in the report on the aforesaid investigations of subsurface conditions.

The detailed plan showing the design of shoring, etc., shall include surcharge loads for nearby embankments and structures, for spoil banks, and for construction equipment and other construction loadings. The plan shall indicate for all trench conditions the minimum horizontal distances from the side of the trench at its top to the near side of the surcharge loads.

Nothing contained in this article shall be construed as relieving the Contractor of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

6-9 PERSONAL LIABILITY

No director, officer, employee, or agent of the Owner, Civiltec Inc., the Owner's Representative, or their consultants shall be personally responsible for any liability arising under or by virtue of the contract.

6-10 INDEMNITY

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Civiltec Inc., the Owner's Representative, their consultants, and each of their directors, officers, agents, employees and volunteers from and against all claims, damages, losses, expenses, and other costs, including, but not limited to, costs of defense and attorneys' fees, arising out of or resulting from or in connection with the performance of the Work, both on and off

the job site, provided that any such liability (1) is attributable to personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, and (2) is caused in whole or in part by an act or omission of the Contractor, any subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable, regardless of whether or not it is caused in part by any act or omission (active, passive, or comparative negligence included), of a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist. The Contractor's obligation under this Section 6-10 shall not be abridged, reduced or discharged by the maintenance of insurance by the Contractor.

In any and all claims against the indemnified parties by any employee of the Contractor, any subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under the first and fourth paragraphs of this Section 6-10 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor, or any subcontractor, or any supplier or other person under workers' compensation acts, disability benefit acts, or other employee acts.

The obligations of the Contractor under the first and fourth paragraphs of this Section 6-10 shall not extend to the liability of Civiltec Inc., the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents, arising out of or resulting from or in connection with the preparation or approval of maps, drawings, opinions, reports, surveys, designs or specifications, providing that the foregoing was the sole and exclusive cause of the loss, damage, or injury.

The Contractor shall also indemnify and hold harmless the Owner, Civiltec Inc., the Owner's Representative, and their consultants, and each of their directors, officers, employees, agents and volunteers from and against all losses, expenses, damages (including damages to the Work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the work and all of the Contractor's obligations under the contract. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

6-11 HOURS OF LABOR

The Contractor shall forfeit as a penalty to the Owner the maximum amount provided by statute for each worker employed in the execution of the contract by the Contractor or any of their subcontractors for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of the Labor Code and, in particular, Section 1810 to Section 1815 thereof, inclusive, except that work performed by employees of Contractors in excess of eight (8) hours per day and forty (40) hours during any one week shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay as provided in said Section 1815.

6-12 PREVAILING WAGE

The Contractor shall comply with Labor Code Section 1775. In accordance with said Section 1775, the Contractor shall forfeit as a penalty to the Owner, a penalty in such amount as the Labor Commissioner shall determine for each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed for any work done under the contract by them or by any subcontractor under them in violation of the provisions of the Labor Code and, in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to said Section 1775, the difference

between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. Moreover, failure to pay the prevailing wage may subject the Contractor to debarment, as provided in Labor Code Section 1777.1.

6-13 <INTENTIONALLY LEFT BLANK>

6-14 APPRENTICES

The Contractor and any subcontractor under them shall comply with the requirements of Sections 1777.5 and 1777.6 of the Labor Code in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices. In accordance with Section 1773.3 of the Labor Code, within five (5) days of awarding the Contract hereunder the Owner shall send a copy of this Contract to the Division of Apprenticeship Standards.

Willful violations of Section 1777.5 will result in a forfeiture of the maximum statutory amount for each calendar day of non-compliance which shall be withheld from progress payments by Owner upon notice from the Department of Industrial Relations pursuant to Labor Code Section 1777.7. Willful violations of Section 1777.5 shall also result in the suspension of the Contractor's right to bid on or receive the award of any public works construction contract, as provided in Section 1777.7.

6-15 WARRANTY OF TITLE

No materials, supplies, or equipment for the Work under this contract shall be purchased subject to any 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 all work to deliver the premises together with all improvements and appurtenances constructed or placed thereon to the Owner free from any claims, liens, encumbrances, or charges and further agrees that neither the Contractor 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 public entities, the title of which is commonly retained by the utility company or the public entity. 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 their protection, or any right under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this article shall be inserted in all subcontracts and material contracts, and notices of its provision shall be given to all persons furnishing materials for the Work when no formal contract is entered into for such materials.

6-16 PROPERTY RIGHTS IN MATERIALS

Nothing in the contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the Work or the soil, or after payment has been made for materials delivered to the site of the Work, or stored subject to or under the control of the Owner. All such materials shall become the property of the Owner upon being so attached or affixed or upon payment for materials delivered to the site of the Work or stored subject to or under the control of the Owner.

Soil, stone, gravel, and other materials found at the site of the Work and which conform to the plans and specifications for incorporation into the Work may be used in the Work. No other use shall be made of such materials except as may be otherwise described in the plans and specifications.

6-17 TITLE TO MATERIALS FOUND ON THE WORK

The title to all water and to the right to use of all water, to all soil, stone, gravel, sand, minerals, and all other materials developed or obtained in the excavation or other operations by the Contractor or any subcontractor or any of their employees, and the right to use or dispose of the same, are hereby expressly reserved in the Owner and neither the Contractor, nor any subcontractor, nor any of their employees shall have any right, title, or interest in or to any part thereof; neither shall they, nor any of them, assert or make any claim thereto. The Contractor may be permitted to use in the Work without charge any such materials which meet the requirements of these specifications.

6-18 MUTUAL RESPONSIBILITY OF CONTRACTORS

Nothing in the contract shall be interpreted as granting to the Contractor exclusive occupancy of the site of the Work. The Contractor must ascertain to their own satisfaction the scope of the project and the nature of any other contracts that have been or may be awarded by the Owner in the construction of the project, to the end that the Contractor may perform this contract in the light of such other contracts, if any.

The Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the project. If the performance of any contract for the project is likely to be interfered with by the simultaneous performance of some other contract or contracts, the Owner's Representative shall decide which contractor shall cease work temporarily and which contractor shall continue or whether the work under the contracts can be coordinated so that the contractors may proceed simultaneously. On all questions concerning conflicting interest of contractors performing related work, the decision of the Owner's Representative shall be binding upon all contractors concerned and the Owner, the Engineer, the Owner's Representative, and their consultants shall not be responsible for any damages suffered or extra costs incurred by the Contractor resulting directly or indirectly from the award or performance or attempted performance of any other contract or contracts on the project or caused by a decision or omission of the Owner's Representative respecting the order of precedence in the performance of the contracts.

If through acts of neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage on the Work, the Contractor may agree to settle with such other contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor will so settle. If such other contractor or subcontractor shall assert any claim against the Owner, the Engineer, the Owner's Representative, or their consultants on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents against any such claim, including all attorneys' fees and any other costs incurred by the indemnified parties relative to any such claim.

6-19 TERMINATION FOR BREACH

If the Contractor refuses or fails to prosecute all or any part of the Work with such diligence as will ensure its completion within the time specified herein, or any extension thereof, or fails to

complete such work within such time, or if the Contractor is adjudged a bankrupt, or makes a general assignment for the benefit of their creditors, or if a receiver is appointed on account of their insolvency, or if they file a petition to take advantage of any debtor's Act, or if the Contractor or any of their subcontractors violate any of the provisions of the contract, or refuse or fail to supply enough properly skilled workers or proper materials to complete the Work in the time specified, as adjusted by any time extensions granted, or they fail to make prompt payment to subcontractors or for material or labor, or if the Contractor disregards any laws or ordinances, or instructions given by the Owner or Owner's Representative, the Owner may, without prejudice to any other right or remedy, serve written notice upon the Contractor and their surety of its intention to terminate the contract. Such notice by the Owner shall set forth the reasons for the intended termination of the contract, and unless within ten days after the service of such notice such violations shall cease and satisfactory arrangements for the corrections thereof be made, the contract shall upon the expiration of said ten days cease and terminate. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished.

Upon termination as provided above, the Owner shall immediately give written notice to the surety and the Contractor, and the surety shall have the right to take over and perform the contract; provided, however, that if the surety within fifteen (15) days after receipt of a notice of termination does not notify the Owner in writing of its intention to take over and perform the contract, or does not commence performance of the contract within thirty (30) days from the date of serving said notice, the Owner may take over the Work and prosecute the same to completion by contract or by any other method it may deem advisable for the account and at the expense of the Contractor, and their surety shall be liable to the Owner for any excess cost or other damage occasioned the Owner thereby, and in such event the Owner may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plants, and other property belonging to the Contractor that may be on the site of the Work or on any other property of the Owner and be necessary for the Work. For any portion of such work that the Owner elects to complete by furnishing its own employees, materials, tools, and equipment, the Owner shall be compensated for such in accordance with the schedule of compensation for cost-plus work in Section 8-1, entitled PAYMENT FOR CHANGES IN THE WORK.

If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the Work, including, but not limited to, all costs to Owner arising from professional services and attorneys' fees and all costs generated to insure or bond the work of substituted contractors or subcontractors utilized to complete the Work, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner promptly upon demand; on failure of Contractor to pay, the Surety shall pay on demand by Owner. Any portion of such difference not paid by Contractor or surety within thirty (30) days following the mailing of a demand for such costs by Owner shall earn interest at the rate of ten percent (10%) per annum or the maximum rate authorized by California law, whichever is lower.

The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the Owner.

6-20 NOTICE AND SERVICE THEREOF

Any notice required or given under the contract shall be in writing, be dated, and signed by the party giving such notice or their duly authorized representative, and be served as follows:

If to the Owner, by personal delivery or by deposit in the United States mail.

If to the Contractor, by personal delivery to the Contractor or to their authorized representative at the site of the project or by deposit in the United States mail.

If to the surety or any other person, by personal delivery to said surety or other person or by deposit in the United States mail.

All mailed notices shall be in sealed envelopes, shall be sent by certified mail with postage prepaid, and shall be addressed to the addresses in the Contract Documents or such substitute addresses which a party designates in writing and serves as set forth herein.

Any notice served in accordance with this Section 6-20, shall be deemed received by the addressee seventy-two (72) hours after deposited, postage prepaid, in the United States mail.

6-21 <INTENTIONALLY LEFT BLANK>

6-22 LANDS AND RIGHTS-OF-WAY

The lands and rights-of-way for the facility to be constructed will be provided by the Owner. Except to the extent the Contractor is authorized to use other property of the Owner as provided in Section 5-9 entitled USE OF OWNER'S PROPERTY DURING CONSTRUCTION, the Contractor shall make their own arrangements and pay all expenses for additional area required by them outside the limits of the Owner's lands 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 plans and specifications. If a permit is not required, the Work shall conform to the standards of the public agency involved in addition to conforming to the plans and specifications.

6-23 WAIVER OF RIGHTS

Except as otherwise specifically provided in the Contract Documents, no action or failure to act by the Owner, Engineer, Owner's Representative, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder.

6-24 TAXES

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

6-25 ASSIGNMENTS OF ANTITRUST ACTIONS

In entering into this Contract or any subcontract to supply goods, services, or materials to the Contractor pursuant to this Contract, the Contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action any of them may have under Section 4 of the Clayton Act (15 U.S.C. Section 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 this contract or any subcontract hereunder. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

6-26 PAYROLL RECORDS

It shall be the responsibility of the Contractor to maintain an accurate payroll record showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each employee in accordance

with Labor Code Section 1776, and to ensure that each subcontractor also complies with all provisions of Labor Code Section 1776 and this contract provision.

All payroll records shall be certified as accurate by the Contractor or subcontractor or its agent having authority over such matters.

The Contractor shall ensure that all payroll records are available for inspection at the Contractor's principal office during normal business hours and shall notify the Owner, in writing, of the place where all payroll records are located from time to time.

The Contractor shall furnish a copy of all payroll records, upon request, to employees or their authorized agents, to the Owner, to the Division of Labor Standards Enforcement, and to the Division of Apprenticeship Standards of the Department of Industrial Relations. The Contractor shall also furnish a copy of payroll records to the general public upon request provided the public request is made through the Owner, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations.

Records made available to the general public in accordance with the prior paragraph shall be marked or obliterated in such a manner that the name and address of the Contractor and/or subcontractor and the name, address, and telephone number of all employees does not appear on the modified record.

The Contractor shall file a certified copy of any requested payroll records with the entity that requested such records within ten days of the date a written request for payroll records has been received. Should any request for payroll records be submitted to the Owner, the sole obligation of the Owner shall be to transmit that request to the Contractor and advise the Contractor of its obligations under the Labor Code and of the penalties for failure to comply.

Failure of the Contractor to comply with any provision of this article or Labor Code Section 1776 within ten days of the date a written request for compliance is received shall result in a forfeiture of the maximum statutory amount per calendar day or portion thereof, for each worker, until strict compliance is obtained. Upon notification by the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the Department of Industrial Relations, the Owner shall withhold penalties under this article or Labor Code Section 1776 from the Contractor's payments then due.

6-27 NOTICE OF LATENT OR HAZARDOUS CONDITIONS

In accordance with Section 7104 of the Public Contract Code,, where the contract specifications require digging trenches or excavating deeper than four (4) feet below the surface, the Contractor shall promptly, and before the following conditions are disturbed, notify the Owner, in writing, of any:

- (a) Material that the Contractor may believe is hazardous waste as defined in Section 25117 of the Health and Safety Code;
- (b) Subsurface or latent physical conditions differing from those indicated in the plans and specifications;
- (c) Unknown physical conditions of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract specifications.

Upon receipt of written notice by the Contractor of such conditions, the Owner shall promptly investigate. If the Owner finds such conditions to exist and determine that an increase or

decrease in the Contractor's cost of or time required for performance of the Work will result from the change in conditions, the Owner will issue a change order.

In the event a dispute arises between the Owner and the Contractor as to whether the conditions materially differ, or involve hazardous waste or cause decrease or increase in the cost of or time required for performance of any part of the Work, the Contractor shall not be excused from the scheduled completion of the Work, and shall retain any and all rights which he may have pertaining to the resolution of disputes between the Owner and the Contractor, as provided in Section 3-9 entitled CLAIMS.

6-28 CONTRACTOR'S OBLIGATIONS CONCERNING PAYMENT OF WORKERS' COMPENSATION AND UNEMPLOYMENT INSURANCE

The Contractor shall be responsible for complying with the provisions of Division 4 of the Labor Code, relating to securing payment of Workers' Compensation, and of the Unemployment Insurance Code.

6-29 USE OF DEBARRED CONTRACTORS

As provided in Public Contract code Section 6109, any contract between the Contractor and a subcontractor that has been declared by the Labor Commissioner to be ineligible to perform work on a public works project is void, and the debarred subcontractor shall not receive any public money for performance of any part of the Work.

6-30 NOTIFICATION OF THIRD-PARTY CLAIMS

The Owner shall provide the Contractor with timely notification of any third-party claims arising under or in relation to the Contract or the performance of the Work. The Owner shall be entitled to offset against any payments due the Contractor the reasonable costs incurred in providing such notification.

ARTICLE 7. CONTRACTOR'S INSURANCE

7-1 GENERAL

The Contractor shall not commence or continue to perform any work unless the Contractor, at their own expense, has in full force and effect all required insurance. The Contractor shall not permit any subcontractor to perform work on this project unless the Workers' Compensation Insurance requirements have been complied with by such subcontractor.

The types of insurance the Contractor shall obtain and maintain are Workers' Compensation Insurance, Liability Insurance, and Builders' Risk Insurance.

Workers' Compensation Insurance and Liability Insurance shall be maintained in effect for the full guarantee period.

Insurers must be authorized to do business and have an agent for service of process in California and have an "A-" policyholder's rating and a Financial Size Category rating of at least VII in accordance with the most current Best's Rating, unless otherwise approved by the Owner.

As evidence of specified insurance coverage, the Contractor shall provide certificates of insurance and endorsements on forms approved by the Owner.

Any deductible or self-insured retention must be declared to and approved by the Owner. At the option of the Owner, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, the Engineer, the Owner's Representative and each of their directors, officers, employees, agents and volunteers, or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

Upon demand by the Owner, the Contractor shall deliver all policies of insurance and the receipts for payment of premiums thereon. Should the Contractor neglect to maintain in force insurance required under the Contract Documents, then it shall be lawful for the Owner to obtain and maintain such insurance, and the Contractor hereby appoints the Owner as its true and lawful attorney-in-fact to do all things necessary for this purpose. Should the Owner make such payments on behalf of the Contractor, any monies so paid shall be charged to the Contractor and shall be deducted such from any payments due the Contractor under the Contract Documents.

7-2 WORKERS' COMPENSATION INSURANCE

The Contractor and all subcontractors shall cover or insure under the applicable laws relating to workers' compensation insurance, all of their employees working on or about the area affected by the Work, regardless of whether such coverage or insurance is mandatory or merely elective under the law.

Upon execution of the Agreement, the Contractor shall provide a certificate(s) of insurance certifying that they have obtained for the period of the contract full Workers' Compensation Insurance coverage for all persons employed directly by the Contractor or through subcontractors in carrying out the Work under the contract. At the same time, the Contractor shall provide the insurance endorsement(s) on the forms provided as a part of the Contract Documents. This insurance shall be in strict accordance with the requirements of the most current and applicable state Workers' Compensation Insurance laws. The Contractor shall defend, protect and save harmless the Owner, the Engineer and the Owner's Representative and each of their directors, officers, employees, agents and volunteers from and against all claims, suits and actions arising from any failure of the Contractor or any subcontractor to maintain such coverage or insurance.

7-3 LIABILITY INSURANCE

The Contractor shall, at the time of execution of this Contract, file with the Owner a Certificate of Insurance, satisfactory to the Owner and evidencing liability insurance as required under the Contract Documents. The provisions required by this article shall either be affirmatively shown on the certificate or evidenced by separate endorsement. The certificate shall provide that coverage may not be cancelled, reduced, or changed without giving the Owner and Civiltec, Inc. at least thirty (30) days prior notice thereof in writing, which notice shall be effective only after being actually and physically received by the Owner and Civiltec, Inc.. Notwithstanding the foregoing, Owner's initial receipt or "acceptance" of certificates of insurance, or of policies of insurance, shall not obligate the Owner to review such certificates or policies for compliance with the Owner's insurance requirements in this article. Any failure of any Contractor-provided insurance to at least match the insurance requirements of this article, whether such failure is discovered before or after issuance of the Notice to Proceed, shall not be the basis on any legal theory whatsoever for any lessening whatsoever of Contractor's financial responsibilities under this Contract for risks described in this article.

Nothing contained in the insurance requirements shall be construed as limiting the extent of the Contractor's responsibility for payment of greater damages resulting from the Contractor's operations under this Contract.

Included in such insurance shall be contractual coverage sufficiently broad to insure the matters set forth in Section 6-10, entitled INDEMNITY, in the General Provisions and in Paragraph 6 of the Agreement.

7-4 BUILDER'S RISK INSURANCE

The Contractor shall provide and maintain Builder's Risk Insurance covering all risks of direct physical loss, damage or destruction to the Work in the minimum amount of the dollar value of the Work contemplated under the Contract Documents, subject to adjustment by change order duly issued by the Owner, to insure against such losses until final acceptance of the Work by the Owner. Such insurance shall include explosion, collapse, underground excavation and removal of lateral support. The Owner shall be named as an additional insured on any such policy. The making of progress payments to the Contractor shall not in any way be construed as creating an insurable interest by or for the Owner or be construed as relieving the Contractor or its subcontractors of responsibility for loss from any direct physical loss, damage or destruction occurring prior to the final acceptance of the Work by the Owner.

The insurer shall waive all rights of subrogation against the Owner. The Contractor shall provide the Owner with a certificate of insurance for Builder's Risk Insurance coverage and evidence of waiver of rights of subrogation against the Owner.

7-5 CONTRACTOR'S LIABILITY NOT LIMITED BY INSURANCE

Nothing contained in these insurance requirements is to be construed as limiting and the liability of the Contractor or the Contractor's sureties.

ARTICLE 8. ESTIMATES AND PAYMENTS

8-1 PAYMENT FOR CHANGES IN THE WORK

Changes in, additions to, or deductions from the Work, including increases or decreases in the quantity of any item or portion of the Work, shall be set forth in a written change order executed by the Owner which shall specify:

The changes, additions, and deductions to be made.

The increase or decrease in compensation due the Contractor, if any.

Adjustment in the time of completion, if any.

Adjustment in the compensation due Contractor shall be determined by one or more of the following methods in the order of precedence listed below:

- 1) Unit prices contained in the contract.
- 2) Mutually agreeable lump-sum or unit prices. If requested by the Owner's Representative, the Contractor shall furnish an itemized breakdown of the quantities and prices used in computing proposed lump-sum and unit prices.
- 3) Where an adjustment in compensation due the Contractor has not been determined, but a written change order has been issued by the Owner, the Contractor shall promptly proceed with the work involved. In such case, the

Contractor shall be compensated for furnishing labor, materials, tools, and equipment on a cost-plus basis, as follows:

- 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 state and federal laws plus subsistence and travel allowance payments to workers.
- b) Cost of material plus fifteen percent (15%). Cost of material shall include sales tax, freight, and delivery charges. The Owner reserves the right to furnish such materials as it deems advisable and the Contractor shall not be paid the fifteen percent (15%) markup on such materials.
- c) For tools and equipment actually engaged in the performance of the work, rental rates plus fifteen percent (15%). The rental rates shall be those prevailing in the area where the Work is performed. No rental charge shall be made for the use of tools or equipment having a replacement value of \$500.00 or less.
- d) Subcontractor invoices to the Contractor plus five percent (5%). Subcontractor invoices shall be based on 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%).

No payment shall be made for any item not set forth above, including without limitation, Contractor's overhead, general administrative expense, supervision, or damages claimed for delay in prosecuting the remainder of the Work.

For cost-plus work, the Contractor shall submit to the Owner's Representative for verification daily work sheets showing an itemized breakdown of labor, materials, tools, and equipment used in performing the work, including the name and number of each worker employed thereon, the number of hours employed thereon, the character of work each worker is doing, and the wages paid or to be paid each worker. In the case of tool and equipment rentals, the Contractor shall be compensated at the rate applicable to that type or article of tool or equipment reasonably necessary to perform the work contemplated by the change order, as determined by and in the sole discretion of the Owner's Representative. receipt of the Contractor's daily work sheets by the Owner's Representative shall not be deemed an admission of the Contractor's right to be compensated for the labor, materials, tools and equipment set forth therein, but is merely an acknowledgment that the workers, materials, tools and equipment specified in the report were in fact employed or used in the prosecution of the Work by the Contractor on the date indicated in the report.

If requested by the Owner, the Contractor shall produce any books, vouchers, memoranda, or other records which will enable the Owner to determine the true, necessary cost of work and materials to be paid for. In no case of cost-plus work ordered by Owner shall additional payment be made to the Contractor due to overtime or holiday wages paid by them in connection with such cost-plus work unless specifically ordered and agreed to in writing by the Owner, and then only to the extent extra payment is regularly being made up by the Contractor for overtime or holiday

work of a similar nature in the same locality. No payment will be made for work not verified by the Owner's Representative.

Any disputes regarding payment for changes in the Work or for extra work, or regarding extensions of time, shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

8-2 NO PAYMENT FOR TEMPORARY WORK

No direct payment will be made to the Contractor for providing transportation, light, power, tools, and equipment or for furnishing, building, and maintaining camps, construction plant, access roads, sanitary conveniences, disposal work, water supply, fire protection, guards, trestles, telephone system, and other temporary works, or for the removal of all temporary structures, plant and materials, or for medical attendance or health protection, or for watchmen, magazine keepers or guards, or for any other service, thing, or material, unless payment therefor has been provided in the Contract Documents or expressly authorized by the Owner. Compensation for all such services, facilities, things or materials necessary or required to execute the Work in accordance with the provisions of the contract shall be considered as having been included in the prices stipulated for the appropriate items.

8-3 PROGRESS PAYMENTS

The Contractor shall, on or before the tenth (10th) day of each calendar month after actual construction work is started, submit to the Owner's Representative a written estimate of the value of the work completed by the Contractor and of materials delivered on the ground at the site of the Work or stored subject to or under the control of the Owner prior to the first of the month in which the estimate is made. In reviewing such payment requests, the Owner's Representative may take into consideration, along with other facts and conditions deemed by them to be proper, the ratio of the difficulty or cost of the work done to the probable difficulty or cost of the work remaining to be done. The Owner shall retain ten percent (10%) of such estimated value as part security for the fulfillment of the contract by the Contractor and shall within thirty (30) days of the date which the estimate is received pay to the Contractor the balance of such estimated value after deducting therefrom all previous payments and all sums to be kept or retained under the terms of the contract. All amounts so retained are withheld subject to the provisions of Public Contract Code Section 7107.

Pursuant to Section 20104.50 of the Public Contract Code, should the Owner fail to make a progress payment within thirty days after receipt of the undisputed and properly submitted pay estimate from the Contractor, the Contractor is entitled to interest from the Owner at the then-prevailing legal rate.

The payment request shall be reviewed by the Owner as soon as practicable after receipt for the purpose of determining that the payment request is proper. Any payment request determined not to be proper shall be returned to the Contractor not later than seven (7) days after receipt by the Owner's Representative. Such returned requests shall be accompanied by a written explanation of the reasons why the payment request is not proper.

In the event a payment request is rejected, all or in part, beyond the seven-day period after receipt, the number of days available to the Owner to make payment without incurring interest shall be reduced by the number of days by which the Owner exceeds the seven-day return requirement set forth above.

8-4 FINAL ESTIMATE AND PAYMENT

When the Work has been completed, the Owner's Representative will make a final estimate of the total amount of work done thereunder and the amount to be paid therefor under the terms of

the contract. If the Owner finds the Work has been completed according to the contract, it shall accept the Work, shall file a notice of completion, and shall pay the entire sum so found to be due after deducting therefrom all previous payments and all amounts to be retained under the provisions of the contract, including any right of offset the Owner may have against the Contractor under the terms of this or any other contract between the Owner and the Contractor. All prior progress estimates and payments shall be subject to correction in the final estimate and payment. The final payment, including all amounts retained from any progress payments, shall not be due and payable until the expiration of thirty-five (35) days from the date of filing a notice of completion of the Work by the Owner, but in all events shall be paid within sixty (60) days of completion of the Work, as defined in Section 7107 of the Public Contract Code.

In the event of a dispute between the Owner and the Contractor over the amount due, the Owner may withhold from the final payment an amount not to exceed one hundred fifty percent (150%) of the disputed amount. In the event that retained funds are not paid within the time specified herein or are wrongfully withheld, as provided in Section 7107, the Owner shall be subject to a charge of two percent (2%) per month on the improperly withheld amount, in lieu of any interest otherwise due. In any action for collection of funds allegedly wrongfully withheld, the prevailing party shall be entitled to recover its attorney's fees and costs incurred in such action.

It is mutually agreed between the parties to the contract that no certificate given or payment made under the contract shall be conclusive evidence of performance of the contract and no payment shall be construed to be an acceptance of any defective work or improper materials.

The Contractor further agrees that the payment of the final amount due under the contract shall release the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents from any and all claims or liability arising out of the contract.

8-5 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

In addition to the amount which the Owner may retain under Section 8-3 entitled PROGRESS PAYMENTS, or under Section 8-4 entitled FINAL ESTIMATE AND PAYMENT, the Owner may withhold a sufficient amount or amounts from any payment otherwise due to the Contractor as in its judgment may be necessary to cover:

Payments which may be past due and payable for properly filed claims against the Contractor or any subcontractors for labor or materials furnished in or about the performance of the Work on the project under this contract.

Estimated or actual costs for correcting defective work not remedied.

Estimated or actual costs for performing any work required of the Contractor pursuant to Section 3-7 entitled FINAL CLEANUP.

Estimated or actual costs of extraordinary or overtime inspection services provided by the Owner.

Costs incurred by the Owner for relocation of underground facilities which should have been borne by the Contractor under the Contract Documents.

Amounts claimed by the Owner as forfeiture due to delay or other offsets.

Any other amounts owing by Contractor to Owner.

Unpaid premiums for insurance required under the contract.

The Owner may apply such withheld amount or amounts to the payment of such claims as the Owner in its sole discretion deems necessary or advisable. In so doing, the Owner shall be deemed the agent of the Contractor and any payments so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor, and the Owner shall not be liable to the Contractor for such payment made in good faith. Such payments may be made without prior judicial determination of the claim or claims. The Owner will render to the Contractor a proper account of such funds disbursed on behalf of the Contractor.

8-6 COST STATEMENT

The Contractor shall furnish the Owner promptly, upon completion of the Work, all information necessary to determine the cost of the Work, including an itemized statement in a form satisfactory to the Owner of the actual cost of all labor, materials, rentals, repairs, compensation and other insurance, transportation of labor, equipment and materials, engineering or other special services, supervision, overhead, depreciation, and taxes properly chargeable against the Work, and any and all costs entering into the work performed. The Contractor shall permit the Owner to have access to original payrolls, vouchers, and other records to the extent required to verify the figures given in said statement, and the Contractor shall not be entitled to receive payment on account of the final estimate as hereinabove provided, unless and until the Contractor furnishes the Owner a satisfactory statement of the cost of the entire Work.

SPECIAL PROVISIONS

SP-1 BEGINNING AND COMPLETION OF WORK

The Contractor shall begin work within fifteen (15) days after the date set forth in the Notice to Proceed and shall complete all work for all Bid Schedules under the contract within ninety days **(90) days** after the date for commencement set forth in the Notice to Proceed. See SP-20 for special construction sequencing and construction work schedule requirements

SP-2 TIME PERIOD DURING WHICH BIDS REMAIN VALID

All bids shall remain valid for a period of forty-five (45) days after the date specified in the Notice Inviting Bids for the opening of bids by the Owner. After that period has expired, and in all events within sixty (60) days after the date set for opening bids, the Bid Security submitted with their Proposal will be returned to the unsuccessful bidders.

SP-3 CONNECTION TO OTHER FACILITIES

Connections to other facilities, as may be shown on the drawings, shall be performed only when authorized by the Owner. The Contractor shall notify the Owner or Owner's representative five days prior to the date that such connections are due to be performed. Dewatering the existing lines and operation of all valves shall be performed by the Owner.

In the event that the pipelines to which connections are to be made do not exist at the time said connections are ready to be made, the Contractor shall install blind flanges until such time that said "existing" pipelines are installed and placed into service. No extra payment will be allowed for any delays resulting from the requirements of this Section SP-3.

SP-4 LIQUIDATED DAMAGES FOR DELAYS

It will be impractical or extremely difficult to fix the actual damages that may result from any delays in completion of the work beyond the date agreed upon. It is therefore stipulated and agreed that if all the work included in the contract is not completed on or before the date of completion as provided in Section SP-1 entitled BEGINNING AND COMPLETION OF WORK, or within such extensions of time as may be granted, the Contractor shall pay to the Owner in accordance with the provisions of Section 5-3 of the General Provisions, as agreed, fixed and liquidated damages for each calendar day's delay until said work is satisfactorily completed or until the Owner may reasonably procure the completion thereof by another contract, or complete the same itself, the sum of \$1,000 per calendar day.

SP-5 BREAKDOWN OF CONTRACT PRICE

For use in preparing estimates of completed work on which to base claims for partial payments, the Contractor shall prepare an itemized breakdown of the contract price indicating quantities and unit prices for the various elements of the work.

The breakdown shall be a true representation of the contract price for work covered by the specifications and drawings and shall be subject to approval by the Owner. An unbalanced breakdown will not be acceptable.

Values assigned to the price breakdown will be used only as a basis for partial payment and not as a basis for additions to or deductions from the contract price.

SP-6 CONTRACT DRAWINGS

The location of the work and existing and new facilities and appurtenant works are shown on the drawings made a part of these specifications as listed herein.

When deemed necessary by the Engineer, additional detailed drawings will be furnished by the Contractor during the progress of the work. The Contractor will be furnished such number of copies of the drawings and specifications as may be required for carrying out the work. Contact prints of the original drawings will be furnished to the Contractor for construction purposes, upon request.

LIST OF DRAWINGS

For the Construction of
**Sierra Madre Villa Ave., Villa Knolls Dr., Edgecliff Ln. and Pasadena Glen Water Line
Improvement
Project**

Sheet No.	Title	File No.
1	Title Sheet, Vicinity Map, Index Map, Location Map and List of Drawings	2025163.00
2	Sierra Madre Villa and Villa Knolls Drive Water Main Replacement Plan	205163.00
3	E. Villa Knolls Drive and N. Edgecliff Lane Water Main Replacement Plan	2025163.00
4	Standard Drawing, No. 100 Miscellaneous Details, Bill of Materials and Notes	2025163.00
5	Standard Drawing, No. 100 Miscellaneous Details, Bill of Materials and Notes	205163.00

For the Construction of
North Pasadena Glen Road Service line and Domestic Services Replacement

Sheet No.	Title	File No.
1	North Pasadena Glen Road Service line and Domestic Services Replacement Plan	2026123.00
2	North Pasadena Glen Road Service Line and Domestic Service Replacement Plan	2026123.00

Sheet No.

Title

File No.

3

Standard Drawing, No. 100
Miscellaneous Details, Bill of Materials and
Notes

2026123.00

SP-7 DRAWINGS AND DATA REQUIRED TO BE SUBMITTED BY CONTRACTOR

A. General

The Engineer's review and approval of drawings and of data required to be submitted herein shall not relieve the Contractor from the full responsibility for the correctness of details and dimensions, and for compliance with the specifications. The Contractor shall assume all responsibility and risk for misfits due to any errors on the drawings.

B. Fabricated Materials

- (1) At a time sufficiently early to allow review as hereinafter specified and to accommodate the rate of construction progress required under the contract, the Contractor shall submit to the Engineer for review, complete shop, assembly and layout drawings of the fabricated materials to be furnished and installed under the contract.
- (2) Said drawings shall indicate type of material proposed to be used and six copies shall be submitted prior to manufacture or fabrication of the respective articles.
- (3) The Engineer will, within fifteen (15) days, return two copies of each drawing to the Contractor with corrections indicated, which drawings shall be considered as the only drawings or prints used for fabrication. If in the opinion of the Engineer, a general revision of drawings is required to prove compliance with the specifications, the Contractor shall revise said drawings and resubmit them for review.

C. Equipment

- (1) Within thirty (30) calendar days after executing the contract, the Contractor shall submit to the engineer for review six complete sets of shop drawings and catalogue data on equipment to be furnished under the contract. The required drawings shall include complete outline and assembly drawings of the equipment, details of electrical connections, schematic control diagrams, foundation requirements and the location, size and length of any required anchor bolts, and shall clearly indicate clearance, casting and machining dimensional tolerances and quality of surface finishes.
- (2) The drawings submitted for review by the Contractor shall also disclose the details of construction including dimensions, the properties of all materials used, applicable ASTM, ANSI, AWWA or other recognized Standard Specifications, and the manufacturer's catalogue, serial or other reference numbers for all equipment to be furnished.

- (3) If the Engineer finds that the drawings submitted by the Contractor are in accordance with acceptable practice and that they appear to meet the requirements of the specifications, the Engineer will return two sets of said drawings so noted within thirty (30) days after their receipt. Otherwise, two sets of drawings will be returned to the Contractor within said thirty (30) day period with a statement of the points wherein they have been found unsatisfactory, and the Contractor shall proceed at once to revise said drawings until they shall be found satisfactory by the Engineer.

D. Revisions

- (1) Revisions shown on said shop assembly or layout drawings, equipment drawings or catalogue data necessary to meet the requirements of the specifications shall not be the basis of claims for extra charges or an extension of time. The Contractor shall accept such revisions or submit another for the Engineer to review.
- (2) When delay is caused by the resubmission of details, the Contractor shall not be entitled to any damages or extensions of time on account of such delay. The required corrections noted by the Engineer shall be made on the tracings as soon as practicable and new prints submitted. As soon as practicable after acceptance by the engineer of any shop, assembly, or layout drawing, one clear legible transparent print on vellum of the tracing of said drawing shall be forwarded to the Engineer.
- (3) No fabrication or other work shall be performed in advance of the receipt of the final accepted drawings. The Contractor shall not deviate in any way from the design, details, or dimensions shown on said final drawings, without written consent of the Engineer.

E. Instruction Manuals

- (1) General Prior to delivery of mechanical and electrical equipment, the Contractor shall furnish to the Engineer at least five complete sets of installation, maintenance and operation data for all electrical and mechanical equipment furnished under this contract.
- (2) Extent of Data. Each set of data shall include, but shall not necessarily be limited to, descriptive brochures, installation, operation and maintenance manuals, standard operation manuals, special instructions and parts lists. Each manual, brochure, etc., shall relate directly and specifically to the applicable equipment and shall not be presentations of a general nature that will make it difficult to ascertain applicability of the data presented.
- (3) Equipment Covered Mechanical and electrical equipment for which such data is to be furnished shall include, but is not necessarily limited to: Valves, air compressor, electrical switchboard and controls.

SP-8 MATERIALS

All materials and articles used for permanent installation in the work shall be new and shall conform to the respective specifications or brands hereinafter designated and, in the specifications, the materials or articles shall conform to the best standard construction practice, as determined by the Engineer.

All material and articles furnished shall be subject to rigid inspection and no materials or articles shall be used in the work until it has been inspected by the Engineer.

SP-9 INSPECTION AND TESTS OF MATERIALS

- A. Readiness for Inspection** The Contractor shall furnish the Owner full information as to the progress of the work in its various parts and shall give the Owner timely notice of the Contractor's readiness for inspection. When practicable, inspection will be made during the manufacture of articles. The Contractor shall furnish, without additional charge, all reasonable facilities and assistance for the safe and convenient inspection and tests required by the Owner.
- B. Final Inspection and Acceptance** Final inspections and acceptance of the articles or materials may be made, after delivery at the work site at the Owner's expense. In the event that any material at the work site is rejected, on account of failure to pass the inspection or test, the Contractor shall replace same promptly. Final inspection will be made as promptly as practicable but may not in all cases be made prior to erection or final assembly.
- C. Right to Reject Articles and/or Materials**
 - (1) The Owner shall have the right at all times and places to reject articles and/or materials to be furnished hereunder which in any respect fail to meet the requirements of the specifications, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site.
 - (2) If the inspector, through an oversight or otherwise, has accepted material or work which is defective or which is contrary to the specifications, such materials, no matter in what state or condition of manufacture, delivery or erection may be rejected by the Owner.
 - (3) Compliance with the specifications is distinctly a duty of the Contractor and shall not be avoided by act or omission on the part of the Owner's inspector.

SP-10 WATER SUPPLY

The Owner will furnish an adequate supply of water for the purpose of construction, testing and disinfecting all the works under the specifications. However, all costs incurred in connecting to existing water supply shall be borne by the Contractor.

SP-11 SANITATION

All parts of the work shall be maintained in a neat, clean, and sanitary condition. All wastes and refuse from sanitary facilities provided by the Contractor or from any other source related to the Contractor's operations shall be taken care of in a sanitary manner, satisfactory to the Owner and in accordance with laws and regulations pertaining thereto. Fixed and portable toilets, which are made inaccessible to flies, shall be provided for use of employees and their use shall be strictly enforced.

The Contractor shall furnish all the facilities and means for the proper sanitation of the work and shall protect and hold harmless the Owner, its Engineer, officers and employees from any liability resulting from improper or insufficient sanitation measures.

SP-12 ROADWAY-DRIVEWAY MAINTENANCE AND DUST ABATEMENT

During the performance of all work included in the contract, the portion of the exiting traveled way which is used as access to the site shall be maintained by the Contractor.

During the performance of all work included in the contract or any operations appurtenant thereto, the Contractor shall furnish all the labor, equipment and means required and shall carry out proper and efficient measures wherever and as often as necessary, to prevent his operations from producing dust in amounts damaging to property or causing a nuisance to persons occupying buildings in the vicinity. All work areas shall be dust free at the end of each work day. If required mechanical sweeping, hand sweeping, or washing shall be performed to remove any dirt from travel surfaces.

SP-13 REPAIR OF PAVEMENT

Pavement damaged by construction operations shall be repaired and replaced in kind, provided, however, that where reconstruction of any right-of-way improvements is subject to the inspection and approval of any governmental agency other than Owner, the Contractor agrees to repair and replace those portions of such right-of-way improvements or pavement damaged during construction to the complete satisfaction of such agency or its authorized representative. Any requirements as to reconstruction of such rights-of-way improvements or pavement shall not form the basis of a claim by the Contractor for additional compensation or for an extension of time.

SP-14 AS-BUILT DRAWINGS

Within ten (10) days after acceptance of the Work by the Owner, the Contractor shall furnish a marked-up set of drawings indicating "As-Built" conditions, which shall reflect all changes made during construction.

SP-15 CONTRACTOR'S LICENSE

The Contractor shall possess a Class "A" general engineering contractor's license, C-34 pipeline Contractor's license or SC-34 supplemental pipeline license issued in accordance with the provisions of Chapter 9, Division 3, of the Business and Professions Code of the State of California. Upon the Owner's request, the Contractor shall present satisfactory evidence that he is licensed in good standing.

SP-16 CONTRACTING AGENCY

The contract for the work will be let by the Kinneloa Irrigation District, and the work shall be scheduled through Tom Majich, General Manager, (626)-797-6295.

SP-17 TYPE OF CONTRACT

Work under these specifications will be paid for as provided in Article 8 of these specifications. This is a cash contract.

SP-18 PERMITS

- A.** The District has applied for the excavation permit necessary for the execution of the work. The permit has been issued to Kinneloa Irrigation District. A copy of this permit is attached at the end of these specifications. The Contractor shall provide a copy of the contractors' liability insurance certificate to Kinneloa Irrigation District. The contractor shall obtain all other permits required for this work as identified in the General Provisions section 6-2.
- C.** The Contractor shall be responsible for developing a schedule of work and preparing a traffic control plan which the Contractor shall coordinate and execute with and under the guidelines of the Kinneloa Irrigation District.

SP-19 DOCUMENTS TO BE FURNISHED BY THE CONTRACTOR TO THE DISTRICT

Special attention is called, for convenience, to the following documents to be furnished to the Water District by the Contractor:

Contract Bonds per Subsection 1-12c hereinbefore

Worker's Compensation Insurance Certificate or
Industrial Accident Commission
Certificate per Subsection 7-2 of the General Provisions hereinbefore.

Liability Insurance Policy or Certificate per Subsection 7-3
of the General Provisions, hereinbefore.

SP-20 COORDINATION OF WORK

In the event that other work under separate contracts is scheduled during the scheduled work for this contract, it shall be the responsibility of the Contractor for this contract to coordinate and schedule work so as to eliminate or minimize interference between the various work parties. Sierra Madre Villa is the only access to two isolated residential areas of the District. The Contractor shall be prepared to provide emergency vehicle access on Sierra Madre Villa Knolls, Edgecliff Lane and Pasadena Glen at all times. Vehicle access for residents shall be provided at all times during and after working hours.

SP-21 PRECEDENCE

In the event of conflict between the requirements as shown on the drawings and the requirements of the specifications, or between the various parts of the specifications, the following order of precedence shall govern: (1) Specifications shall govern over other agencies requirements; (2) Drawings shall govern over standard specifications; (3) the Special Provisions shall govern over other parts of the specifications; (4) the reference standards shall govern over the specifications.

SP-22 "OR EQUAL" ITEMS

In compliance with the provisions of Public Contracts Code Section the Contractor will have thirty (35) calendar days after award of the contract to submit data substantiating a request for substitution of any "or equal" items.

SP-23 ESTIMATED QUANTITIES

The quantities listed on the drawings and the proposal are estimates only and are furnished for the convenience of the bidder in preparing his bid and will be used in

determining the lowest responsible bidder unless they are found to be in error. The Owner will not be responsible for any errors occurring in said estimates.

SP-24 COVER

Water mains 8-inch and larger shall have a minimum of 42 inches of cover, and water mains less than 6-inch shall have a minimum of 36 inches of cover, unless otherwise shown on the drawings. Service connections shall have a minimum of 24 inches of cover. Measurement of cover shall be from the top of pipe to gutter grade in street areas, and from the top of pipe to finished grade in other areas.

SP-25 LENGTH OF PIPE

The length of pipe will be measured on the horizontal length between the centers of fittings or valves, or between the ends of pipe, as the case may be, and includes the lengths of any intervening valves and fittings.

SP-26 LINES, GRADES AND CONSTRUCTION SURVEY

The Contractor shall set "line", unless such line has been set by appropriate stakes or other devices, by measuring the distance from the curb face or edge of pavement, whichever is applicable, and set "grade" to provide a minimum cover as shown on the drawings or hereinafter in these specifications. The Contractor shall provide all survey required at no additional cost to the District.

SP-27 OUTAGE TIME

The Contractor shall schedule his work in such a manner that all outage time for connections to existing water mains and service meters will be completed in one work day between 8:00a.m. Thru 4:00p.m. No outages on Fridays.

SP-28 EXISTING UNDERGROUND UTILITIES

The approximate locations and depth of all known utility lines and substructures are shown on the plans. Said locations and depths have been determined by examination of available records and the plans have been checked for accuracy by the utility companies known to have facilities, which may be affected by the proposed construction. It shall be the Contractor's responsibility to determine the exact location and depth of all utilities and substructures, including service connections, which may be affected by the proposed construction. Such determination shall be made by exposing without damaging such substructures by careful excavation ahead of the machine trenching. If no pay item is provided in this contract, full compensation for such work shall be considered as included in the bid prices for other items.

If utility lines or substructures are discovered by the Contractor which are not shown on the plans or if known utility lines are found to be at locations which are different than those shown on the plans, the Contractor shall notify the Engineer immediately. If any utility line or substructure is damaged by the Contractor, he shall bear the cost of damage and the cost of replacement or repair of any utility or substructure.

SP-29 GUARANTEE

The Contractor shall guarantee the entire work against defects in materials and workmanship for a period of one (1) year after the date of completion and shall repair or replace at his own expense, any such defects in workmanship or materials.

SP-30 COMPACTION TESTING

Compaction testing shall be done in accordance with Section 211-Soils and aggregate test of the SSPWC. Compaction tests shall be conducted along the pipeline trench alignment at no more than 25-foot intervals. Testing shall be done by a laboratory approved by the district. Soil testing costs shall be included in appropriate bid item.

SP-31 ITEMS OF WORK SIERRA MADRE VILLA, VILLA KNOLLS, AND EDGECLIFF LN.

1. MOBILIZATION, DEMOBILIZATION AND GUARANTEE

Work under this item includes furnishing all labor, material and equipment to mobilize and demobilize, provide cleanup of construction site, provide all bonds, insurances, and guarantee, and obtain all permits, (60% due at mobilization, 40% due at demobilization. Payment for this work will be made at the contract lump sum price.

2. PROVIDE PUBLIC SAFETY, TRAFFIC CONTROL, AND TRAFFIC CONTROL PLANS

Work under this item includes furnishing all labor, material and equipment as required to provide public convenience, safety, and traffic control, including a traffic control plan, warning signs, high level warning devices, barricades, construction notices, and trench plate bridging. Payment for this work will be made at the contract lump sum price.

3. PROVIDE EXCAVATION SAFETY MEASURES

Work under this item includes furnishing all labor, material and equipment to provide excavation safety measures including sheeting, shoring, and bracing, or equivalent method for the protection of life and limb in trenches and open excavation in conformance with applicable safety orders. This item also includes providing safety provisions in the work area required for working in the canyon slopes brush area. Payment for this work will be made at the contract lump sum price.

4. REPLACE PAVEMENT STRIPING AND MONUMENTS

Work under this item includes furnishing all labor, material and equipment to replace any damaged pavement striping, stop bars, text and line striping. This item also includes replacing any disturbed survey control monuments. Payment for this work will be made at the contract lump sum price.

5. FURNISH AND INSTALL 12-INCH DUCTILE STEEL PIPELINE

Work under this item includes furnishing all labor, material and equipment to furnish and install 12-inch steel pipe in improved street R/W, including: survey, pipe materials, copper tracer wiring per detail as shown on these plans, pavement removal and disposal, trench excavation, removal and disposal of trench material, control of ground and surface water, installing sand bedding and compaction, installing slurry backfill material and compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing

utilities, dust control in the work area, sweeping or washing pavement surfaces, compaction testing and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

6. FURNISH AND INSTALL 12-INCH DUCTILE IRON PIPELINE

Work under this item includes furnishing all labor, material and equipment to furnish and install 12-inch ductile iron pipe in improved street R/W, pressure class 350, including: survey, pipe materials, copper tracer wiring per detail as shown on these plans, pavement removal and disposal, trench excavation, removal and disposal of trench material, control of ground and surface water, installing sand bedding and compaction, installing slurry backfill material and compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, compaction testing dust control in the work area, sweeping or washing pavement surfaces, and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

7. FURNISH AND INSTALL 8-INCH DUCTILE IRON PIPELINE

Work under this item includes furnishing all labor, material and equipment to furnish and install 8-inch ductile iron pipe in improved street R/W, pressure class 350, including: survey, pipe materials, copper tracer wiring per detail as shown on these plans, trench excavation, pavement removal and disposal, removal and disposal of trench material, control of ground and surface water, installing sand bedding and compaction, installing slurry backfill material and compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, compaction testing dust control in the work area, sweeping or washing pavement surfaces, and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

8. REMOVE EXISTING FIRE HYDRANT AND FURNISH AND INSTALL 6-INCH FIRE HYDRANT ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to remove the existing fire hydrant assembly and lateral, return fire hydrant head to KID, and install new Fire Hydrant assembly, tee, valve per KID standard drawing, including: valve, valve can and cover, trench excavation, disposal of excess materials, control of ground and surface water, sand bedding, slurry backfill, compaction, installation of pipe, fittings, couplings, thrust blocks, temporary and permanent support of utilities, disposal of excess materials, and all other appurtenances. Payment for this work will be made at the contract unit price.

9. FURNISH AND INSTALL 12-INCH BUTTERFLY VALVE

Work under this item includes furnishing all labor, material and equipment to furnish and install 12-inch butterfly valve, included: valve materials, trench excavation, bedding, backfill, soil compaction, fittings, couplings, concrete thrust blocks, valve can and cover per KID standard drawing, and all other appurtenances necessary to install the valve. Payment for this work will be made at the contract unit price.

10. FURNISH AND INSTALL 8-INCH RW GATE VALVE

Work under this item includes furnishing all labor, material and equipment to furnish and install 8-inch RW gate valve, including: valve materials, trench excavation, bedding, backfill, soil compaction, fittings, couplings, concrete thrust blocks, handwheel operator or valve can and cover per KID standard drawing, and all other appurtenances necessary to install the valve. Payment for this work will be made at the contract unit price.

11. FURNISH AND INSTALL 3/4" AIR RELEASE VALVE ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to furnish and install 3/4" air release valve assembly including: double strap saddle, corporation stop, meter box, ARV cover, copper pipe and fittings per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, installation of concrete pad, temporary asphalt pavement, dust control, work area sweeping or washing, and all other appurtenances. Payment for this work will be made at the contract unit price.

12. FURNISH AND INSTALL SAMPLE STATION ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to furnish and install sample station assembly including double strap saddle, corporation stop, sample station cover, copper pipe and fittings, ball valve, per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, installation of concrete pad, dust control, work area sweeping or washing, and all other appurtenances. Payment for this work will be made at the contract unit price.

13. FURNISH AND INSTALL 8-INCH PRESSURE REDUCING VALVE ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to furnish and install 8-inch pressure reducing valve, vault and cover assembly, and retaining wall including: installation of inlet and outlet valves, inlet and outlet piping, per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, dust control, work area sweeping or washing, and all other appurtenances. Payment for this work will be made at the contract unit price.

14. FURNISH AND INSTALL 2-INCH PRESSURE REDUCING VALVE ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to furnish and install 2-inch pressure reducing valve including: installation of inlet and outlet valves, inlet and outlet piping, per detail as shown on these plans, control of ground and surface water, dust control, work area sweeping or washing, and all other appurtenances. Payment for this work will be made at the contract unit price.

15. FURNISH AND INSTALL 1-INCH COPPER EXISTING WATER SERVICE RECONNECTION

Work under this item includes furnishing all labor, material and equipment to furnish and install 1-inch water service lateral and reconnect to the existing customer meter per details on plan, including: removing interfering portions of existing service lateral, installing new copper piping, service saddle, corporation stop fittings couplings, bends, connectors, trench excavation, disposal of excess materials, control of ground and surface water, bedding, backfill, compaction, removal, abandonment or protection of interfering portions of existing utilities or improvements, temporary and permanent support of utilities, disposal of excess materials, and all other appurtenances. Payment for this work will be made at the contract unit price.

16. FURNISH AND INSTALL 1-INCH COPPER WATER SERVICE

Work under this item includes furnishing all labor, material and equipment to furnish and install 1-inch water service lateral and water service customer meter per details on plan, including: removing interfering portions of existing service lateral, installing new meter, meter box, copper piping, service saddle, corporation stop fittings couplings, bends, connectors, trench excavation, disposal of excess materials, control of ground and surface water, bedding, backfill, compaction, removal, abandonment or protection of interfering portions of existing utilities or improvements, temporary and permanent support of utilities, disposal of excess materials, and all other appurtenances. Payment for this work will be made at the contract unit price.

17. FURNISH AND INSTALL TEMPORARY ASPHALT CONCRETE TRENCH RESURFACING

Work under this item includes furnishing all labor, material and equipment to furnish and install temporary asphalt concrete pavement per detail on these plans, including placing and compaction. Payment for this work will be made at the contract lineal foot of trench price.

18. FURNISH AND INSTALL PERMINANT ASPHALT CONCRETE TRENCH RESURFACING

Work under this item includes furnishing all labor, material and equipment to furnish and install asphalt concrete pavement per detail on these plans, including saw cut, removal and disposal of temporary paving, compaction, protection of interfering portions of existing utilities or improvements, Payment for this work will be made at the contract lineal foot of trench price.

19. FURNISH AND INSTALL SLURRY SEAL COAT

Work under this item includes furnishing all labor, material and equipment to furnish and installing slurry seal coat in the areas shown on the plans, including surface preparation and application of slurry coat materials. Payment for this work will be made at the contract lineal foot price.

20. PRESSURE TEST, DISINFECT, FLUSH, SAMPLE, AND LABORATORY TESTING OF WATER LINES

Work under this item includes furnishing all labor, material, and equipment to pressure test, disinfect, flush, sample, and provide disinfection testing laboratory test results for new pipelines, service laterals, fire hydrants, coordinating and performing all tie-ins to connect to existing lines, etc. Payment for this work will be made at the contract lump sum price.

SP-32 ITEMS OF WORK FOR NORTH PASADENA GLEN ROAD

1. MOBILIZATION AND DEMOBILIZATION

Work under this item includes furnishing all labor, material and equipment to mobilize and demobilize, provide cleanup of construction site, provide all bonds, insurances, guarantee, and obtain all permits, (60% due at mobilization, 40% due at demobilization. Payment for this work will be made at the contract lump sum price.

2. SAFETY AND TRAFFIC CONTROL MEASURES

Work under this item includes furnishing all labor, material and equipment as required to provide public convenience, safety, and traffic control, including a traffic control plan if required, warning signs, high level warning devices, barricades, construction notices, and trench plate bridging. Payment for this work will be made at the contract lump sum price.

3. PROVIDE TRENCH AND EXCAVATION SAFETY MEASURES

Work under this item includes furnishing all labor, material and equipment to provide excavation safety measures including sheeting, shoring, and bracing, or equivalent method for the protection of life and limb in trenches and open excavation in conformance with applicable safety orders. This item also includes providing safety provisions in the work area required for working in the canyon slopes brush area. Payment for this work will be made at the contract lump sum price.

4. REPLACE PAVEMENT STRIPING AND MONUMENTS

Work under this item includes furnishing all labor, material and equipment to replace any damaged pavement striping, stop bars, text and line striping. This item also includes replacing any disturbed survey control monuments. Payment for this work will be made at the contract lump sum price.

5. FURNISH AND INSTALL 4-INCH DUCTILE IRON PIPELINE

Work under this item includes furnishing all labor, material and equipment to furnish and install 4-inch ductile iron pipe in unimproved R/W, pressure class 350, including: survey, pipe materials, copper tracer wiring per detail as shown on these plans, trench excavation, removal and disposal of trench material, control of ground and surface water, installing sand bedding and compaction, installing aggregate backfill material and compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities,

compaction testing dust control in the work area, sweeping or washing pavement surfaces, and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

6. FURNISH AND INSTALL 8-INCH DUCTILE IRON PIPELINE

Work under this item includes furnishing all labor, material and equipment to furnish and install 8-inch ductile iron pipe in improved street R/W, pressure class 350, including: survey, pipe materials, copper tracer wiring per detail as shown on these plans, pavement removal and disposal, trench excavation, removal and disposal of trench material, control of ground and surface water, installing aggregate backfill, sand bedding and compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, compaction testing dust control in the work area, sweeping or washing pavement surfaces, and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

7. REMOVE EXISTING FIRE HYDRANT AND FURNISH AND INSTALL 6-INCH FIRE HYDRANT ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to remove the existing fire hydrant assembly and lateral, remove existing valve and install blind flange on tee, furnish and install new Fire Hydrant assembly, tee, valve per KID standard drawing, including: valve, valve can and cover, trench excavation, pavement removal and disposal, disposal of excess materials, control of ground and surface water, sand bedding, aggregate backfill, compaction, installation of pipe, fittings, couplings, thrust blocks, temporary and permanent support of utilities, disposal of excess materials, and all other appurtenances. Payment for this work will be made at the contract unit price.

8. FURNISH AND INSTALL 8-INCH GATE VALVE

Work under this item includes furnishing all labor, material and equipment to furnish and install 8-inch RW gate valve, including: valve, materials, trench excavation, bedding, backfill, soil compaction, fittings, couplings, concrete thrust blocks, handwheel operator or valve can and cover per KID standard drawing, and all other appurtenances necessary to install the valve. Payment for this work will be made at the contract unit price.

9. FURNISH AND INSTALL 8-INCH TAPPING SLEEVE AND 8-INCH TAPPING GATE VALVE

Work under this item includes furnishing all labor, material and equipment to furnish and install 8-inch tapping sleeve and 8 inch tapping gate valve, including: tapping sleeve, gate valve, materials, trench excavation, bedding, backfill, compaction, fittings, couplings, concrete thrust blocks, valve can and cover per KID standard drawing, and all other appurtenances necessary to install the tapping sleeve and tapping gate valve. Payment for this work will be made at the contract unit price.

10. REMOVE EXISTING WHARF HEAD AND FURNISH AND INSTALL 4-INCH WHARF HEAD ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to remove existing wharf head, return head to KID, furnish and install new Wharf head assembly, tee, valve per KID standard drawing, including: trench excavation, disposal of excess materials, control of ground and surface water, sand bedding, aggregate backfill, compaction, installation of pipe, fittings, couplings, thrust blocks, temporary and permanent support of utilities, disposal of excess materials, and all other appurtenances. Payment for this work will be made at the contract unit price.

11. FURNISH AND INSTALL 1-INCH COPPER SERVICE LATTERAL RECONNECTION

Work under this item includes furnishing all labor, material and equipment to furnish and install 1-inch water service lateral and reconnect to the existing customer meter per detail 4/3 on plan, including: removing interfering portions of existing service lateral, installing new copper piping, service saddle, corporation stop fittings couplings, bends, connectors, trench excavation, disposal of excess materials, control of ground and surface water, bedding, backfill, compaction, removal, abandonment or protection of interfering portions of existing utilities or improvements, temporary and permanent support of utilities, disposal of excess materials, and all other appurtenances. Payment for this work will be made at the contract unit price.

12. FURNISH AND INSTALL TEMPORARY ASPHALT CONCRETE TRENCH RESURFACING

Work under this item includes furnishing all labor, material and equipment to furnish and install temporary asphalt concrete pavement per detail 5/4 on these plans, including placing and compaction. Payment for this work will be made at the contract lineal foot of trench price.

13. FURNISH AND INSTALL PERMINANT ASPHALT CONCRETE TRENCH RESURFACING

Work under this item includes furnishing all labor, material and equipment to furnish and install asphalt concrete pavement per detail 5/3 on these plans, including saw cut, removal and disposal of temporary paving, compaction, protection of interfering portions of existing utilities or improvements, Payment for this work will be made at the contract lineal foot of trench price.

14. PRESSURE TEST, DISINFECT, FLUSH, SAMPLE, AND LABARATORY TESTING OF WATER LINES

Work under this item includes furnishing all labor, material, and equipment to pressure test, disinfect, flush, sample, and provide disinfection testing laboratory test results for new pipelines, service laterals, fire hydrants, coordinating and performing all tie-ins to connect to existing lines, etc. Payment for this work will be made at the contract lump sum price.

SP-33 CONSTRUCTION SCHEDULING TRAFFIC CONTROL, AND NOTICES

SEQUENCE OF CONSTRUCTION

The construction work shall be performed and completed as follows
The sequence of construction is to install the new pipelines, fill, disinfect, test, and flush the new pipeline sections. Make one tie into existing pipelines, reconnect existing meters and install new meters connecting to the new pipelines. Once all meters and appurtenances are connected to the new pipelines, abandon existing pipelines as shown on the plans

DURATION OF CONSTRUCTION

The construction schedule shall be prepared and followed so no customer is without water service for more than 8 hours.

TRAFFIC CONTROL REQUIREMENTS

The contractor shall comply with the special traffic control, residence notices and detour requirements as follows.

SIERRA MADRE VILLA and PASADENA GLEN

Sierra Madre Villa from south of Villa Knolls to north of Vosburg Street shall maintain one lane of through traffic during construction for the installation of the water main. Construction Traffic notices will be posted Fourteen (14) days prior to the Sierra Madre Villa construction. The Contractor shall post signs at both ends of the construction area and prepare and distribute written notices to all affected parties on Sierra Madre Villa, Villa Knolls and Edgecliff. The contractor should also notify Emergency Services, including L.A. Co. Sheriff and Fire Departments. The notices shall include:

- a) Dates "from and to" that construction will occur, and traffic will be restricted to single lane operations.
- b) Time of road closure -- 8:00 A.M. to 5:00 P.M. Monday through Friday only
- c) Detour Instructions as noted below

Contractor will post the following detour signage. All signage shall conform to the WATCH Manual or CAL-TRANS spec

Signage shall be located at the upper and lower ends of the project area on Sierra Madre Villa stating the dates and times of construction, 7 days prior to start of Construction.

SP-34 HIGH RISK FIRE HAZARD AREA PROTECTION REQUIREMENTS

The Kinneloa Irrigation District is a high-risk fire hazard area. The contractor shall comply with all fire protection requirements during construction activities including the following minimum requirements:

Provide Water Truck on site (Capacity 3000 Gal.)

- a. The water truck shall be filled and operational at any time work is being done
 - b. Provide fittings, connections, and adaptors capable of delivering water to a LA Co. Fire Truck
 - c. Provide hose reel and 50 ft. of 1.5 in. hose (minimum) on water truck with nozzle for spot fires.
 - d. Provide Fire Extinguishers for areas the Water Truck cannot access.
- All Gasoline or Diesel driven Equipment or tools shall have US Forest Service Mufflers/ spark arrestors.

SECTION B – MATERIALS

B-1 REFERENCED DOCUMENTS

All applicable provisions of the General Provisions shall apply to work performed under this section.

B-2 SCOPE OF WORK

Furnish all labor, materials, equipment, and services necessary for the complete construction of the Sierra Madre Villa, Villa Knolls, Edgecliff Ln, and Pasadena Glen Water Line Improvement Project as indicated on the drawings and specified herein.

B-3 MATERIAL FURNISHED BY CONTRACTOR

Contractor shall furnish and install all material required to complete the work in accordance with the drawings and specifications. All material furnished by the Contractor shall be new and of current design being produced by the manufacturer.

B-4 RESPONSIBILITY FOR MATERIAL

A. MATERIAL FURNISHED BY THE CONTRACTOR

The Contractor shall be responsible for all material furnished by him and shall replace, at his own expense, all such material found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all material and labor required for the replacement of installed material discovered defective prior to the final acceptance of the work or during the guarantee period.

B. RESPONSIBILITY FOR SAFE STORAGE

The Contractor shall be responsible for the safe storage of existing material to be reused and material furnished by or to him and accepted by him and intended for the work until it has been incorporated in the completed project.

B-5 CONTRACTOR SUBMITTALS

A. The Contractor shall submit to the Engineer, six (6) copies of shop drawings and literature for review. Said drawings and literature shall show manufacturer's model numbers, part numbers, dimensions, color, and installation requirements for all items listed:

- Piping materials
- Piping fittings
- Valves
- Concrete Mix Design
- AC Pavement and Base Materials
- Vaults

B. These drawings shall be complete and shall contain all required information details. Materials and equipment shall not be purchased or installed without prior review of shop drawings. If requested, Contractor shall remove all equipment requiring shop drawings installed without prior signed review.

C. Shop drawings shall consist of outline drawings, assembly drawings, and bills of material, wiring diagrams, field connection diagrams, catalog cuts, and all rating data. Provide shop drawings for all installed items.

- D. Before purchase of equipment, the Contractor shall submit to the District for approval, six (6) copies of shop drawings and descriptive matter as are necessary to show the dimensions, construction, and performance of the altitude valve.

B-6 STANDARDS

All materials furnished and all work performed under these specifications shall comply with the requirements of the Standard Specifications for Public Works Construction, latest edition of the American Water Works Association (AWWA) Standards, and Kinneloa Irrigation District Standards, except as otherwise specified herein.

B-7 AIR RELEASE VALVES

- A. Air release valves shall have a cast-iron body, stainless steel float, and bronze or stainless steel trim.
- B. 1/2" air release valves shall be Apco No. 55 or Engineer approved equivalent.
- C. 3/4" Air release valves shall be Apco No. 65 or Engineer approved equivalent.
- D. Air release valves shall be designed for 250 psi working pressure.

B-8 PRESSURE GAUGES

The pressure gauge shall be a liquid filled, stainless steel case, 3-1/2" diameter, bottom mounted gauge with a 1/4" NPT connection. The pressure gauge shall have a range of 0-150 psi and have a glycerin filling. The pressure gauge shall be an Ashcroft Type 1009 or approved equivalent.

B-9 PIPE FITTINGS AND APPURTENANCES

A. DUCTILE IRON PIPE AND FITTINGS

Ductile iron pipe and fittings shall conform to the requirements of American National Institute Standard ANSI A21.20 (AWWA C1120) entitled, "American National Standard for Ductile Iron and Gray Iron, 3 in. through 48 in. for Water and Other Liquids." The ends shall conform to any of the following:

- 1. Standard spigot end
- 2. Tyton end
- 3. Flange end

Fittings shall be cement-mortar lined in accordance with American National Standards Institute Standard ANSI A21.4 (AWWA C104) entitled, "American National Standard for Cement-Mortar Lining for Ductile Iron and Gray Iron Pipe and Fittings for Water." Hydrant bury shall have AWWA Class "D" hubs and American National Standard Class 250 flanges, faced and drilled.

B. STEEL PIPE AND FITTINGS

- 1. PIPE LESS THAN 4 INCHES IN DIAMETER

Unless otherwise indicated or specified, pipe less than 4 inches in diameter shall be steel pipe conforming to the requirements of ASTM Standard A 120, entitled "Specification for

Pipe, Steel Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless, for Ordinary Uses". Unless otherwise designated, it shall be of the wall thickness known as Schedule 40.

2. STEEL PIPE 4" IN DIAMETER OR LARGER

- a. All steel pipe of 4" through 10" diameter shall be Schedule 40. Pipe 12" and larger in diameter shall be standard weight. All pipes shall be manufactured in accordance with the requirements of ASTM Standard A53 Grade B. All dimensions and thicknesses shall comply with ANSI Standard B36.10.

Pipe and fittings shall be mortar-lined and coated except where otherwise indicated and shall be in accordance with AWWA Standard C205 included hereinafter.

3. FITTINGS

- a. Screwed Fittings

Screwed fittings shall conform to the requirements of ANSI Standard B16.3, entitled "Malleable-Iron Screwed Fittings, 150 and 30 Lb". They shall be banded, galvanized, and standard weight. Nipples shall be standard galvanized steel nipples. No close nipples shall be used.

4. LINING AND COATING

Pipe and fittings shall be lined and coated as indicated on the drawings and shall conform to the following requirements.

- a. Mortar Lining and Coating

All steel pipe and fittings 4 inches or larger, in contact with backfill material or concrete, except as indicated on the drawings, shall be mortar-lined and coated. The lining shall have a minimum thickness of 1/2". The coating shall have a minimum thickness of 3/4".

Mortar-lining and coating shall otherwise conform to the applicable requirements of AWWA Standard C205, entitled "AWWA Standard for Cement-Mortar Protective Lining and Coating for Steel Water Pipe - 4 In. and Larger - Shop Applied". Exterior coatings shall be reinforced with 2 x 4 steel wire mesh, 13 gauge each way, and shall conform to the requirements of ASTM Standard A 185, entitled "Specification for Steel Welded Wire, Fabric, Plain for Concrete Reinforcement". The cement used shall be Type II.

- b. Mortar-Lining and Paint Coating

Above ground piping and fittings 4 inches or larger shall be shop mortar-lined conforming to the requirements hereinbefore for mortar-lining, and the outside protection shall be field applied paint coat conforming to the requirements specified hereinafter for painting of pipe.

- c. Epoxy Lining and Coating

Epoxy lining and coating shall be applied by a fusion method - 16 mils thickness minimum by Fusecoat Company, Inc., 9658 Alpaca Street, South El Monte, California 91733-3071, 626/686-2258.

d. Galvanizing

Where indicated on the drawings, steel pipe shall be galvanized. Galvanizing shall conform to the requirements of ASTM Standard A 53, entitled "Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless".

5. WELDING

a. General

All welding shall be performed by welders qualified in accordance with the Requirements of Section IX, "Welding Qualifications" of the American Society of Mechanical Engineers, or American Welding Society Standard B3.0-41T, "Standard Qualification Procedure".

b. Pipe Welding

Circumferential joints in steel pipe shall be welded by use of electric arc in such a manner as to ensure a connection equaling or surpassing the strength of adjacent pipe. Care shall be taken to prevent spalling of the mortar lining and coating. All field welding shall be done in accordance with the applicable requirements of AWWA Standard C206, entitled "AWWA Standard for Field Welding of Steel Water Pipe".

C. FLANGES, BOLTS, AND GASKETS

1. STEEL FLANGES

Steel flanges for pipe and fittings shall be flat-faced and shall conform to the requirements of AWWA Standard C207, entitled "AWWA Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 In. Through 144 In.", or shall conform to ANSI Standard, entitled "Steel Pipe Flanges and Flanged Fittings", 250-pound slip-on flanges. All flanges shall be welded inside and outside.

2. BOLTS AND NUTS

Bolts for above ground installation shall be of low carbon steel with ANSI regular hexagonal head. Nuts shall be of low carbon steel with ANSI regular hexagonal dimensions. Threads shall be coarse thread series, Class 2A and 2B fit. Bolts and nuts shall conform to the requirements of ANSI Standards B18.2.1 and B18.2.2, respectively, and shall be cadmium plated or hot-dip galvanized after fabrication. In lieu of the above, all bolts, nuts, and washers for buried installation shall be stainless steel 316 bolts and nuts.

3. GASKETS

Gaskets for flanged joints shall be ring-type, cloth-inserted rubber gaskets 1/8-inch thick. The gaskets shall extend from the inside edge of the flange to at least the inside edge of the bolt holes, or they may extend beyond the bolt circle.

D. COPPER TUBING AND PIPE

Copper Tubing and pipe shall be Type K, Class I, and shall conform to Federal Specification WW-T-799D, entitled "Tube, Copper, Seamless, (for Use with Solder - Flared - or Compression - Type Fittings)".

E. PLASTIC PIPE

Plastic pipe shall be of polyvinyl chloride plastic and shall be suitable for use with potable water.

1. Polyvinyl chloride pipe shall conform to ASTM Standard D 1785, entitled "Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120", and shall be of Type I, Grade 1 materials. All pipes shall be Schedule 80.
2. Fittings shall be Schedule 80 and shall conform to ASTM Standard D 2464, entitled "Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80 and shall be Type I, Grade 1 materials.
3. Adapters, reducers, or bushings shall be used as required.
4. Solvent for joining polyvinyl chloride plastic pipe shall conform to the requirements of the pipe manufacturer. Use primer and heavy bond glue #2711 or #711.
5. Unless otherwise indicated on the drawings, all connections shall be slip type. Slip connections shall be made by solvent welding with a solvent material recommended by the pipe manufacturer. Use primer and heavy bond glue #2711 or #711. Threaded connections when called for on the drawings or specified shall be iron pipe thread. No close nipples shall be used.

B-10 VICTAULIC COUPLINGS (NOT USED)

Victaulic couplings shall be Victaulic standard couplings, Style 77, or approved equivalent. Pipe ends at couplings shall be grooved type for steel pipe and meet the manufacturer's design tolerances. Bolts and nuts shall be stainless steel.

B-11 PIPE SUPPORTS

Pipe supports for water pipeline shall be of the adjustable cast iron saddle type as manufactured by Grinnell Company, Figure 264 (Catalog G-69), or approved equivalent.

B-12 GATE VALVES

Gate valves shall be resilient wedge gate valves. Gate valves shall meet all applicable requirements of AWWA Standard for Resilient Seated Gate Valve C 509. Valves 12 inches and smaller shall be designed for a working pressure of 150 psi to 200 psi. Valves shall have non-rising stems and 2-inch square operating nut with arrow cast in metal to indicate direction of opening. The wedge shall be constructed of ductile iron, full encapsulated in synthetic rubber except for guide and wedge nut area.

The valve body and bonnet shall be fusion bonded epoxy, inside and out. Valves shall be furnished with appropriate flange or push-on joint ends. Resilient seat gate valves shall be Mueller **"ONLY"**, Model A2362-E381 EPDM – 316 SS..

Each buried gate valve shall be provided with a valve box and cover or handwheel. The valve box shall consist of a piece of 8-inch P.V.C. pipe, Class 100, with a telescoping galvanized steel valve-box tube with a cast iron cover marked "WATER". The valve box shall be mounted vertically over the valve operator, as detailed on Kinneloa Irrigation District standard drawing.

B-13 BUTTERFLY VALVES

The butterfly valves shall be Mueller Model "Line Seal III", no exceptions, flanged, designed for buried service, and equipped with underground operator. Above ground butterfly valves shall be equipped with hand wheel operator with arrow cast in metal to indicate direction of opening and closing. The valve body and disk shall be fuse coated epoxy coated inside and out per specifications. The underground operation shall be manual, with an underground 2-inch square nut. The valve shall have Ductile iron body and bonnet, Ductile iron disc with 316 Stainless steel seat, EPDM packing and EPDM seat, 316 stainless steel shaft, squeeze pin, lock washers, cap screws, and expansion plug

Each buried butterfly valve shall be provided with a valve box and cover. The valve box shall consist of a piece of 8-inch P.V.C. pipe, Class 100, with a telescoping galvanized steel valve-box tube with a cast iron cover marked "WATER". The valve box shall be mounted vertically over the valve operator, as detailed on Kinneloa Irrigation District standard drawing.

B-14 CORPORATION STOPS

All corporation stops shall be of the size indicated on the drawings. Corporation stops shall be as shown on the standard drawings.

B-15 FIRE HYDRANTS ASSEMBLIES

Fire hydrant assemblies shall include the tees, gate valves, valve boxes and covers, bends, pipe buries, and all fittings as shown on the plans. Valves, pipes, and other components shall conform to the applicable requirements specified elsewhere herein. Fire hydrant heads shall be bronze. The exterior surface of each fire hydrant assembly above ground shall be painted with a minimum of two coats of Rustoleum primer and two coats of traffic signal yellow L.A. Co. F.D. reg. # 8, or Engineer-approved equivalent.

B-16 BALL VALVES

Ball valves shall be brass bodied, threaded for piping in which they are installed. Ball valves shall have a stainless steel ball, TFE seats, and shall be rated for 300 psi WWP. Valves shall be Crane, Milwaukee Valve Company, or Engineer approved equivalent.

B-17 PRESSURE SWITCHES

- A. Each pressure switch shall have a pressure snubber between the device and the pressure source. Pressure snubbers shall be of brass construction, have 1/4" NPT male and female connections and be of the filter type. Pressure snubbers shall be Weksler Instruments Type BW41, Ashcroft, Cajon, or Engineer approved equivalent.
- B. Supply side pressure switches shall open on pressure drop. Delivery side pressure switches shall open on pressure rise.
- C. Pressure switches shall be weatherproof.

B-18 ENCASEMENT AND THRUST BLOCKS

At all changes in direction, plugs, dead ends and similar locations, thrust blocks shall be provided. Thrust blocks shall not be less than the sizes indicated on the drawings and may be larger at the discretion of the Contractor to meet conditions encountered during construction. They shall extend from the fitting to undisturbed earth. All concrete for thrust blocks shall be composed of one part

Portland cement, two parts washed concrete sand and five parts crushed rock or gravel and shall be placed as dry as practicable.

B-19 PRESSURE AND LEAKAGE TEST

After all thrust blocks have been in place for at least two days in the particular portion to be tested, and after all pipe has been filled for not less than 48 hours, a pressure test shall be conducted by the Contractor. Each section of main, up to but not exceeding 1000 feet in length, and all fittings connected thereto, shall be subjected to a hydrostatic pressure of 175 pounds per square inch while all pipe and joints are inspected for leakage. Pressure shall be taken at, or corrected to the lowest point in the portion of the line being tested. After the entire section under test has been inspected and no leaks have been found, or if found, have been repaired and resubjected to the test pressure, the pressure shall be maintained for one hour. Welded steel pipe shall have no leakage.

B-20 BACKFILLING AND BEDDING

Backfilling shall follow the pipe installation as closely as possible. Bedding material shall be placed in the trench a minimum of 6" thick. After the pipe has been properly installed, the backfilling material shall be placed in the trench on both sides of the pipe over the top of the pipe to the level required by the Engineer. Material used for bedding shall be imported washed concrete sand. Bedding material shall be densified by jetting to a relative density of 90%. Backfill material shall be sand slurry or Aggregate base where shown on the plans.

B-21 ASPHALT CONCRETE PAVING

- A. Subgrade shall be prepared in accordance with the provisions of Subsection 301-1 "Subgrade Preparation" of the Standard Specifications for Public Works Construction, latest edition. All pavement sections shall have the thickness shown on the drawings. Pavement shall be placed directly on prepared base material. Subgrade shall be prepared in the manner specified in the Section on earthwork. The top six inches of the subgrade shall be compacted to a relative compaction of 95 percent.
- B. Soil sterilization shall be provided in all pavement areas. An approved dye shall be added to the soil sterilant to insure coverage. The Contractor shall exercise care that no sterilant is applied outside the paving limits.
- C. Treatment shall be made after the subgrade has been completed and just prior to placing of pavement. Time lapse between soil treatment and placing of pavement shall be the practicable minimum.
- D. The Contractor shall provide all the necessary protection to prevent injury to animal, adjacent plant life, future planting areas, and property that is occasioned by the application of soil sterilant. The Contractor will be held responsible for all personal injury or property damage caused by soil sterilants or their storage.
- E. GENERAL

Asphalt concrete pavement to be constructed shall conform to the requirements of Subsection 302-5 "Asphalt Concrete Pavement" of the Standard Specifications for Public Works Construction, latest edition.

F. TYPE OF COURSES

Permanent A.C. pavement shall consist of two 2-inch lifts minimum of asphalt concrete pavement and Slurry Seal were indicated.

The asphalt concrete shall be Type C2-AR-4000, conforming to Subsection 203-6 of the Standard Specifications for Public Works Construction, latest edition, and shall be constructed in two courses.

Base and finish courses shall be C2-AR-4000. A top coat of asphalt seal coat per Standard Specifications for Public Works Construction subsection 203-9 shall be applied to the finished asphalt pavement.

The asphalt pavement restoration shall receive a slurry seal coat where shown on the drawings. Slurry seal coat shall be Type II emulsion aggregate slurry with 2.5% latex polymer additive.

When mud or other soft, spongy, or otherwise unsuitable material in the subgrade is encountered, it shall be taken out and the excavation refilled with good earth or aggregate base material. The Contractor may elect, at his own expense and upon approval of the Engineer, to remove all or a portion of the unsuitable material and replace it with aggregate base material.

Unsuitable fill material shall include, but not be limited to, vegetable or animal matter, metal, and rocks or lumps of material exceeding six (6) inches in greatest dimension. Unsuitable fill material shall be disposed of away from the site of work. If the disposal of unsuitable fill material necessitates the importation of material from a source outside the site, the imported material shall be approved by the Engineer.

B-22 REINFORCEMENT STEEL

A. GENERAL

1. The Contractor shall furnish, fabricate, and place all concrete and masonry reinforcement steel, couplers, and concrete inserts for use in reinforced concrete and masonry construction and shall perform all appurtenant work, including all the wires, clips, supports, chairs, spacers, and other accessories, all in accordance with the Contract Documents. The Contract Documents shall take precedence over these specifications.

B. REFERENCE CODES

1. Codes:

UBC ' Uniform Building Code, Latest Edition

C. CONTRACTOR SUBMITTALS

1. The Contractor shall furnish reinforcement placing drawings, shop bending diagrams, placing lists, and drawings of all reinforcement steel prior to fabrication.
2. Details of the concrete reinforcement steel and concrete inserts shall be submitted by the Contractor at the earliest possible date after receipt by the Contractor of the Notice to Proceed. Said details of reinforcement steel for fabrication and erection shall conform to ACI 315 and the requirements specified and shown. The shop bending diagrams shall show the actual lengths of bars, to the nearest inch

measured to the intersection of the extensions (tangents for bars of circular cross section) of the outside surface. The shop drawings shall include bar placement diagrams that clearly indicate the dimensions of each bar splice.

3. Where mechanical couplers are required or permitted to be used to splice reinforcement steel, the Contractor shall submit manufacturer's literature which contains instructions and recommendations for installation for each type of coupler used; certified test reports which verify the load capacity of each type and size of coupler used; and shop drawings which show the location of each coupler with details of how they are to be installed in the formwork.
4. If reinforcement steel is spliced by welding at any location, the Contractor shall submit mill test reports which shall contain the information necessary for the determination of the carbon equivalent as specified in AWS D1.4. The Contractor shall submit a written welding procedure for each type of weld for each size of bar which is to be spliced by welding; merely a statement that AWS procedures will be followed is not acceptable. Welding of reinforcing bars shall be done only where specifically detailed on the plans or when permitted by the Engineer.
5. Contractor shall submit all reinforcing for a given structure in a single submittal at one time. Partial reinforcing submittals may be returned to the Contractor rejected for incompleteness.

D. QUALITY ASSURANCE

1. If requested by the Engineer, the Contractor shall provide samples from each heat of reinforcement steel delivered in a quantity adequate for testing. Costs of initial tests will be paid by the Engineer. Costs of additional tests due to material failing initial tests shall be made by the Contractor.
2. If reinforcement steel is spliced by welding at any location, the Contractor shall submit certifications of procedure qualifications for each welding procedure used and certification of welder qualifications, for each welding procedure, and for each welder performing the work. Such qualifications shall be as specified in AWS D1.4.
3. If requested by the Engineer, the Contractor shall provide samples of each type of welded splice used in the work in a quantity and of dimensions adequate for testing. At the discretion of the Engineer, radiographic testing of direct butt welded splices will be performed. The Contractor shall provide assistance necessary to facilitate testing. The Contractor shall repair any weld which fails to meet the requirements of AWS D1.4. The costs of testing will be paid by the Contractor.
4. Inspection: All work hereunder shall be subject to continuous inspection by a Special Inspector selected by the Owner and approved by the local Building Official having jurisdiction. Special Inspection shall be performed in accordance with the 1997 edition of the Uniform Building Code. The Special Inspector shall work under the direct supervision of the Engineer. All costs of such inspection shall be borne by the Contractor and shall be included in the price bid for completion of the work.

The Special Inspector shall observe the following work for conformance with the design drawings and specifications:

- a. During placing of all reinforcing steel in concrete requiring special inspection; during the welding of all reinforcing steel.

E. PRODUCTS

1. Reinforcement Steel

- a. Reinforcement Steel for all cast-in-place reinforced concrete and masonry construction shall conform to the following requirements:
- b. Bar reinforcement shall conform to the requirements of ASTM A 615 for Grade 60 Billet Steel Reinforcement or as otherwise shown.
- c. Bar reinforcement used in welded connections shall conform to the requirements of ASTM A 706.

2. Accessories

- a. Accessories shall include all necessary chairs, slab bolsters, concrete blocks, tie wires, dips, supports, spacers, and other devices to position reinforcement during concrete and grout placement. All bar supports shall meet the requirements of the CRSI Manual of Standard Practice. Wire bar supports shall be CRSI Class 1 for maximum protection with a 1/8-inch minimum thickness of plastic coating which extends at least 1/2-inch from the concrete surface. Plastic shall be gray in color.
- b. Concrete blocks (dobies), used to support and position reinforcement steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Wire ties shall be embedded in concrete block bar supports.
- c. Drilling of reinforcing bars in place of cast-in-place hooks and anchors will not be permitted unless previously approved by the Engineer in writing.

F. MECHANICAL COUPLERS

1. Mechanical couplers shall be provided where shown and where approved by the Engineer. The couplers shall develop a tensile strength which exceeds 125 percent of the yield strength of the reinforcement bars being spliced at each splice.
2. Where the type of coupler used is composed of more than one component, all components required for a complete splice shall be supplied. This shall apply to all mechanical splices including those splices intended for future connections.
3. The reinforcement steel and coupler used shall be compatible for obtaining the required strength of the connection. Straight threaded type couplers shall require the use of the next larger size reinforcing bar or shall be used with reinforcing bars with specially forged ends which provide upset threads which do not decrease the basic cross section of the bar.
4. Couplers shall be Lenton Form Saver as manufactured by Erico Products; Dowel Bar Splicer System as manufactured by Richmond Screw Anchor Company; or equal.

G. WELDED SPLICES

1. Welded splices shall be provided where shown and where approved in writing by the Engineer. All welded splices of reinforcement steel shall develop a tensile strength

which exceeds 125 percent of the yield strength of the reinforcement bars which are connected.

2. All materials provided for welded splices shall conform to the requirements of AWS D1.4.

H. EPOXY GROUT

1. Epoxy for grouting reinforcing bars shall be specifically formulated for such application, for the moisture condition, application temperature, and orientation of the hole to be filled.

B-23 CONCRETE

A. GENERAL

1. Provide Cast-in-place concrete construction, including form work and reinforcement, where shown on the drawings, as specified herein, and as needed for a complete and proper installation.

B. SUBMITTALS

1. Concrete mix designs in accordance with provisions of the SSPWC as modified herein, shall be submitted to the Engineer for review and approval. Mix designs shall be signed by a licensed engineer.
2. Provide samples of reinforcing for testing in accordance with the SSPWC.

C. FORMS

1. Design, erect, support, brace, and maintain formwork so it will safely support vertical and lateral loads which might be applied until such loads can be supported safely by the concrete structure.
2. Construct forms to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure.

D. CONCRETE

1. Comply with the following as minimums:
 - a. Cement: shall comply with ASTM C150, Type V Portland cement, Type I – Normal or Type II – Moderate, Portland type may be used if soil sulfate levels as determined by a Geotechnical Engineer are sufficiently low.
 - b. Fine and Coarse Aggregates: ASTM C33, uniformly graded and clean;
 - c. Do not use aggregate known to cause excessive shrinkage.
 - d. Aggregate, coarse: Crushed rock or washed gravel with minimum size between 3/4" and 1-1/2", and with a maximum size number 4.

- e. Aggregate, fine: Natural washed sand of hard and durable particles varying from fine to particles passing a 3/8" screen, of which at least 12% shall pass a 50-mesh screen.
 - f. Water: Clean and potable.
2. Provide concrete with the compressive strengths shown on the drawings. When such strengths are not shown on the drawings, provide the following as minimums:
- a. Concrete Footings..... 3250 psi
 - b. Concrete walks and slabs on grade..... 3250 psi
3. Surface treatment
- a. Where "sealer" or "hardener" is called for on the drawings, provide "Ashford Formula" manufactured by Curecrete Chemical Company of Orem, Utah and distributed by Martech Associates, 19836 Vintage Street, Chatsworth, California 91311 213/993-1163, and provide the manufacturer's standard written 20 year/10 year warranty.
 - b. Except as otherwise directed by the Engineer or shown on the drawings, on all other concrete slab, driveway, and walkway surfaces provide "Hunt TLF" curing agent manufactured by Hunt Process Co., Inc.

E. ADMIXTURES

- 1. Fly Ash: ASTM C618 Class F.

F. ACCESSORIES

- 1. Bonding Agent: Two component modified epoxy resin, such as Sikadur Hi-mod by Sika.
- 2. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2500 psi in 48 hours and 7,000 psi in 28 days.
- 3. Epoxy Adhesive: Pre-package resin and hardener dual cartridge system mixed and delivered by a pneumatically or manual activated tool. The product shall have a current I.C.B.O Research Report, such as Sika "SET Adhesive" or Hilti "HY-150"

G. CONCRETE MIX

- 1. Deliver concrete in accordance with ASTM C94.
- 2. Select proportions for normal weight concrete in accordance with ACI 301.
- 3. Provide concrete to the following criteria:

Unit	Measurement (Range)	
Coarse Aggregate	75 % by weight	80 % by weight
Fine Aggregate	25 % by weight	20 % by weight
Cement (lbs/CY including fly ash)	470	564

Unit	Measurement (Range)	
Water/Cement Ratio (maximum)	0.52 by weight	0.45 by weight
Aggregate Size (maximum)	1 inch	1 inch
Fly Ash Content:	10% Max. % of cement content	15% Max. % of cement content
Slump - Plus or minus 1 inch	4 inches	3 inches

I. OTHER MATERIALS

1. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer. Calcium chloride and other admixtures containing chloride ions shall not be used in the concrete mix.
2. Use set retarding admixtures during hot weather only when approved by Engineer.
3. Use accelerating admixtures in cold weather only when approved by Engineer. Use of admixtures will not relax cold weather placement requirements.

B-24 PRESSURE REDUCING VALVES

1. Function: This valve shall control the delivery of water from the Vosburg Zone to the Glen Zone without the need for floats or other devices. It shall be a throttling type of valve and open as necessary to maintain a set pressure on the discharge side to the Glen Zone. The valve shall remain fully closed until opened by the hydraulic head of the Glen Zone. This valve is designed for one-way flow.
2. Main Valve: The valve shall be hydraulically operated, single diaphragm-actuated, globe pattern. The valve shall consist of three major components: the body with seat installed, the cover with bearings installed, and the diaphragm assembly. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure. Packing glands and/or stuffing boxes are not permitted and there shall be no pistons operating the main valve or pilot controls.
3. Main Valve Body:

No separate chambers shall be allowed between the main valve cover and body. Valve body and cover shall be of cast material. Ductile Iron is standard and other materials shall be available. No fabrication or welding shall be used in the manufacturing process.

The valve shall contain a resilient, synthetic rubber disc, with a rectangular cross-section contained on three and one-half sides by a disc retainer and forming a tight seal against a single removable seat insert. No O-ring type discs (circular, square, or quad type) shall be permitted as the seating surface. The disc guide shall be of the contoured type to permit smooth transition of flow and shall hold the disc firmly in place. The disc retainer shall be of a sturdy

one-piece design capable of withstanding opening and closing shocks. It must have straight edge sides and a radius at the top edge to prevent excessive diaphragm wear as the diaphragm flexes across this surface. No hourglass-shaped disc retainers shall be permitted, and no V-type or slotted type disc guides shall be used.

The diaphragm assembly containing a non-magnetic 303 stainless steel stem of sufficient diameter to withstand high hydraulic pressures shall be fully guided at both ends by a bearing in the valve cover and an integral bearing in the valve seat. The seat shall be a solid one-piece design and shall have a minimum of a five-degree taper on the seating surface for a positive, drip-tight shut off. No center guides shall be permitted. The stem shall be drilled and tapped in the cover end to receive and affix such accessories as may be deemed necessary. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure.

The flexible, non-wicking, FDA approved diaphragm shall consist of nylon fabric bonded with synthetic rubber compatible with the operating fluid. The center hole for the main valve stem must be sealed by the vulcanized process or a rubber grommet sealing the center stem hole from the operating pressure. The diaphragm must withstand a Mullins Burst Test of a minimum of 600 psi per layer of nylon fabric and shall be cycle tested 100,000 times to insure longevity. The diaphragm shall not be used as the seating surface. The diaphragm shall be fully supported in the valve body and cover by machined surfaces which support no less than one-half of the total surface area of the diaphragm in either the fully opened or fully closed position.

The main valve seat and the stem bearing in the valve cover shall be removable. The cover bearing and seat in 6" and smaller size valves shall be threaded into the cover and body. The valve seat in 8" and larger size valves shall be retained by flat head machine screws for ease of maintenance. The lower bearing of the valve stem shall be contained concentrically within the seat and shall be exposed to the flow on all sides to avoid deposits. To ensure proper alignment of the valve stem, the valve body and cover shall be machined with a locating lip. No "pinned" covers to the valve body shall be permitted. Cover bearing, disc retainer, and seat shall be made of the same material. All necessary repairs and/or modifications other than replacement of the main valve body shall be possible without removing the valve from the pipeline. Packing glands and/or stuffing boxes shall not be permitted and components including cast material shall be of North American manufacture.

The valve manufacturer shall warrant the valve to be free of defects in material and workmanship for a period of three years from date of shipment, provided the valve is installed and used in accordance with all applicable instructions. Electrical components shall have a one-year warranty.

Material Specification

Main Valve Body and Cover: Ductile Iron

Main Valve Trim: Stainless Steel

End Detail: 150 lb

Pressure Rating: 150 psi

Temperature Range: to 180 °F

Rubber Material: Buna-N Rubber
Coating: 8-10 mil fusion bonded epoxy

4. Pilot Control System: The pilot control shall be hydraulically operated. When actuated by system pressure the pilot control valves shall apply pressure from the upstream side of the valve to the cover of the main valve through the internal working of the pilot controls to open or close the valve based on a set predetermined pressure. When the desired pressure is reached, the pilot valve will control the valve to maintain the set pressure.

The valve shall close completely if the discharge pressure setting is exceeded.

Main valve body: Ductile iron
Coating: 8-10 mil fusion bonded epoxy
Trim: Stainless Steel
Rubber Material: Buna-N Rubber
Tubing and Fittings: Stainless steel
Operating Fluids:
Water Temperature Range: to 180 °F

Accessories
XP2F-X35 Data Acquisition & Flow Meter Package

The 2-inch Valve shall be Cla-Val Co. Model No. 690-01 reduced port
The 8-inch Valve shall be Cla-Val Co. Model No. 90-01 full port

B-25 – PRECAST CONCRETE VAULTS

- A. Precast concrete vaults shall be installed as shown and shall be sized as dimensioned on the Drawings. Locations and number of pipe penetrations and dimensions of penetrations shall be as shown on the Drawings.
- B. Contractor shall submit detailed plans for the vaults and structural calculations stamped and signed by a registered civil or structural engineer licensed in the State of California for review by the Owner and Engineer.
- C. Pre-cast concrete vaults shall be furnished in one or more sections with out a base.
- D. Design loads are those anticipated for use within a public parkway. *AASHTO H-20*, live loads of 8000 lbs. with a 30% impact factor. The minimum compressive concrete strength shall be 4000 psi at 28 days.
- E. The vault lid shall be double-leaf, ¼" thick aluminum plate cove with a diamond pattern. The channel frame shall be ¼" thick aluminum with an anchor flange all around the perimeter. The door shall be equipped with heavy forged brass hinges having minimum 3/8" diameter stainless steel pins. The doors shall automatically lock into the vertical position by means of a heavy steel hold-open arm with a release handle. A type 316 SS snap lock with a gasketed cover plug and removable turn handle shall be provided. Compression spring operators enclosed in telescopic tubes shall be provided for smooth and controlled door

operations. The vault lid shall be a *Type JD* as manufactured by the Bilco Company or approved equal.

- F. Sectional pre-cast concrete vault structures shall be sealed on the outside with a polyurethane sealant.
- G. Sealing of Joints: Contractor shall seal all concrete joints with a polyurethane sealant to be approved by the Owner and Engineer.
- H. The pre-cast concrete vaults shall be steel reinforced, where required and shall be billet steel conforming to *ASTM A-615* or *A-706*.
- I. All piping penetrations shall be sealed with a non-shrink grout placed in the annular space between the pipe O.D. and the vault opening.

SECTION C -- METHODS

C-1 PROTECTION OF QUALITY OF WATER

The Contractor shall take such precautions as are necessary or as may be required to prevent contaminated water, water having undesirable physical or chemical characteristics, oil, gasoline, from entering the water lines by any means.

C-2 SAFEGUARDING EXCAVATIONS AND PROTECTING PROPERTY

- A. Excavation shall be properly shored and braced such that they will be safe and that the ground alongside the excavation will not slide or settle. Shoring and bracing shall be sufficient to assure that all existing improvements of any kind, on either public or private property, will be fully protected from damage.
- B. The Contractor shall furnish, install, and maintain all timbering necessary to support the sides of the excavations. Wherever, in the opinion of the District, sufficient or proper timbering has not been provided, the Contractor, on demand, shall furnish and install additional timbering; but neither compliance with nor failure of the District to make such demand shall relieve the Contractor from responsibility for sufficiency of the timbering.
- C. If damage occurs to such improvements as a result of inadequate shoring and bracing, the Contractor shall affect the necessary repairs or reconstruction, at his own expense, as directed by the District Engineer.
- D. The Contractor shall have at the work site, copies or suitable extracts of: Construction Safety Orders, Tunnel Safety Orders, and General Industrial Safety Orders issued by the State Division of Industrial Safety. The Contractor shall comply with provisions of these and all other applicable laws, ordinances, and regulations.

Before excavating any trench 5 feet or more in depth, the Contractor shall submit to the Engineer, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for the workers protection from the hazard of caving ground during the excavation of such trench. If the plan varies from the shoring system standards, the plan shall be prepared by a registered civil engineer. No excavation shall be commenced until the Engineer has accepted the plan and the Contractor has obtained a permit from the State Division of Industrial Safety. A copy of the permit shall be submitted to the District Engineer.

C-3 EXCAVATION AND PREPARATION OF TRENCH

A. General

The trench shall be dug so that the pipe can be laid to the alignment and depth required.

B. Width of Trench

The width of the trench shall be ample to permit the pipe to be laid and jointed properly, and the backfill to be placed and compacted as specified. Trenches shall be of such extra width, when required, as will permit and convenient placing of timber supports, sheeting and bracing, and handling of specials.

C. Bell Holes

Bell holes shall be provided at each ductile-iron pipe joint to permit the jointing to be made properly.

D. Pipe Clearance in Rocks

Ledge rock, boulders, and large stones shall be removed to provide a clearance of at least 6 inches below and on each side of all pipe, valves, and fittings. The specified minimum clearance is the minimum clearance distance which will be permitted between any part of the pipe and appurtenances being laid and any part, projection or point of such rock, boulder, or stone.

E. Excavation for Ductile Iron and Steel Pipe

The trench shall be excavated to the depth required so as to provide a uniform and continuous bearing and support for the pipe on solid and undisturbed ground at every point between bell holes, except that it will be permissible to disturb or otherwise damage the finished surface over a maximum length of 18 inches near the middle of each length of pipe by withdrawal of pipe slings or other lifting tackle. Any part of the bottom of the trench excavated below the specified grade shall be corrected with approved material, thoroughly compacted as directed by the Engineer. The finished subgrade shall be prepared accurately by means of hand tools.

The subgrade beneath the centerline of the pipe shall be finished to within 0.03 foot of straight line between pipe joints or batter boards, and all tolerances shall be from the specified grade.

F. Excavation for PVC Pipe

Trenches for PVC pipe shall be excavated to the depth required so as to provide a uniform and continuous bearing and support for the pipe on solid and undisturbed ground at every point. All rocks and stones capable of significantly scratching or otherwise damaging the pipe shall be removed from the bottom of the trench. The trench shall be dug in straight lines between all the fittings.

G. Water in Trench

Water, if encountered, shall be removed from excavations as soon as it accumulates.

C-4 PIPE LAYING, DUCTILE-IRON AND STEEL PIPE

A. Handling Pipe and other Materials

Proper implements, tools, and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient prosecution of the work. All pipe, fittings, valves and hydrants shall be carefully lowered into the trench piece by piece by means of a derrick, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.

B. Hammer Test

The pipe and fittings shall be inspected for defects, and while suspended above grade, be rung with a light hammer to detect cracks.

C. Cleaning Pipe and Fittings

All lumps, blisters and excess coal-tar coating shall be removed from the bell and spigot end of each pipe, and the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry and free from oil and grease before the pipe is laid.

D. Laying Ductile-Iron and Steel Pipe

Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. If the pipe laying crew cannot put the pipe into the trench and in place without getting earth into it, the Engineer may require that before lowering the pipe into the trench, a heavy, tightly woven canvas bag of suitable size shall be placed over each end and left there until the connection is to be made to the adjacent pipe. During laying operations, no debris, tools, clothing, or other materials shall be placed in the pipe.

After placing a length of pipe in the trench, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with approved backfill material tamped under it, except at the bells. Pipe and fittings which do not allow a sufficient and uniform space for joints shall be removed and replaced with pipe and fittings of proper dimensions to insure such uniform space. Precautions shall be taken to prevent dirt from entering the joint space.

At times when pipe laying is not in progress, the open ends of pipe shall be closed by watertight plug or other means approved by the Engineer. This provision shall apply during the noon hours as well as overnight. If water is in the trench, the seal shall remain in place until the trench is pumped completely dry.

E. Cutting Pipe

The cutting of pipe for inserting valves, fittings, or closure pieces shall be done in a neat workmanlike manner without damage to the pipe or cement lining and so as to leave a smooth end at right angles to the axis of the pipe.

The flame cutting of pipe by means of an oxyacetylene torch will not be allowed.

F. Bell Ends to Face Direction of Laying

Pipe shall be laid with bell ends facing in the direction of laying, unless directed otherwise by the Engineer.

G. Unsuitable Conditions for Laying Pipe

No pipe shall be laid in water or when in the opinion of the Engineer trench conditions are unsuitable.

C-5 PIPE LAYING, PVC

A. Handling Pipe

Before installation, the Contractor shall carefully inspect all plastic pipes for cuts, punctures, or excessive abrasion that may have resulted from shipping or handling. Damaged pipe sections shall be rejected. Since even slight scratches considerably decrease the ultimate strength of plastic pipe the pipe shall be carefully placed on the trench bottom. Pulling of pipe into the trench will not be permitted except as required to pull the pipe under existing curbs, gutters and other obstructions. Pipe shall be carefully handled at all times and protected from abrasion and contact with any sharp object that may cut or scratch the pipe.

B. Installation

The pipe shall be carefully installed in the trench. The pipe shall not be kinked or bent.
Care shall be taken to prevent the entrance of dirt or contaminants into the pipe.

C. Cutting

When cutting is required, plastic pipe shall be cut cleanly at right angles to the axis of the pipe with cutting tools specifically manufactured for the purpose.

C-6 WELDING

A. STRUCTURAL AND GENERAL

All welding shall be performed by welders qualified in accordance with the requirements of Section IX, "Welding Qualifications" of the American Society of Mechanical Engineers, or American Welding Society Standard B3.0-41T, "Standard Qualification Procedure".

B. PIPE WELDING

Circumferential joints in steel pipe shall be welded by use of electric arc in such a manner as to ensure a connection equaling or surpassing the strength of adjacent pipe. Care shall be taken to prevent spalling of the mortar lining and coating. All field welding shall be done in accordance with the applicable requirements of AWWA Standard C206, entitled "AWWA Standard for Field Welding of Steel Water Pipe".

C-7 ENCASEMENT AND THRUST BLOCKS

The location and minimum size of thrust blocks shall be as indicated on the drawings. The thrust blocks shall be large enough to withstand 300 psi test pressure without exerting more than 2000 psf bearing pressure on the soil and may be larger at the discretion of the Contractor to meet conditions encountered during construction.

C-8 SETTING VALVES, FITTINGS, AND HYDRANTS

Valves, fittings, and fire hydrants shall be installed at the locations shown on the drawings. Valve stems shall be perpendicular to the finish surface, hydrant barrels shall be vertical. Each valve shall be complete with a valve box and cover. Valve stem extensions shall be furnished and installed where the distance from the valve nut to the top of the valve box exceeds 4 feet 10 inches. The stem extension shall provide an operating nut 30 inches

below the top of the valve box. Hydrants shall be set with the outlets facing 45 degrees to the curb face or street, section G1c and three foot unobstructed clearance all sides per L.A. Co. Fire Department reg. No. 8, section G1e.

C-9 INSTALLING COPPER TUBING

- A. Copper tubing shall be installed in a workman-like manner. Buried tubing shall be installed as shown or as directed. Bends shall be made by the use of fittings or with a bending tool of the proper radius to avoid flattening or kinking the tubing. For tubing larger than 1-inch diameter, copper fittings shall be used for deflection angles of 45 degrees or more. Tubing that has been flattened, kinked or wrinkled shall be replaced. Tubes and fittings shall be cleaned of all impurities before making joints.
- B. Tube shall be cut square with a wheel cutting tool, reamed and dressed free of all burrs. All bends shall be made with bending tool and the minimum radius of bends shall be as follows:

<u>Tubing Size</u> <u>ID-Inches</u>	<u>Radius of Bend-Inches</u> <u>(To Center Line of Tube)</u>
1/4"	1"
1/2"	2"
3/4"	3"
1"	4"

In assemblies tubing with compressing fittings, straight line connections shall be avoided wherever possible, especially with short lengths of tubing.

- C. Soldered joints shall be made by mechanics experienced in this class of work. The solder used shall not contain more than 0.20 percent lead. The surface of the tube which will be in contact with solder and the inside surface of the fitting shall be cleaned with fine sand cloth or steel wool until the metal is bright. Care shall be taken that particles of steel wool or other material does not fall into either tube or fitting. After cleaning, the surface of the tube and the fitting shall be covered with a thin film of non-corrosive flux. While assembling the joint, care shall be taken to insert the tube tight against the stop of the socket. The joint shall be heated so that the heat is uniformly distributed around the entire circumference of the fitting and not concentrated in one spot. Heat shall be applied by a gas-air, acetylene-air, or blow torch. The use of an oxyacetylene torch will not be allowed. The flame of the torch shall be directed on the fitting as much as possible to avoid burning the flux or destroying its effectiveness. When applying solder, the flame shall be moved away from the joint. Excess solder shall be removed with a brush or rag while still in a plastic state. The joint shall be allowed to cool undisturbed in still air.
- D. For flared fittings, the tube end shall be flared so that the angle, radius, length and diameter of flare conform to the corresponding dimensions of the flare seal of the fittings. The flare shall be square and concentric with the tube and fittings. Only a flaring tool furnished by the manufacturer of the fittings being installed shall be used. After a flare has been made, it shall be inspected for splits or cracks and for scratches, pock marks, or other surface markings. If such imperfections or surface markings are present, the flare shall be cut off and the tube reflared. All assembling of flared tube fittings shall be in accordance with the manufacturer's recommendations.

C-10 PRESSURE AND LEAKAGE TEST

After all thrust blocks have been in place for at least two days in the particular portion to be tested, and after all pipe has been filled for not less than 48 hours, a pressure test shall be conducted by the Contractor. The Contractor shall provide temporary test plugs, thrust blocks, and fittings to complete pressure testing prior to connecting to existing pipelines. Pressure testing against existing close system valves is not acceptable. Each section of main, up to but not exceeding 1000 feet in length, and all fire hydrants and fittings connected thereto, shall be subjected to a hydrostatic pressure of 175 pounds per square inch while all pipe and joints are inspected for leakage. Pressure shall be taken at, or corrected to the lowest point in the portion of the line being tested. After the entire section under test has been inspected and no leaks have been found, or if found, have been repaired and resubjected to the test pressure, the pressure shall be maintained for one hour, during which time the amount of leakage shall be determined by measuring the quantity of water which must be added to maintain the test pressure. During one hour period, the total leakage shall not exceed the amount per joint under test as shown on the following table and if the leakage exceeds that amount, the lower portions of the joints shall be uncovered until cause of the leakage has been located and repaired.

TABLE OF ALLOWABLE LEAKAGE PER JOINT IN GALLONS PER HO

4"	0.0142
6"	0.0212
8"	0.0284
10"	0.0354
12"	0.0424
16"	0.0450

C-11 DISINFECTING THE PIPELINES

(a) Chlorination shall be by means of a chlorine-water mixture applied by means of a solution-fed chlorination device. The maximum chlorine dosage entering the pipeline shall be 80mg/L.

Chlorinated water shall be retained in the pipeline long enough to destroy all nonspore-forming bacteria and, in any event, for at least 24 hours. After the chlorinated water has been retained for the required time, the chlorine residual in the line shall be at least 50 mg/L or one half of the initial chlorine dosage. If less than 50 mg/L or one half of the initial chlorine dosage is indicated the line shall be flushed and the chlorination process shall be repeated until a test has indicated a residual of at least 50 mg/L of chlorine. All valves within the scope of project shall be operated while the lines are filled with the heavily chlorinated water.

(b) After the specified retention period, the heavily chlorinated water shall be flushed from the main until the chlorine concentration in the water leaving the main is no higher than that generally prevailing in the system. The heavily chlorinated water flushed from the pipeline shall be reduced to 1.0 mg/L chlorine prior to discharging into a storm drain system. The Contractor shall perform this at his own expense. A chlorine residual determination shall be made to ascertain that the high chlorine residual has been removed from all water discharged from the main.

(c) The Contractor will collect water samples and provide laboratory analysis report prior to placing the new facilities in service. The Contractor shall provide approved sampling points at least every 500 L.F. of pipeline main as specified by the District. Should any sample fail to meet the requirements of the District, the chlorination procedures shall be repeated. The Contractor will be responsible for the cost of additional sampling and laboratory analysis.

After final flushing and before the new main is connected to the existing distribution system, two consecutive sets of samples, taken 24 hours apart, shall be collected from the new main.

(d) The new water main and all existing services shall be flushed out until the chlorine residual is not greater than that prevailing in the system prior to placing in service.

(e) Existing water mains that have been shut down and cut into for connections or installation of tees and valves shall be sterilized by swabbing with heavily chlorinated water to the satisfaction of the Water Manager or his duly authorized representatives.

(f) As an optional procedure water mains and appurtenances must be completely installed, flushed, disinfected, and satisfactory bacteriological sample results received prior to permanent connections being made to the active distribution system. Sanitary construction practices must be followed during the installation of the final connection, so that there is no contamination of the new or existing water main with foreign material or groundwater.

(g) As another optional procedure, the new pipe, fittings and valve(s) required for the connection may be spray-disinfected or swabbed with a minimum 1 percent solution of chlorine just prior to being installed, if the total length of connection from the end of a new main to the existing main is equal to or less than 18 feet. This option must be approved by the District prior to implementation.

(h) As another optional procedure the pipe required for the connection must be set up aboveground, disinfected, and bacteriological samples taken if the total length of connection from the end of a new main to the existing main is greater than 18 feet. After satisfactory bacteriological sample results have been received for this "pre-disinfected" pipe, the pipe can be used in connecting the new main to the active distribution system. Between the times that satisfactory bacteriological sample results are received and the time that the connection piping is installed, the ends of this piping must be sealed with plastic wraps or watertight plugs or caps. This option must be approved by the District prior to implementation.

(i) **Bacteriological tests.** After the new pipeline has been flushed, the contractor shall have tests samples drawn for chlorine residual. Should the chlorine residual in any part of the new disinfected water main be higher than the existing water system, the contractor shall repeat the flushing and test sampling procedure until the chlorine residual is equivalent to or less than the existing distribution system. When the chlorine residual is equivalent to the existing system the contractor may proceed with sampling for bacteriological testing. Bacteriological test samples shall be taken by the contractor at the direction of the inspector with at least one set of samples collected at 1000 L.F. intervals along the new water main, plus one set of samples at each dead end main, and one set of samples from each branch.

Two consecutive bacteriological sample sets are required for water quality evaluation. The first bacteriological sample set should be taken immediately after the final flushing and the second set of samples taken at least 24 hours later. If either bacteriological test sample results fail to pass the bacteriological contamination limit requirements, the contractor should take corrective actions. Re-sampling and testing shall continue until two consecutive negative samples sets are demonstrated. All samples shall be collected and tested by a State of California certified testing laboratory for bacteriological contamination in accordance with *Standard Method for the Examination of Water and Wastewater*, and shall show the absence of coliform organisms.

The following tests are required to provide information for water quality evaluation:

- 1) Presence/Absence of Total Coliform by any of the three methods:
Multiple Tube Fermentation, Membrane Filtration, or Enzyme Substrate
- 2) Heterotrophic Plate Count

The Laboratory test report shall include:

- 1) Presence/Absence of Coliform bacteria Count per 100ml.
- 2) Heterotrophic Plate Count per ml.
- 3) Total and free chlorine residual, taken at the time of the sample collection

All coliform tests results must be negative. The heterotrophic plate count shall be less than 500 per ml.

The results of these tests must be approved in writing by the inspector prior to connecting new water mains to the system or activating any new water facilities. Certified laboratory test reports shall be submitted to the inspector for evaluation. Should the Certified Laboratory test results disclose that the water samples from the new water line does not meet the above standards, the disinfection process shall be repeated and the water re-sampled and re-tested until the sampled water meets the required standard.

C-12 **FLUSHING**

After the pressure test has been satisfactorily completed, the newly laid lines shall be thoroughly flushed to remove any foreign material. The Contractor shall provide a suitable connection at the end of each new line at the invert large enough to develop a velocity in the line of at least 5 f.p.s. as shown in the table below.

TABLE OF REQUIRED OPENINGS TO FLUSH PIPELINES
At 5 f.p.s. (40 psi pressure)

PIPE SIZE INCHES	FLOW G.P.M.	ORIFICE SIZE INCHES	<u>HYDRANT</u>		<u>OPENINGS</u> SIZE
			<u>NO.</u>		<u>INCHES</u>
4"	200	1-3/8	1		2-1/2
6"	440	2	1		2-1/2
8"	780	2-1/2	1		2-1/2
10"	1,220	3-1/4	2		2-1/2
12"	1,760	3-3/4	2		2-1/2
14"	2,400	4-1/2	3		2-1/2
			or:	1	4-1/2
16"	3,130	4-1/4	1		2-1/2
			and	1	4-1/2

METHODS
C-8

The Contractor shall furnish and install sufficient temporary pipe, valves, and fittings to divert the flow of flushing water away from the open trench. Contractor shall, provide facilities and chemicals to Dechlorinate the highly Chlorinated discharge water per the requirements of the State of California NPDES MS4 permit.

C-13 DETECTOR WIRE (TRACER WIRE)

When new water mains, Fire Hydrant & service laterals, are used, upon completion of the pipe laying and prior to the backfill operations as hereinbefore described, a single strand of 12-gage bare copper wire shall be installed on top of the pipe at its center in order to make it possible to relocate the pipe with locating equipment. The wire shall be brought to the surface and provided with 12" of slack in each valve can. The detector wire shall be tied to all service lines and extended along each fire hydrant lateral up to and tied to the burry flange.

C-14 CORROSION PROTECTION FOR METAL

All iron or steel surfaces such as valves, flanges, bolts, nuts, coupling, etc., that will be permanently in contact with earth or backfill shall be protected by coating with a bituminous coating.

C-15 SERVICE CONNECTIONS

Copper pipe services shall be furnished and installed where indicated on the drawings. The exact location of services and connections shall be as directed by the Owner in the field.

C-16 REINFORCEMENT STEEL

A. GENERAL

1. All reinforcement steel, couplers, and other appurtenances shall be fabricated, and placed in accordance with requirements specified herein and the prepared shop drawings.

B. FABRICATION

1. Reinforcement steel shall be accurately formed to the dimensions and shapes shown, and the fabricating details shall be prepared in accordance with ACI 315 and ACI 318, except as modified by the Drawings. Stirrups and tie bars shall be bent around a pin having diameter not less than 1-1/2-inch for No. 3 bars, 2-inch for No. 4 bars, and 2-1/2-inch for No. 5 bars. Bends for other bars shall be made around a pin having a diameter not less than 6 times the bar diameter, except for bars larger than 1 inch, in which case the bends shall be made around a pin of 8 bar diameters. Bars shall be bent cold.
2. The Contractor shall fabricate reinforcement bars for structures in accordance with bending diagrams, placing lists, and placing drawings. Said drawings, diagrams, and lists shall be prepared by the Contractor as specified under Section B-24-C.
3. Fabricating Tolerances: Bars used for concrete reinforcement shall meet the following requirements for fabricating tolerances:
 - a. Sheared length: ± 1 -inch

- b. Depth of truss bars: + 0, -1/2-inch
- c. Stirrups, ties, and spirals: $\pm \frac{1}{2}$ -inch
- d. All other bends: ± 1 -inch

C. PLACING

1. Reinforcement steel shall be accurately positioned as shown, and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcement steel shall be supported by concrete, plastic or metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcement steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used, in sufficient numbers to support the bars without settlement, but in no case shall such support be continuous. All concrete blocks used to support reinforcement steel shall be tied to the steel with wire ties embedded in the blocks. For concrete to be placed over falsework, the Contractor shall furnish concrete, metal, plastic, or other acceptable bar chairs and spacers.
2. Reinforcing shall be accurately positioned around pipe opening to conform to the required tolerances. Placement of reinforcing mats without required pipe openings followed by field cutting of mat to clear the pipe flange shall not be permitted.
3. Limitations on the use of bar support materials shall be as follows:
 - a. Concrete Dobies: permitted at all locations except where architectural finish is required.
 - b. Wire Bar Supports: permitted only at slabs over dry areas, interior dry wall surfaces, and exterior wall surfaces.
 - c. Plastic Bar Supports: permitted at all locations except on grade.
4. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.
5. Bars additional to those shown which may be found necessary or desirable by the Contractor for the purpose of securing reinforcement in position shall be provided by the Contractor at his own expense.
6. Unless otherwise specified, reinforcement placing tolerances shall be within the limits specified in Section 7.5 of ACI 318 except where in conflict with the requirements of the Building Code.
7. Bars may be moved as necessary to avoid interference with other reinforcement steel, conduits, or embedded items. If bars are moved more than one bar diameter, or enough to exceed the above tolerances, the resulting arrangement of bars shall be as acceptable to the Engineer.
8. Accessories supporting reinforcing bars shall be spaced such that there is no deflection of the accessory from the weight of the supported bars. When used to space the reinforcing bars from wall forms, the forms and bars shall

be located so that there is no deflection of the accessory when the forms are tightened into position.

D. SPACING OF BARS

1. The clear distance between parallel bars shall be not less than the nominal diameter of the bars nor less than 1-1/3 times the maximum size of the coarse aggregate, nor less than one inch.
2. The clear distance between bars shall also apply to the distance between a contact splice and adjacent splices or bars.

E. SPLICES

1. General:
 - a. Reinforcement bar splices shall only be used at locations shown. When it is necessary to splice reinforcement at points other than where shown, the character of the splice shall be as acceptable to the Engineer.
 - b. Unless otherwise indicated, dowels shall match the size and spacing of the spliced bar.
2. Splices of Reinforcement
 - a. The length of lap for reinforcement bars, unless otherwise shown shall be in accordance with ACI 318-99, Section 12.15.1 for a Class B splice.
3. Bending or Straightening
 - a. Reinforcement shall not be straightened or rebent in a manner which will injure the material. Bars with kinks or bends not shown shall not be used. All bars shall be bent cold, unless otherwise permitted by the Engineer. No bars partially embedded in concrete shall be field-bent except as specifically shown or permitted in writing by the Engineer.
4. Couplers which are located at a joint face shall be a type which can be set either flush or recessed from the face as shown. The couplers shall be sealed during concrete placement to completely eliminate concrete or cement paste from entering. Couplers intended for future connections shall be recessed a minimum of 1/2-inch from the concrete surface. After the concrete is placed, the coupler shall be plugged with plastic plugs which have an O-ring seal and the recess filled with sealant to prevent any contact with water or other corrosive materials. Threaded couplers shall be plugged.
5. Unless noted otherwise, mechanical coupler spacing and capacity shall match the spacing and capacity of the reinforcing shown for the adjacent section.

F. CLEANING AND PROTECTION

1. Reinforcement steel shall at all times be protected from conditions conducive to corrosion until concrete is placed around it.
2. The surfaces of all reinforcement steel and other metalwork to be in contact with concrete shall be thoroughly cleaned of all dirt, grease, loose scale and rust, grout, mortar and other foreign substances immediately before the concrete is placed. Where there is delay in depositing concrete, reinforcement shall be reinspected and, if necessary recleaned.

C-17 CONCRETE

A. GENERAL

1. Construction of cast-in-place concrete, including formwork and reinforcement, where shown on the drawings, as specified herein and in the SSPWC, and as needed for a complete and proper installation.

B. SURFACE CONDITIONS

1. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
2. Do not commence placement of concrete until mix designs have been reviewed and approved by the Engineer and all governmental agencies having jurisdiction, and until copies of the approved mix designs are at the job site and the batch plant.
3. Comply with pertinent provisions of the Standard Specifications.

C. REINFORCING

1. Comply with the following, as well as the details and methods of reinforcing placement and supports.
 - a. Clean reinforcement and remove loose dust and mill scale, earth, and other materials which reduce bond or destroy bond with concrete.
 - b. Position, support, and secure reinforcement against displacement operations.
 - c. Place reinforcement to obtain the required coverages for concrete protection.
 - d. Install welded wire fabric in as long lengths as practicable, lapping adjoining pieces one full mesh minimum.
 - e. Unless otherwise shown on the drawings, or required by governmental agencies having jurisdiction, lap bars 24 diameters minimum.

D. EMBEDDED ITEMS

1. Do not embed piping, other than electrical conduit, in structural concrete.
 - a. Locate conduit to maintain maximum strength of the structure.
 - b. Increase the thickness of the concrete if the outside diameter of the conduit exceeds 30% of the thickness of the concrete.
2. Set bolts, inserts, and other required items in the concrete, accurately secured so they will not be displaced, and in the precise locations needed prior to placing concrete.

E. MIXING CONCRETE

1. Transit mix the concrete in accordance with provisions of ASTM C94.
2. Mixing water:
 - a. At the batch plant, withhold 2-1/2 gal of water per cubic yard of concrete.
 - b. upon arrival at the job site, add all or part of the withheld water (as required for proper slump) before the concrete is discharged from the mixer.
 - c. Mix not less than five minutes after the withheld water has been added, and not less than one minute of that time immediately prior to discharge of the batch.
 - d. Unless otherwise directed, provide 15 minutes total mixing time per batch after first addition of water.
3. Do not use concrete that has stood for over 30 minutes after leaving the mixer, or concrete that is not placed within 60 minutes after water is first introduced into the mix.

F. PLACING CONCRETE

1. Preparation:
 - a. Remove foreign matter accumulated in the forms.
 - b. Rigidly close openings left in the formwork.
 - c. Wet wood forms sufficiently to maintain workability of the concrete.
 - d. Use only clean tools.
 - e. Notify Engineer minimum 24 hours prior to commencement of concrete placement.
 - f. Place concrete in accordance with ACI 304

2. Conveying:
 - a. Perform concrete placing at such a rate that concrete which is being integrated with fresh concrete is still plastic.
 - b. Deposit concrete as nearly as practicable in its final location so as to avoid separation due to rehandling and flowing.
 - c. Do not use concrete which becomes non-plastic and unworkable, or does not meet required quality control limits, or has been contaminated by foreign materials.
 - d. Remove rejected concrete from the job site.
3. Placing concrete in forms:
 - a. Deposit concrete in horizontal layers not deeper than 24", and avoid inclined construction joints.
 - b. Remove temporary spreaders in forms when concrete has reached the elevation of the spreaders.
4. Placing concrete slabs:
 - a. Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of panels or section is completed.
 - b. Bring slab surfaces to the correct level with a straightedge, and then strike off.
 - c. Use bullfloats or darbies to smooth the surface, leaving the surface free from bumps and hollows.
 - d. Do not sprinkle water on the plastic surface. Do not disturb the slab surface prior to start of finishing operations.

G. CONSOLIDATION

1. General:
 - a. Consolidate each layer of concrete immediately after placing, by use of internal concrete vibrators supplemented by hand spading, rodding, or tamping.
 - b. Do not vibrate forms or reinforcement.
 - c. Do not use vibrators to transport concrete inside the forms.
 - d. Consolidate concrete by mechanical vibration in strict accordance with ACI 309R.

H. JOINTS

1. Construction joints:
 - a. Do not use horizontal construction joints except as may be shown on the drawings.
 - b. If additional construction joints are found to be required, secure the Engineer's approval of joint design and location prior to start of concrete placement.
2. Expansion joints:
 - a. Do not permit reinforcement or other embedded metal items that are being bonded with concrete (except dowels in floors bonded on only one side of the joints) to extend continuously through expansion joint.
 - b. Fill expansion joints full depth with expansion joint material approved by the Engineer.

I. CONCRETE FINISHING

1. Except as may be shown otherwise on the drawings, provide the following finishes at the indicated locations:
 - a. Scratch finish:
 - (1) Apply to monolithic slab surfaces that are to receive concrete floor topping or mortar setting bed.
 - b. Float finish:
 - (1) Apply to monolithic slab surfaces that are to receive trowel finish and other finishes specified hereinafter, and to slab surfaces which are to be covered with insulation.
 - c. Trowel finish:
 - (1) Apply to monolithic slab surfaces that are to be exposed to view, unless otherwise shown, and to slab surfaces that are to be covered with resilient flooring, carpeting, paint, or other thin-film finish coating system.
 - d. Non-slip broom finish:
 - (1) Apply to walks, stairs, drives, ramps, and similar pedestrian and vehicular areas.

J. REMEDIAL WORK

Repair or replace deficient work as directed by the Engineer and at no additional cost to the Owner.

K. CURING AND PROTECTION

1. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures by covering wetted concrete floor surface with a vapor barrier. Tape the seams of the curing sheeting to provide a continuous cover. Introduce additional water under the vapor barrier if slab surface dries prior to 3 days.
2. Immediately after removing wall forms, lightly wet exposed surfaces and cover with burlap continuously. Keep burlap damp for period of seven (7) days after concrete was placed.
3. The Contractor is responsible until the project is accepted by the Owner to protect all concrete surfaces from mechanical damage.

L. FIELD QUALITY CONTROL

1. Contractor shall provide free access to Work and cooperate with appointed testing and inspection firms appointed to the project.
2. Submit proposed mix design of each class of concrete to Engineer for review prior to commencement of Concrete Work. Do not start work until written approval of mix designs has been obtained.
3. Tests of cement and aggregates may be performed by the Owner at its expense to ensure conformance with specified requirements.
4. Four concrete test cylinders will be taken for every 50 cubic yards or fraction thereof of each class of concrete placed each day. Sampling and curing of the test cylinders shall conform to ASTM C31.
5. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete it represents.
6. One slump test will be taken for each set of test cylinders taken.
7. 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 strength 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.

M. PATCHING

1. Allow Engineer and/or District's Representative to inspect concrete surfaces immediately upon removal of forms.
2. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.
3. Patch imperfections by removing material until homogeneous concrete is met. Coat area with an approved epoxy bonding material and then patch

with an approved mixture of one part Portland cement, two parts sand and fine gravel or an epoxy-sand mix.

N. DEFECTIVE CONCRETE

1. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
2. Repair or replacement of defective concrete will be determined by the Engineer.
3. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon expressed direction of Engineer for each individual area.

C-18 PAINTING AND CORROSION PROTECTION

A. UNDERGROUND

All iron or steel surface such as valves, flanges, bolts, nuts, couplings, etc., that will be permanently in contact with earth or backfill shall be protected by coating with a bituminous coating.

B. ABOVEGROUND FERROUS SURFACES

All aboveground or exposed exterior ferrous surfaces of valves, pipes, fittings, and other ferrous items that are not of stainless steel galvanized, finish-painted in shop, epoxy-coated, chromed, or otherwise adequately protected from corrosion shall be field-painted as follows:

One prime coat Engard 115 Chromate Primer, 2 finish coats Engard 430 epoxy-ester finish to 3 mils, for total dry-film thickness of 4 mils minimum. The epoxy-ester finish color will be designated in advance by the Engineer.

Paint shall be applied only on thoroughly dry surfaces and under favorable weather conditions. The prime coat shall be applied only on surfaces that are thoroughly cleaned of all scale, rust, grease, and other foreign matter by commercial blast cleaning or equivalent in accordance with the Steel Structures Painting Council specification, SSPC-SP-2. Succeeding coats shall not be applied before cleaning or repainting the previous coat where necessary. All coatings shall be applied in accordance with the latest revisions of SSPC Paint Application Specification No. 1.

C-19 ASPHALT CONCRETE PAVING

A. PREPARATION OF SUBGRADE

Subgrade shall be prepared in accordance with the provisions of Subsection 301-1 of the Standard Specifications, entitled "Subgrade Preparation." All pavement sections shall have the thicknesses shown on the drawings. The top 6 inches of the subgrade shall be compacted to a relative compaction of 95%. When mud or other soft, spongy, or otherwise unsuitable material in the subgrade is encountered, it shall be taken out and the space refilled with good earth or aggregate base material.

The Contractor may elect, at his own expense and upon approval of the Engineer, to remove all or a portion of the unsuitable material and replace it with aggregate base material.

Unsuitable fill material shall include, but not be limited to vegetable or animal matter, metal, and rocks or lumps of material exceeding six inches in greater dimension. Unsuitable fill material shall be disposed of away from the site of work. If the disposal of unsuitable fill material necessitates the importation of material from a source outside the site, the imported material shall be approved by the Engineer. Unsuitable materials shall be removed from the site by the Contractor at no additional cost to the District.

B. SOIL STERILIZATION

Soil sterilization shall be provided in all pavement areas. The sterilant solution shall be applied with suitable spray equipment at the rate of 4 to 5 gallons mixed solution per 100 square feet. The solution shall consist of "Poly-bor-chlorate" as manufactured by Pacific Coast Borax Company, mixed with water at the rate of 1 pound to 1 gallon. Additionally, approved dye shall be added to the soil sterilant to ensure coverage. The Contractor shall exercise care that no sterilant is applied outside the paving limits.

Treatment shall be made after the subgrade has been completed and just prior to placing of pavement. Time lapse between soil treatment and placing of pavement shall be the practicable minimum. After chemical treatment has been made, the area shall be thoroughly sprinkled so as to distribute the chemical throughout the first two or three inches of subgrade.

The Contractor shall provide all the necessary protection to prevent injury to animal, adjacent plant life, future planting areas, and property that is occasioned by the application of soil sterilant. The Contractor will be held responsible for all personal injury or property damage caused by soil sterilants or their storage.

C-20 PAVEMENT STRIPPING AND REFLECTIVE DEVICES

A. GENERAL

All new roadway stripping and reflective devices shall meet any or all local city, county and state requirements, codes, and standards, etc.

C-21 TRAFFIC CONTROL SIGNAGE AND DEVICES

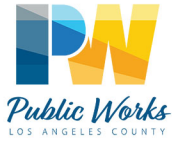
A. GENERAL

All traffic control devices, barricades, signs shall conform to the WATCH Manual, Southern California Chapter APWA or California Manual of Temporary Traffic Controls.

C-22 NOTIFICATIONS TO CUSTOMERS

A. GENERAL

The District in conjunction with the Contractor's schedule of work shall notice all effected customer 48 hours prior to beginning work near the customer's property.



**COUNTY OF LOS ANGELES
PUBLIC WORKS**

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803

PERMIT TYPE: Road
PERMIT CLASS/SUBCLASS: Excavation
EXPIRATION DATE: 10/02/2026

PERMIT#: PWRP2026002694
PERMIT STATUS: Issued
Page 1 of 15
ISSUE DATE: 08/03/2026
BY: Miguel Osorio
PERMIT OFFICE: PO2
23757 W. Valencia Blvd
Valencia, CA 91355
(661) 222-2948
(661) 222-2952 Fax

APPLICANT	ADDRESS	
Owner/Applicant Kinneloa Irrigation District Tom Majich	1999 Kinclair Drive Pasadena, CA 91107	Mobile: (626)833-0210 email: tm@kidwater.info
LOCATION: 1463 Edgecliff Lane Pasadena, CA 91107 At intersection of Sierra Madre Villa and Villa Highland Drive. Also on Edgecliff Lane from Villa Knolls Drive south to the end of Edgecliff Lane.	PROJECT/WORK ORDER NO.	

INSPECTION REQUIRED

CALL PERMIT OFFICE AT LEAST ONE (1) WORKING DAY BEFORE STARTING WORK UNDER THIS PERMIT. FAILURE TO DO SO IS CAUSE FOR REVOCATION OF THIS PERMIT. THIS PERMIT IS VOID IF WORK IS NOT STARTED BY 10/02/2026.

PROJECT DESCRIPTION:

Kinneloa Irrigation District - installation of new 12" DIP potable water line on Sierra Madre Villa, Villa Highlands Drive and Edgecliff Lane. Project duration 5 days on Villa Highlands and 10 days on Edgecliff lane. Total of project duration (15) days. proposed water main installed in this project 935 LF.

PROJECT CONDITIONS:

1. This permit is issued for BIDDING PURPOSES ONLY. No work is allowed under this permit without submittal and approval of the contractor's insurance by the County as stipulated in section 7-3 of the "GREENBOOK". Prior to start of construction, the permittee shall submit the proper insurance documents (general liability, workers comp, and additional insured endorsement showing LA County as an additional insured) by contacting the permit office indicated on this permit.
2. All damages to the curb and gutter, sidewalk panels as a result of work performed under this permit MUST be replaced from score line to score line to the satisfaction of the inspector.
3. PRE-CONSTRUCTION MEETING REQUIRED. Prior to starting work, permittee must call the permit office indicated on this permit to schedule a Pre-construction meeting.
4. This permit is valid only for work in the unincorporated County public right of way.

Attachments: Los Angeles County Road Permit Standard Provisions, Best Management Practices(BMPs)

FEE NAME	FEE CODE	AMOUNT
Actual Cost Deposit	02389797	\$5,000.00
Permit Processing - Excavation	02272921	\$401.00
Issuance Fee	02272920	\$222.00
Mainline Check Fee - 0 to 15,000 LF	02389801	\$909.90
TOTAL FEES:		\$6,532.90

By performance of the work activity under this permit, permittee agrees to the following terms:

1. Permittee is hereby permitted to perform the scope of work described above at the location described above, subject to all applicable provisions of the County of Los Angeles Highway Permit Ordinance (Division 1 of Title 16, Los Angeles County Code), and/or any Municipal Code or Ordinance governing the area where this work is to be done.
2. Permittee's activities in connection with this Permit are subject to the provisions and conditions contained in this Permit and any attachments, which are incorporated herein.
3. INSPECTION REQUIRED - Contact the Permit Office indicated on the Permit at least one (1) working day before starting any work.
4. Permitted work must comply with Section 8771 of the State of California Business and Professions Code for the preservation and/or perpetuation of existing land survey monuments.
5. Permitted work must comply with Chapter 12.80 Stormwater and Runoff Pollution Control of the Los Angeles County Code, and the Best Management Practices (BMPs) Attachment.
6. This permit must be made available for inspection at the work site upon request from a County representative or law enforcement official. (LACC 16.06.040)
7. This permit will expire if the work is not commenced within sixty (60) days from the date of permit issuance. (LACC 16.08.110)
8. Upon completion of work, Permittee must contact the Permit Office indicated in this Permit no later than the next business day.
9. This Permit is revocable by the County if the County determines that the public interest and welfare require such revocation and shall be deemed void if the Permittee is not in compliance with Section 3800 of the Labor Code.

LOS ANGELES COUNTY ROAD PERMIT STANDARD PROVISIONS

A. GENERAL

1. This Permit is valid only for the purpose specified herein. No change of purpose or deviation from the drawings attached to this permit is permitted except upon prior written permission of the Commissioner or his/her representative.
2. The Permittee shall comply with the provisions of this permit, provisions of Title 16, Division 1 of the Los Angeles County Code, and the provisions of the specifications and all codes referred to by Division 1. (§16.06.060)
3. The Permittee must call/notify the permit office specified on the permit a minimum of 24 hours prior to performing any work on the highway. All work must be performed on weekdays during regular working hours (7:00 AM - 5:00 PM), excluding holidays unless otherwise specified in the permit.
4. Each permit shall expire if the work is not commenced within sixty (60) days from the date of issuance or said work is not diligently prosecuted to completion, as determined by the Commissioner or his/her representative. (§16.08.110)
5. A copy of this Permit must be made available at the job site for inspection by the Commissioner or his/her representative, any peace officer, or person having responsibility for the safety or maintenance of the highway. (§16.06.040)
6. Activities and uses authorized under this Permit are subject to any instructions of the Commissioner or his/her representative. **ALL INSTRUCTIONS MUST BE STRICTLY OBSERVED.** (§16.06.210)
7. The Permittee (including its contractors and subcontractors and volunteers) shall indemnify, defend (with counsel reasonably satisfactory to the County of Los Angeles), and hold harmless the County of Los Angeles, and its elected and appointed officers, employees, and agents, from and against any and all claims, expenses (including court costs and reasonable attorney and expert witness fees) demands, liabilities, losses, or causes of action of whatsoever nature or character, for injury, illness or death or loss of, damage to, or destruction of property which arises out of, or is in any way connected to, the activities of the Permittee described in this Permit. (§16.06.190)

This indemnification shall survive in its entirety the termination, revocation, or cancellation of this Permit, and shall remain in full force and effect in perpetuity, unless agreed to otherwise in writing by the County of Los Angeles.
8. Should evidence of the renewal or replacement of the contractor's insurance policy not be filed with the County prior to the expiration or cancellation date, the County will stop all work and no further work shall be performed until new insurance coverage has been obtained by the Contractor as per Section 7-3 of the Standard Specifications for Public Works Construction (Greenbook).
9. This permit is not transferable. No party other than the permittee or permittee's authorized agent (shown on the permit) is allowed to work under this permit. (§16.08.100)
10. All permit applicants, permit holders, and their engineers, surveyors, contractors, and anyone performing activity within the road right-of-way are responsible for preservation and/or perpetuation of all existing monuments which control subdivisions, tracts, boundaries, streets, highways, or other rights-of way, easements, or provide survey control which will be disturbed or removed due to contractor's work. Contractor shall provide of at least 7 working days' notice to inspector/surveyor/project engineer prior to disturbance or removal of existing monuments. Pursuant to Business and Professions Code Section 8771, the Project engineer/surveyor shall coordinate with contractor to reset monuments or provide permanent witness

monuments and file the required documentation with Survey/Mapping and Property Management Division, Records of Survey Unit (626) 458-5141.

11. Permittees and their contractors shall implement Best Management Practices (BMPs) to effectively control water pollution during all Permit construction projects. This project shall conform with the requirements of the following County Code and Permits:
 - a. Los Angeles, California County Code Chapter 12.80 Stormwater and Runoff Pollution Control
 - b. Waste Discharge Requirements for Municipal Separate Storm Water System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach (Order No. R4-2012-0175 as amended by State Water Board Order WQ 2015-0075 and Los Angeles Water Board Order R4-2012-0175-A01, National Pollutant Discharge Elimination System [NPDES] No. CAS004001)
 - c. NPDES General Permit for Storm Water Discharge Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ amended by 2012-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002)

The Permittee or Authorized Representative and their contractors shall know and fully comply with the applicable provisions of these permits and Federal, State and local regulations that govern the Permittee or Authorized Representative's operations and the storm water discharges from the project site.

The Permittee or Authorized Representative and their contractors shall be responsible throughout the duration of the project for installing, constructing, inspecting, maintaining, removing and disposing of the BMPs. Unless otherwise directed by LACDPW, the Permittee or Authorized Representative and their contractors are responsible for BMP implementation and maintenance throughout any temporary suspension of work. The Permittee or Authorized Representative shall reimburse LACDPW for the full costs of cleaning or repairing of storm drain, water course, or channel which may be necessary due to ineffective implementation of BMPs.

The project site shall be inspected by the Permittee or Authorized Representative or their contractors a minimum of once every week or at least once for projects that last only one week or less.

12. Whenever the provisions of Division 1 of Title 16-Highways require a permittee to perform any work, take any action or be liable for any fees or costs, such requirement also applies to any person who commences any work for which a permit is required by this Division 1, whether such person obtains such a permit or not. (§16.06.100)
13. Permittee is responsible to pay the cost of County inspection including any overtime costs or Non-Business Hours (NBH) inspection fees incidental to the work. Permittee must provide a minimum 24 hour advance written notice with authorization for the contractor to perform the NBH work.
14. This Permit is subject to all prior unexpired permits, agreements, easements, privileges, or other rights, whether recorded or unrecorded, in the area specified by this Permit. Permittee shall make his own arrangements with holders of such prior rights.
15. Whenever a permittee fails to comply with the conditions established for the exercise of a privilege granted under a permit, the Commissioner may revoke the privilege. Upon such revocation, the permittee shall immediately restore the highway to the Commissioner's satisfaction. If the permittee fails to do so, the Commissioner may restore the highway at the expense of the permittee or charge the permittee a fee of \$200.00 a day for each day of failure to restore the highway. (§16.10.160)
16. This Permit may be revoked or suspended at any time whenever the Commissioner or representative determines the permit was issued in error, or on the basis of incorrect information, or that the permit is in violation of any provision of the Los Angeles County code. (§16.10.170)

17. This Permit may be cancelled by the Commissioner if it is determined the permitted activity has not commenced within the time specified and diligently prosecuted to completion. (§16.06.050)
18. Upon written notice of cancellation or revocation of this Permit for any cause whatsoever, Permittee shall, if directed by County, restore County right of way and structures to their condition prior to commencement of work under this Permit, including the removal of any improvements installed by Permittee, and then shall vacate County property. Should Permittee neglect to restore the premises or structures to a condition reasonably satisfactory to the Commissioner or his/her representative, the County may perform such work or have others perform the work, and the Permittee agrees to reimburse the County for all costs of the work so performed upon receipt of a statement thereof. (§16.06.230)
19. In the event of a County employee work stoppage, the Commissioner or his/her representative reserves the right to suspend all activity authorized under this Permit which requires inspection by the County. Activity authorized by this Permit shall not resume until County approval to do so is given.
20. A Flood Control District permit will be required when requested work affects the Flood Control District's right of way or facility.
21. This permit does not authorize the installation of any facility on private property unless easement is dedicated to the County for County owned facilities located on private property.

B. CONSTRUCTION, ENCROACHMENTS AND EXCAVATIONS

22. All work shall be performed in accordance with the current Standard Specifications for Public Works Construction (Greenbook), or according to the plans and specifications referred to in the permit and, in addition, to any special requirements and/or specifications which are made a part of the permit. In case of conflict between two specifications, the higher specification shall apply. (§16.06.070)
23. Permittee shall safeguard and complete the activity or work within a reasonable time. Any part of the highway facility of any nature removed or disturbed shall be repaired, restored and replaced in a condition satisfactory to the commissioner. All surplus material of any kind shall be removed from the highway. (§16.06.080)
24. When paving, excavated material, barricades, lights or other devices are not properly placed or maintained; when the work started is not completed; when the work does not comply with the specifications or any special requirement; when the permittee fails or refuses to remove any obstruction; when any highway facility has been damaged and the permittee fails or refuses to repair or restore; then the commissioner with his own forces or otherwise may cause such to be placed, erected, completed, repaired, restored, removed and/or maintained. The permittee shall pay for any and all costs. (§16.06.230)
25. The permittee shall investigate and be aware of all existing facilities lawfully within the highways which are within the limits of his activity. The permittee shall not interfere with any existing public or private facility without the consent of its owner. If it becomes necessary to relocate an existing facility, this shall be done by its owner or to the satisfaction of its owner. (§16.06.110)
26. The cost of locating, exposing, moving or relocating publicly and privately owned facilities shall be borne by the permittee unless he makes other arrangements with the owner of the facility or unless the owner is required by his franchise or agreement to relocate his facility without cost. (§16.06.120)
27. The permittee shall support and protect all facilities by a method satisfactory to the owner. The owner has the right to support or protect any of its facilities at the sole expense of the permittee. In case any of said facilities should be damaged (and for this purpose, pipe coating or other encasement of devices should be considered as part of a structure), they may be repaired by the owner at the expense of the permittee or, if authorized by the owner, may be repaired by the permittee under the supervision of the owner. The expense of repairs to any damaged facilities shall be borne by the permittee. (§16.06.130)

28. No above ground facility or obstruction shall be placed in the sidewalk that would reduce the width of the sidewalk to less than 48 inches, exclusive of the top of curb, unless approved by the Commissioner or authorized representative.
29. If any facility or encroachment placed in the excavation or the facility or encroachment for which a permit is issued interferes with the future use of the highway by the general public, then the applicant and his successors or assigns will at his own expense remove or relocate such facility or encroachment to a location satisfactory to the commissioner. This does not apply when the applicant has an easement superior to the highway easement at the time of application and can furnish evidence when required of such superior easement. (§16.18.120)
30. Temporary stockpiling of material or debris spoils are not allowed in the public right of way unless specifically authorized in the permit or by the permit inspector. Traffic control devices shall be in place and maintained to provide protection for vehicular and pedestrian traffic in accordance to the California MUTCD Part 6.
31. Newly paved or resurfaced roadways shall not be cut within two (2) years from the date of final acceptance. Exceptions may include emergencies such as a main break, cuts for service connections, extensions of existing water and sewer facilities to provide service to new developments.
32. If at any time subsequent to the first repair of a surface of a highway damaged or destroyed by any excavation, encroachment or moving operation in such highway it becomes necessary again to repair such surface due to settlement or any other cause directly attributable to such excavation, encroachment or moving operation, the permittee shall pay to the commissioner the cost of such additional repair; provided, however, that the commissioner shall have the option of either making the repair or requiring the permittee to make the repair. (§16.14.040)
33. Pursuant to Government Code Section 4216 and Greenbook Section 5, authorization for excavations for removal or construction of substructures by this Permit require the Permittee to notify Underground Service Alert (USA) of Southern California, telephone number 811, at least 48 hours prior to start of work to receive a "ticket number" which shall be entered on the face of the Permit by the Permittee. (§16.06.140)
34. Pipelines and utilities shall not be installed closer than two feet from any other pipeline or utility; five feet from any sewer line. Waterlines shall not be installed closer than ten feet from a sewer line unless evidence of permission from the Division of Drinking Water (DDW) is provided.
35. The following minimum depths of cover, below gutter flow line grade, shall be required (§16.18.040):

LOCAL STREETS

- 24" for service pipelines
- 30" for all pipelines transporting nonhazardous substances
- 30" for electrical facilities
- 42" for pipelines transporting hazardous substances

MASTER PLAN HIGHWAYS

- 24" for service pipelines
- 36" for pipelines transporting nonhazardous substances
- 42" for electrical facilities
- 42" for pipelines transporting hazardous substances

36. A minimum depth of cover of 18 inches below existing or proposed edge of gutter grade shall be permitted for cable TV and telephone conduits designed pursuant to special requirements of the road commissioner, and to be placed in existing roadways as follows (§16.18.041):

- a. Mainline cable conduit in a four- to five-inch-wide trench located adjacent to the concrete gutter (three from the edge of curb if no gutter exists);
- b. Service cable conduits crossing the roadway from the mainline to serve users on the opposite side of local streets when installed by an acceptable boring method.

37. Excavations deeper than five feet require a Cal OSHA permit.
38. Excavations 2' wide or less, within the travelled roadway, require the use of one (1) sack slurry or other approved Controlled Low Strength Material (CLSM) as backfill (Greenbook 201-6).
39. Any deviation from the alignment shown on attached plans and or the installation of additional conduits, vaults, or appurtenances must have prior written approval.
40. Excavations are to be filled, covered or plated unless otherwise directed by the Inspector. Plates shall be installed flush with the existing pavement. All gaps surrounding the plates must be filled to the satisfaction of the Inspector.
41. Any permittee, prior to making any excavation within the construction area where a pipeline known to carry a hazardous substance exists, shall not excavate until the pipeline has been located by potholing or other proven acceptable methods at intervals sufficient to determine its exact location. The permittee shall arrange with the owner to locate or expose private and public facilities. Abandoned or inoperative pipelines designed to carry hazardous substances shall be considered as carrying a hazardous substance until determined otherwise by owner.

In no case shall the intervals between potholes or the location by proven acceptable methods exceed the distance set forth as follows (§16.06.150):

- 1. Excavations for Highway Construction. The pipeline shall be located at intervals not greater than 25 feet for lines less than eight inches in diameter, 50 feet for lines of eight inches through 24 inches in diameter, and 200 feet for lines greater than 24 inches in diameter;
 - 2. Trench Excavation.
 - a. Longitudinal Pipelines. All longitudinal pipelines in the construction area of the highway shall be located at intervals not greater than 500 feet. If determined to be within six feet of the excavation, it shall be further located at intervals not greater than 25 feet for lines less than eight inches in diameter, 50 feet for lines of eight inches through 24 inches in diameter, and 100 feet for lines greater than 24 inches in diameter;
 - b. Transverse Pipelines. If the location of the pipeline is above or less than six inches below the facility being installed, it shall be carefully hand-tool exposed before excavating. If its location is six inches or more below the facility, it need only be located.
42. After it is determined that the horizontal or vertical clearance between the pipeline known to carry hazardous substances and the construction limits is less than 12 inches (18 inches if scarifying), the permittee shall confer with the owner. Unless the owner elects to relocate, abandon or take the pipeline out of service, the permittee shall not excavate until the pipeline has been completely hand-tool exposed within the limits of construction.
- Once the physical location of pipelines known to carry hazardous substances has been determined, as above described, the permittee doing the excavating, in cooperation with and with the occurrence of the owner, shall determine how to protect the pipeline from damage before proceeding with his work. (§16.06.160)
43. Each permittee excavating in the highway shall notify the public agency maintaining records for the jurisdiction and the owner, if known, whenever previously unidentified or unknown utilities or underground facilities are encountered so that the location can be accurately established and made a part of the permanent substructure records. (§16.06.170)
44. ABANDONMENT OR REMOVAL OF FACILITIES OR ENCROACHMENTS (§16.18.160)

- a. Abandonment or removal of any facility or encroachment are permitted when approved under the terms of the permit. The Permittee must submit a plan or map describing the facility or encroachment to be abandoned or removed and indicating its exact locations. Permission to abandon a facility or encroachment without removing shall be subject to removal within one year after the effective date of the abandonment if the facility or encroachment may interfere with a present or future public improvement. If it is determined that the facility or encroachment should be removed, the permittee or its successor in interest shall remove it at its expense or pay County for the cost of such removal. Permittee shall leave any abandoned facility or encroachment in a safe manner.
- b. Abandonment in place of a pipeline used to convey toxic, corrosive or flammable liquids will be subject to the following conditions:
 - i. The pipeline shall be thoroughly purged of liquids and vapors and filled with an inert material that will remain in a solid or semi-solid state if any portion of the pipeline is cut or removed in the future.
 - ii. The Permittee shall file a certificate with the commissioner that said requirements have been complied with and the abandoned pipeline has been left in a safe condition.

C. PUBLIC NOTIFICATION

45. Permittee shall provide a minimum 48 hour advanced notice to:
- a. all affected business establishments and residences within two hundred (200) feet of the work when:
 - i. activities occur outside business hours (5:00 PM to 7:00 AM) and/or
 - ii. activities impact traffic and/or parking in the public highway, including pedestrian and/or vehicular access to properties exceeding two consecutive days.
 - b. the fronting residential property owner or occupant for utility work involving the installation of ground-mounted structures or underground vaults in the parkway.

46. Permittee shall provide a minimum 24 hour advanced notice to the owner or resident/occupant prior to closing or restricting access to any property.

Notices shall be written and provide sufficient information regarding the project including the work schedule and a contact to handle questions. A copy of the notification or door hanger shall be provided to the permit inspector upon request.

D. TRAFFIC CONTROL AND ACCESS

47. Any work which interferes with or endangers the safe movement of traffic shall have the work safeguarded by adequate warning signs, barricades, lights and devices. The Permittee shall be responsible for placing and maintaining adequate warning signs, lights, barricades and devices during all periods of his activity in order to promote the safe movement of traffic, including but not limited to periods of twilight, nighttime, fog and/or rain. All warning signs, barriers, barricades, flags and other devices shall comply with or exceed the standards required in the Vehicle Code. (§16.06.090)
48. Permittee shall maintain traffic flow at all times. Temporary traffic controls shall comply with the California Manual on Uniform Traffic Control Devices (CA MUTCD), Part 6 (current edition), or the traffic control plans approved as part of this permit.
49. No street shall be closed without prior approval of the Commissioner or authorized representative. Street closures shall be implemented in conformance with the approved traffic control plan (if applicable). At least 48 hours in advance of closing or reopening the street, Permittee shall contact the inspector, Police, Fire, traffic and/or engineering departments of the responsible jurisdiction.
50. Streets to be posted for "TEMPORARY NO PARKING" must be done at least 48 hours prior to start of work. Only County approved "TEMPORARY NO PARKING" signs shall be used. Signs are available for purchase at each Department of Public Works Permit Office and shall be installed by the Permittee for each construction activity or operation, unless such activities or operations will occur within 2 working days of each other.

51. The commissioner may restrict the use of, or close, any county highway whenever he considers such closing or restriction of use necessary (§16.06.240):
- a. For the protection of the public;
 - b. For the protection of such county highway from damage during storms;
 - c. During construction, improvement or maintenance operations thereon.
52. Permittee shall not remove or move existing temporary railings (k-rails) or related traffic safety devices in-place along County public right-of-way. Permittee must contact local Road Maintenance Division Office for authorization at least two (2) days prior to removing or moving existing k-rails on public road right-of-way. Permittee shall be responsible for removing, moving and replacing back any k-rails "in-kind".
- a. MD1 - Baldwin Park (626) 337-1277
 - b. MD2 - Altadena (626) 300-2080
 - c. MD3 - Westchester (310) 348-6448
 - d. MD4 - Hollydale (562) 869-1176
 - e. MD5 - Palmdale (661) 947-7173

E. TREES AND LANDSCAPING

53. It is unlawful for anyone (other than the road commissioner or persons acting under their authority with regard to public highways) to prune, deface, destroy or remove any tree or landscaping growing, or to grow upon any public highway within the County of Los Angeles without written permit of the road commissioner; or to deface, break, destroy, or remove any post or other structure used to protect or support any such tree or landscaping; or to plant or place thereon or attach thereto any sign, notice or other advertising device. (§16.76.010)
54. When permitted activities require the pruning or removal of any tree(s) or landscaping growing in the public highway; or modifications to structures used to protect or support such tree(s) or landscaping, the permittee must contact the local Road Maintenance District Office for authorization at least seven (7) days prior to doing anything to the tree(s) or landscaping.
- a. Baldwin Park (MD1) (626) 337-1277
 - b. Alhambra (MD2) (626) 300-2080
 - c. Westchester (MD3) (310) 348-6448
 - d. Hollydale (MD4) (562) 869-1176
 - e. Palmdale (MD5) (661) 947-7173

F. RESTORATION / PAVEMENT REQUIREMENTS

55. Immediately upon completion of the work necessitating the excavation, facility or encroachment permitted by any permit issued, the permittee shall promptly and in a workmanlike manner restore the area affected by his activity to a condition satisfactory to the commissioner. (§16.18.090)
56. Permittee shall refill an excavation in the manner which is satisfactory to the commissioner and is most effective to accomplish thorough consolidation and enable the highway to be restored to a condition equivalent to that in which it was prior to the excavation. (§16.18.100)
57. Temporary resurfacing shall not be left in place longer than 30 days unless permitted by the commissioner. Permanent resurfacing shall be placed immediately following the removal of the temporary resurfacing. Installation of temporary or new pavement resurfacing shall comply with the Greenbook Section 306-13.
58. RESTORATION OF HIGHWAY SURFACE (§16.06.200)
- a. Upon completion of the permitted activity, the Permittee shall restore that portion of the highway facilities damaged by the Permittee's activity.
 - b. Where the pavement or surface has been removed, the permittee shall replace it to a thickness one inch greater than that of the surrounding pavement or surface, and in no event to a thickness less than two inches.
 - c. The base course removed shall be replaced to the same thickness as that of the surrounding base course.
 - d. When the street surface has been treated with a seal or slurry prior to the work under permit, the seal and/or slurry shall be replaced upon the portion repaired.

e. When the structural section removed varies from or exceeds the average existing section, the commissioner may elect to require the replacement of an equivalent section which would meet the average structural section requirements.

59. Upon completion of the work, Permittee shall contact the Permit Office identified on this permit no later than the next business day and remove all applicable USA markings.

Best Management Practices (BMPs)

Attachment

The Los Angeles County Department of Public Works (LACDPW) requires Permittees and their contractors to implement a program to effectively control water pollution during all Permit construction projects. This project shall conform with the requirements of the following County Code and Permits:

- Los Angeles, California County Code Chapter 12.80 Stormwater and Runoff Pollution Control
- Waste Discharge Requirements for Municipal Separate Storm Water System (MS4) and Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach (Order No. R4-2012-0175 as amended by State Water Board Order WQ 2015-0075 and Los Angeles Water Board Order R4-2012-0175-A01, National Pollutant Discharge Elimination System [NPDES] No. CAS004001)
- NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002)

The Permittee or Authorized Representative and their contractors shall know and fully comply with the applicable provisions of these permits and Federal, State and local regulations that govern the Permittee or Authorized Representative's operations and the storm water discharges from the project site.

In order to ensure a minimum level of water quality control, the Permittee or Authorized Representative and their contractors shall effectively implement and maintain appropriate Best

- Management Practices (BMPs) shown in Table 1. In addition, the Permittee or Authorized Representative and their contractors shall comply with the following requirements:
- Sediments shall not be discharged to the storm drain system or receiving waters. Sediments generated on the construction site shall be retained.
- No construction-related materials: waste, spills, or residue shall be discharged from the project site to streets, drainage facilities, receiving waters, or adjacent property by wind or runoff.
- Non-storm water runoff from equipment, vehicle washing, or any other activity shall be contained within the project site using appropriate BMPs.
- Erosion from slopes and channels shall be prevented.
- Minimize grading during the wet season (October 15 through April 15). All erosion susceptible slopes shall be covered, planted, or protected in any way that prevents sediment discharge from the project site.

BMPs shall conform to the requirements in the LACDPW Construction Division's "Construction Site Best Management Practices (BMPs) Manual," and addenda thereto issued up to and including, the date of issuance of the Permit for the project. Copies of the Manual are available for download at: <http://dpw.lacounty.gov/cons/specs/BMPManual.pdf>

Year-Round Implementation Requirements

The Permittee or Authorized Representative and their contractors shall have an effective program for implementing, inspecting, and maintaining water pollution control practices for wind erosion control, tracking control, non-storm water control, and waste management and materials pollution control.

Soil stabilization and sediment control practices shall be provided throughout the rainy season, defined as between October 15 and April 15, and whenever the National Weather Service predicts rain within 24 hours. The National Weather Service weather forecast shall be monitored and used by the Permittee on a daily basis.

The non-rainy season shall be defined as all days outside the defined rainy season. Disturbed soil areas within the project shall be protected in conformance with the requirements in the Construction Site BMP Manual with sediment controls implemented prior to a predicted rain event.

Maintenance and Inspection

The Permittee or Authorized Representative and their contractors shall be responsible throughout the duration of the project for installing, constructing, inspecting, maintaining, removing and disposing of the BMPs. Unless otherwise directed by LACDPW, the Permittee or Authorized Representative and their contractors are responsible for BMP implementation and maintenance throughout any temporary suspension of work. The Permittee or Authorized Representative shall reimburse LACDPW for the full costs of cleaning or repairing of storm drain, water course, or channel which may be necessary due to ineffective implementation of BMPs.

The project site shall be inspected by the Permittee or Authorized Representative or their contractors a minimum of once every week or at least once for projects that last only one week or less.

Report of Non-Permitted Discharge and Enforcement

If the Permittee or Authorized Representative or their contractors identify any non-permitted discharge into the storm drain system or receiving waters in a manner causing, or potentially causing, a condition of pollution, or if the project receives a written notice or order from any regulatory agency, the Permittee or Authorized Representative or their contractors shall immediately inform LACDPW Construction Division Permits Section by calling the assigned Field Office. The Permittee or Authorized Representative or their contractors shall submit a written report (see attached Notice of Non-Permitted Discharge) to the LACDPW within 5 days of the discharge event, notice or order.

The Permittee or Authorized Representative and their contractors are subject to enforcement action by Chapter 12.80 of the Los Angeles County Code that states, *corporation, municipality or district or any officer or agent of any firm, corporation, municipality or district violating any provision of this chapter shall be guilty of a misdemeanor. Such violation shall be punishable by a fine of not more than \$1,000 or by imprisonment in the county jail for a period not to exceed six months, or by both fine and imprisonment. Each day during any portion of which such violation is committed, continued or permitted shall constitute a separate offense and shall be punishable as such (Ord. 98-0021§1(part), 1998).*

In addition, the Permittee or Authorized Representative and their contractors are subject to enforcement action by the State Water Resources Control Board (SWRCB), Environmental Protection Agency, private citizens and citizen groups. The Permittee or Authorized Representative and their contractors shall be responsible for the costs and for liabilities imposed

by law as a result of the Permittee or Authorized Representative or their contractor's failure to comply. Costs and liabilities include, but are not limited to, fines, penalties and damages whether assessed against LACDPW or the Permittee or Authorized Representative or their contractors, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

Table 1		
Construction Site BMPs		
ID	BMP Name	Minimum Requirement⁽¹⁾
Temporary Soil Stabilization		
SS-1	Scheduling	X ⁽²⁾
SS-2	Preservation of Existing Vegetation	X ⁽²⁾
SS-3	Hydraulic Mulch ⁽³⁾	
SS-4	Hydroseeding ⁽³⁾	
SS-5	Soil Binders ⁽³⁾	
SS-6	Straw Mulch ⁽³⁾	
SS-7	Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats ⁽³⁾	
SS-8	Wood Mulching	
SS-9	Earth Dikes/Drainage Swales & Ditches	
SS-10	Outlet Protection/Velocity Dissipation Devices	
SS-11	Slope Drains	
SS-12	Streambank Stabilization	
Temporary Sediment Control		
SC-1	Silt Fence ⁽⁴⁾	
SC-2	Desilting Basin	
SC-3	Sediment Trap	
SC-4	Check Dam	
SC-5	Fiber Rolls ⁽⁴⁾	
SC-6	Gravel Bag Berm ⁽⁴⁾	
SC-7	Street Sweeping and Vacuuming	X ⁽²⁾
SC-8	Sandbag Barrier ⁽⁴⁾	
SC-9	Straw Bale Barrier ⁽⁴⁾	
SC-10	Storm Drain Protection	X ⁽²⁾
Wind Erosion Control		
WE-1	Wind Erosion Control	X ⁽²⁾
Tracking Control		
TC-1	Stabilized Construction Entrance/Exit	
TC-2	Stabilized Construction Roadway	
TC-3	Entrance/Outlet Tire Wash	

Table 1 (continued) Construction Site BMPs		
ID	BMP Name	Minimum Requirement⁽¹⁾
Non-Storm Water Management		
NS-1	Water Conservation Practices	
NS-2	Dewatering Operations ⁽⁵⁾	
NS-3	Paving and Grinding Operations	
NS-4	Temporary Stream Crossing	
NS-5	Clear Water Diversion	
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting	X ⁽²⁾
NS-7	Potable Water/Irrigation	
NS-8	Vehicle Equipment Cleaning	X ⁽²⁾
NS-9	Vehicle Equipment Fueling	X ⁽²⁾
NS-10	Vehicle Equipment Maintenance	X ⁽²⁾
NS-11	Pile Driving Operations	
NS-12	Concrete Curing	
NS-13	Material and Equipment Use Over Water	
NS-14	Concrete Finishing	
NS-15	Structure Demolition/Removal Over or Adjacent to Waters	
NS-16	Temporary Batch Plant	
Waste Management and Material Pollution Control		
WM-1	Material Delivery	X ⁽²⁾
WM-2	Material Use	X ⁽²⁾
WM-3	Stockpile Management	
WM-4	Spill Prevention and Control	X ⁽²⁾
WM-5	Solid Waste Management	X ⁽²⁾
WM-6	Hazardous Waste Management	
WM-7	Contaminated Soil Management	
WM-8	Concrete Waste Management	
WM-9	Sanitary/Septic Waste Management	X ⁽²⁾
WM-10	Liquid Waste Management	

(1) Additional BMPs may be required based on actual field condition, Contractor operations, or construction operations.

(2) Not all minimum requirements may be applicable to every project. Applicability to a specific project shall be verified by the Permittee or Authorized Representative and their Contractor.

(3) The Permittee or Authorized Representative and their Contractors shall select one of the identified soil stabilization BMPs or a combination thereof.

(4) The Permittee or Authorized Representative and their Contractors shall select one of the identified sediment control barrier BMPs or a combination thereof.

(5) Dewatering BMPs are required for discharging accumulated precipitation (rain and snow melt) and for potential contact with groundwater during excavation. Separate permit requirements are applicable for construction dewatering of groundwater.

Construction and Demolition Recycling and Reuse Requirement Condition for Utility Projects:

Projects shall comply with the requirements of the County's Construction and Demolition (C&D) Recycle Reuse Ordinance by recycling or reusing construction and demolition debris at County approved recycling facilities. Additional information regarding the C&D ordinance, including detailed guidelines and a list of approved facilities, is available on Public Works' CleanLA website: <https://cleanla.lacounty.gov/cnd/>. This ordinance only applies to Unincorporated Los Angeles County jurisdictions.