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**CONTRACT SPECIFICATIONS  
FOR THE  
WATER MAIN IMPROVEMENTS  
FOR  
1850 KINNELOA CANYON ROAD  
PROJECT  
IN THE  
KINNELOA IRRIGATION DISTRICT  
1999 KINCLAIR DRIVE  
PASADENA, CALIFORNIA 91107-1017**

**February 2023**



*Prepared by:*

Civiltec Engineers, Inc.  
118 West Lime Avenue  
Monrovia, CA 91016  
626/357-0588  
FAX 626/303-7957

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

**NOTICE INVITING BIDS**

**For the  
1850 KINNELOA CANYON ROAD  
WATER MAIN IMPROVEMENT  
Project**

**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 **July 6, 2023** 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", 6" and 4" ductile iron pipelines valves fittings, and service reconnections in Kinneloa Canyon road.

**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. Qualification to bids will not be accepted.

**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 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

NOTICE INVITING BIDS

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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 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: **May 23, 2023**

KINNELOA IRRIGATION DISTRICT

By:

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

**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 that 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 1850 Kinneloa Canyon Road Water Main Improvement Project as specifically set forth in documents entitled KINNELOA IRRIGATION DISTRICT plans for 1850 Kinneloa Canyon Road Water Main Improvement Projects 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 they will accept as full 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 \_\_\_\_\_ 2023 \_\_\_\_\_

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  
System Improvements  
For  
1850 Kinneloa Canyon Road Water Main Improvement Project  
  
Kinneloa Irrigation District

Item No.	Description	Quantity	Unit Cost	Item Amount	
1	Mobilization and Demobilization		L.S.	1	\$_____ \$_____
2	Provide Traffic Control, Trench Tunneling Under Existing Structures and Excavation Safety Measures		L.S.	1	\$_____ \$_____
3	Furnish all Fees, Permits, and Insurances Required to Complete the Project		LS	1	\$_____ \$_____
4	Furnish and Install 12-inch Ductile Iron Pipe pressure class 350, including: fittings, excavation, bedding, backfill, compaction, tracer wire, etc.		L.F.	500	\$_____ \$_____
5	Furnish and Install 12-inch Butterfly Valve, valve box and cover, fittings, gaskets, etc.		EA	3	\$_____ \$_____
6	Furnish and Install 6-inch Ductile Iron pipe in improved street r/w, pressure class 350, including: excavation, bedding, backfill, compaction, tracer wire, etc.		L.F	30	\$_____ \$_____
7	Furnish and install 20-inch steel casing pipe, including: insulators, spacers, end seals, conc. slurry backfill, jacking and receiving pits, etc.		LF	80	\$_____ \$_____
8	Furnish and Install Reconnection of 6-inch Water Lines, Pipe Removal Etc.		EA.	2	\$_____ \$_____
9	Furnish and Install Reconnection of 4-inch Water Lines, Pipe Removal Etc.		EA.	1	\$_____ \$_____
10	Furnish and Install 6-Inch Fire Hydrant Assembly with valve box and cover, including fittings, gaskets, etc. per KID Std.		EA.	1	\$_____ \$_____
11	Furnish and reconnect 1-inch domestic service Per Kinneloa Stds.		EA	8	\$_____ \$_____
12	Furnish and install 2-inch Blow Off per Kinneloa Irrigation Stds.		EA	1	\$_____ \$_____
13	Abandon Existing Piping, cut, plug, Excavation Etc.		EA	3	\$_____ \$_____
14	Furnish and Install asphalt concrete trench resurfacing for pipe and services per detail as shown on the plans		LF.	1060	\$_____ \$_____

15	Pressure test, disinfect, flush, sample, disinfection testing of, water lines.	L.S.	1	\$ _____	\$ _____
<b>TOTAL BID PRICE</b>					<b>\$ _____</b>

Total Bid Price in Words \_\_\_\_\_

4D	Deduction if 12-inch Ductile iron Pipe class 350 is replaced with 8-inch Ductile Iron Pipe Class 350	L.F.	500	\$ _____	\$ _____
<b>TOTAL BID PRICE INCLUDING 4D DEDUCTION</b>					<b>\$ _____</b>

Total Bid Price in Words including 4D deduction \_\_\_\_\_

## **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>
12-inch ductile Iron Pipe		
8-inch Ductile Iron Pipe		
6-inch Ductile Iron Pipe		
12-inch butterfly valve		
6-inch fire hydrant assembly		
Water Meter materials		
A.C Pavement Materials		
Slurry seal materials		

## **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):

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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):

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## **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.

[illegible]

**(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.

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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 1850 Kinneloa Canyon Road Water Main Improvement Project as  
specifically set forth in documents entitled KINNELOA IRRIGATION DISTRICT plans for 1850  
Kinneloa Canyon Road Water Main Improvement Project 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 \_\_\_\_\_, 2023

\_\_\_\_\_  
(Principal) (SEAL)

By \_\_\_\_\_

\_\_\_\_\_  
(Surety) (SEAL)

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.

## RISK TRANSFER CLAUSES CONSTRUCTION CONTRACTS

### Agreements

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

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

**Coverage** - Coverage shall be at least as broad as the following:

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

**RISK TRANSFER CLAUSES  
CONSTRUCTION CONTRACTS**

4. **Builder's Risk** – (Course of Construction) if necessary- insurance utilizing an "All Risk" (Special Perils) coverage form with limits equal to the completed value of the project and no coinsurance penalty provision. See **Responsibility of Work**
5. **Contractor's Pollution Liability** – (optional: if project involves environmental hazards) with limits no less than \$5,000,000 per occurrence or claim, and \$10,000,000 policy aggregate.

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

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

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

**Notice of Cancellation:** Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Kinneloa Irrigation District.

**Acceptability of Insurers** - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A: VII or equivalent or as otherwise approved by Kinneloa Irrigation District.

The Contractor agrees and he/she will comply with such provisions before commencing work. All of the insurance shall be provided on policy forms and through companies satisfactory to Kinneloa Irrigation District. Kinneloa Irrigation District reserves the right to obtain complete, certified copies of all required insurance policies, including the policy declarations page with

## **RISK TRANSFER CLAUSES CONSTRUCTION CONTRACTS**

endorsement number. Failure to continually satisfy the Insurance requirements is a material breach of contract.

**Responsibility for Work** - Until the completion and final acceptance by 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** (course of construction) or an installation floater (for materials and equipment) 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 coverage, theft, vandalism and malicious mischief, and collapse. The Policy shall be endorsed with Kinneloa Irrigation District, its directors, officers, employees, and authorized volunteers named as loss payee, as their interest may appear. 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.

**Deductibles and Self-Insured Retentions** - Insurance deductibles or self-insured retentions must be declared by the Contractor and approved by the Kinneloa Irrigation District. At the election of Kinneloa Irrigation District the Contractor shall either cause the insurer to reduce or eliminate such self-insured retentions as respects the Kinneloa Irrigation District, its directors, officers, employees, and authorized volunteers or the Contractor shall provide a financial guarantee satisfactory to the Kinneloa Irrigation District guaranteeing payment of losses and related investigations, claim administration, and defense expenses. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or the Kinneloa Irrigation District.

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

**Continuation of Coverage** - The Contractor shall, upon demand of Kinneloa Irrigation District deliver evidence of coverage showing continuation of coverage for at least (5) years after completion of the project. Contractor further waives all rights of subrogation under this



## **RISK TRANSFER CLAUSES CONSTRUCTION CONTRACTS**

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 (via as broad as ISO CG 20 38 04 13). The Contractor shall, upon demand of Kinneloa Irrigation District, deliver to Kinneloa Irrigation District copies such policy or policies of insurance and the receipts for payment of premiums thereon.

### **Other Considerations/Exceptions:**

---

If scope includes Design/Build exposures include:

**Professional Liability** - with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.

#### **Professional Liability maybe Claims Made Policies – include the following provisions.**

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
2. Insurance must be maintained and evidence of insurance must be provided **for at least five (5) years after completion of the contract of work.**
3. If coverage is canceled or non-renewed, and not **replaced with another claims-made policy form with a Retroactive Date** prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of **five (5) years** after completion of contract work.

### **GENERAL CONDITIONS**

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

## **RISK TRANSFER CLAUSES CONSTRUCTION CONTRACTS**

and other safety devices; equipment and wearing apparel as are necessary or lawfully required to prevent accidents, injuries, or illnesses (including but not limited to exposure to the Coccidioides fungus and Valley Fever); and adequate facilities for the proper inspection and maintenance of all safety measures

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

It is a condition of this contract, and shall be made a condition of each subcontract which the Contractor enters into pursuant to this contract, that the Contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions 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.

**RISK TRANSFER CLAUSES  
CONSTRUCTION CONTRACTS**

DATE: \_\_\_\_\_

SIGNED: \_\_\_\_\_  
CONTRACTOR

COMPANY: \_\_\_\_\_

.

**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 1850 Kinneloa Canyon Road Water Main Improvement Project 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; 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 \_\_\_\_\_, 2023, 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 2023 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 **1850 KINNELOA CANYON ROAD WATER MAIN IMPROVEMENT PROJECT**, as specifically set forth in said Contract Document entitled **KINNELOA IRRIGATION DISTRICT plans for 1850 KINNELOA CANYON ROAD WATER MAIN IMPROVEMENT PROJECT** for which award of contract was 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"

"CONTRACTOR"

By: \_\_\_\_\_  
Its \_\_\_\_\_  
[TITLE]

License No(s). \_\_\_\_\_  
Expiration Date(s) \_\_\_\_\_

By: \_\_\_\_\_  
Its \_\_\_\_\_  
[TITLE]

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, **1850 KINNELOA CANYON ROAD WATER MAIN IMPROVEMENT PROJECT**, as specifically set forth in said Contract Document entitled **KINNELOA IRRIGATION DISTRICT plans for 1850 KINNELOA CANYON ROAD WATER MAIN 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 \_\_\_\_\_, 2022\_\_\_\_\_.

**MANDATORY FORM**

Contractor: \_\_\_\_\_  
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 **1850 KINNELOA CANYON ROAD WATER MAIN IMPROVEMENT PROJECT**, as specifically set forth in said Contract Document entitled **KINNELOA IRRIGATION DISTRICT plans for 1850 KINNELOA CANYON ROAD WATER MAIN 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 \_\_\_\_\_, 2023.

Contractor: \_\_\_\_\_ Surety: \_\_\_\_\_

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

Title: \_\_\_\_\_ Title: \_\_\_\_\_

By: \_\_\_\_\_ Home Office Address: \_\_\_\_\_

**MANDATORY FORM**

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 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 \_\_\_\_\_, 2023.

\_\_\_\_\_  
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.

**MANDATORY FORM**

Dated: \_\_\_\_\_

Signed: \_\_\_\_\_

\_\_\_\_\_  
[TITLE]

Subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 2023, 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 plans for 1850 KINNELOA CANYON ROAD WATER MAIN  
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-3	[ ]
Faithful Performance Bond (100%)	A-4 to A-5	[ ]
Payment Bond	A-6	[ ]
Worker's Compensation Insurance Certificate	7-2	[ ]
Liability Insurance Policy or Certificate	7-3	[ ]
Risk Transfer Agreement	P-13	[ ]
Additional Insured – Owners Lessees or Contractors – Form B	P-19	[ ]
Non-Collusion Affidavit	P-19 to P-20	[ ]
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.

## **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 engineer.

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 CERTIFICATES**

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 CERTIFICATES**

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 Civiltex, 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 Civiltex, 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 sixty days **(60) 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 are not existing 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 to 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  
**1850 KINNELOA CANYON ROAD WATER MAIN IMPROVEMENT**  
Project

Sheet No.	Title	File No.
1	Title Sheet	2015174.00
2	1850 Kinneloa Canyon Road Water Main Improvement Project	2015174.00

#### **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 lines 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 traveled 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 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 damaged during construction to the complete satisfaction of such agency or its authorized representative. Any requirements as to reconstruction of such rights-of-way 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 Chris Burt, Facilities Supervisor, (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 determined that an excavation permit is not required in the private roadway. 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.

**B.** The Contractor shall be responsible for developing a schedule of work and 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 and Edgecliff Lane at all times. Vehicle access for residents shall be provided at all times 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 or shall contact the developer to perform required construction survey at no 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 between 8:00a.m. Thru 4:00p.m. on Tuesday or Thursday of each week. Outages over the weekend are not acceptable.

#### **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 Kinneloa Irrigation District. Soil compaction testing cost shall be included in appropriate bid item.

#### **SP-31 ITEMS OF WORK**

##### **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 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 TRAFFIC CONTROL, TRENCH TUNNELING UNDER EXISTING STRUCTURERS AND EXCAVATION SAFETY MEASURERS**

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.

3. FURNISH ALL FEES, PERMITS, AND INSURANCE

Work under this item includes Payment of bond cost, providing required liability insurance documents, and paying any fees not paid by KID. (60% due at mobilization, 40% due at demobilization.  
Payment for this work will be made at the contract lump sum price.

4. 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: pipe materials, copper tracer wiring per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, temporary asphalt pavement, dust control, work area sweeping or washing, and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

5. 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.

6. FURNISH AND INSTALL 6-INCH DUCTILE IRON PIPELINE

Work under this item includes furnishing all labor, material and equipment to furnish and install 6-inch ductile iron pipe in improved Street R/W, pressure class 350, including: pipe materials, copper tracer wiring per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, temporary asphalt pavement, dust control, work area sweeping or washing, and all other appurtenances. Payment for this work will be made at the contract lineal foot price.

7. FURNISH AND INSTALL 20-INCH STEEL CASING PIPE

Work under this item includes furnishing all labor, material and equipment to furnish and install new 20-inch standard steel casing pipe, including: piping, insulators, spacers, pipe end seals, concrete slurry backfill, excavation, cut, backfill, compaction, jacking and receiving pits and any other appurtenances. Payment for this work will be made at the contract lineal foot price.

8. FURNISH AND INSTALL RECONNECTIONS OF 6 INCH WATER LINES

Work under this item includes furnishing all labor, material and equipment to furnish and install reconnections to 6 inch pipelines including: pipe materials, copper tracer wiring per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, 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.

9. FURNISH AND INSTALL RECONNECTIONS OF 4 INCH WATER LINES

Work under this item includes furnishing all labor, material and equipment to furnish and install reconnections to 4 inch pipeline connections including: pipe materials, copper tracer wiring per detail as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, installation of pipe, bends, fittings, couplings, concrete thrust blocks, connections to existing facilities, removal, abandonment or protection of interfering portions of existing utilities, 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.

10. FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to furnish and install 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, bedding, backfill, soil 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 DOMESTIC WATER SERVICE

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 this plan, including: piping, service saddle, 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 2" BLOW OFF VALVE ASSEMBLY

Work under this item includes furnishing all labor, material and equipment to furnish and install 2" blow off valve assembly, including: double strap saddle, corporation stop, meter box, 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.

13. ABANDON EXISTING PIPING, CUT, AND PLUG

Work under this item includes furnishing all labor, material and equipment to abandon existing piping in place including pipe materials, as shown on these plans, trench excavation, control of ground and surface water, bedding, backfill, compaction, concrete thrust blocks, removal, abandonment or protection of interfering portions of existing utilities, 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.

14. FURNISH AND INSTALL ASPHALT CONCRETE TRENCH RESURFACING

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

15. PRESSURE TEST, DISINFECT, FLUSH, SAMPLE, AND 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 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 in to 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.

### **KINNELOA CANYON ROAD**

Kinneloa Canyon Road 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 Kinneloa Canyon Road construction. The Contractor shall post signs at both ends of the construction area and prepare and distribute written notices to all affected parties on Kinneloa Canyon Road. The contractor shall 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 thru 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 Kinneloa Canyon Road stating the dates and times of construction, 7 days prior to start of Construction.

### **SP-33 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 1850 Kinneloa Canyon Road Water Main 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

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 materials to be provided.

## **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 (NOT USED)**

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
- 4. Mechanical joint restrained

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 body 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".

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 (NOT USED)**

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. 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 (NOT USED)**

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 (NOT USED)**

- 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. Suction side pressure switches shall open on pressure drop. Discharge side pressure switches shall open on pressure rise.
- D. 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 and backfill shall be imported washed concrete sand. Bedding material shall be densified by jetting to a relative density of 90%.

**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. Epoxy grout shall meet the requirements found in Section B-25-F.4.

**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
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 SUSTAINING VALVE (Not Used)**

Each pressure sustaining valve shall be a 50-01 Series Clay-Val model 100-01 (angle). Diaphragm-activated, single-seated, composition disc, hydraulically-operated, globe-type valve. The pressure sustaining valve shall have Class 150 psi maximum working pressure with epoxy lined and coated Hi-Tensile ductile iron body and cover conforming to ASTM Standard A-536, entitled "Specification for Ductile Iron Castings". The pressure sustaining valve shall be set to maintain a preset downstream pressure. Main valve trim shall be of brass or bronze. Pilot control system shall be of cast-brass with stainless steel trim.

## **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 of 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 ID-Inches</u>	<u>Radius of Bend-Inches (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 HOUR**

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:  $\pm 1$ -inch

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