



**CASITAS MUNICIPAL WATER DISTRICT
MATILIJA GROUNDWATER SUPPLY PILOT WELL DRILLING**

Specification No. 23-462

January 29, 2025

Bids will be received via email to bids@casitaswater.com

*until **Wednesday, February 26, 2025 at 11:00 a.m.***

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NOTICE INVITING BIDS

MATILIJA GROUNDWATER SUPPLY PILOT WELL DRILLING SPECIFICATION NO. 23-462

Sealed bids for the above referenced project and specification will be received by the Casitas Municipal Water District up to **11:00 a.m. on Wednesday, February 26, 2025** via email to bids@casitaswater.com, at which time they will be opened and publicly read aloud via conference call. Bidders interested in participating in the conference call shall email Julia Aranda at jaranda@casitaswater.com to receive call-in information at least one hour prior to bid opening. Each bid shall be made out on a form to be obtained from the Casitas Municipal Water District.

Each bid must be accompanied by a certified check, a cashier's check, or by a bid bond executed by a corporate surety satisfactory to the Casitas Municipal Water District, in the sum of not less than ten (10) percent of the total amount of the bid, as a guarantee that the Bidder will enter into the proposed contract, if it be awarded to them. **The lowest three bidders must deliver their entire bid package within 24 hours of the bid opening to the District's office located at 1055 N. Ventura Avenue, Oak View, CA 93022.** Failure to do so may result in disqualification. The guarantee will be forfeited, should the Bidder to whom the contract is awarded fail to enter into the contract.

In accordance with the provisions of Section 1770-1784 of the California Labor Code, the Casitas Municipal Water District has ascertained the general prevailing rate of wages applicable to the work to be done. It shall be mandatory upon the Contractor to whom the contract is awarded, and upon the subcontractor(s) under them, to pay not less than the specified rates to all laborers and mechanics employed by them in the execution of the contract. The wage scale can be obtained on the internet at www.dir.ca.gov/dlsr/statistics_research.html.

All bidders and their subcontractors shall be registered with the California Department of Industrial Relations (DIR). Failure of the bidder or subcontractors to be registered with the DIR shall render their bid as non-responsive and will be rejected except where State code provides for exceptions to the registration requirements. All contractors and their subcontractors shall furnish electronic certified payroll records directly to the Labor Commissioner, also known as Division of Labor Standards Enforcement.

The District reserves the right to waive any formalities which, in the opinion of the Board of Directors, do not materially affect the relationship of the various proposals. The District reserves the right to retain all bids for a period of sixty (60) days and to reject any and all bids for any reason at the sole discretion of the District, with or without cause.

The contract documents shall consist of this Notice Inviting Bids, the Instructions to Bidders, Formal Proposal with Bidding Sheet and Bidder's Plan for Construction, Form of Agreement, Specifications and Drawings, and any changes made by issuance of a supplemental notice.

A **mandatory** pre-bid conference and site visit will be held for this project on **Wednesday, February 12, 2025 at 10:00 a.m.** starting at the District office, 1055 N Ventura Avenue, Oak View, CA 93022. A site visit will immediately follow which all potential bidders must attend.

Bidders may contact Virgil Clary, vclary@casitaswater.com with any questions. A complete bid package (plans and specifications) may be examined and downloaded free of charge from our website at: <https://www.casitaswater.org/do-business-with-cmwd>.

INSTRUCTIONS TO BIDDERS

Proposal. The proposal shall be submitted on the separate bid forms accompanying these specifications, designated "Proposal" and made a part of these specifications. The proposal shall be submitted via email to bids@casitaswater.com and shall be endorsed with the name of the project as set forth in the Notice Inviting Bids.

The sealed proposals will be publicly opened and read via conference call at the time stated in the Notice Inviting Bids. Bidders, or their authorized agents, are invited to be present and shall request call-in information from Julia Aranda at jaranda@casitaswater.com at least one hour prior to bid opening. **The three lowest bidders must deliver their hardcopy bid to the District office at 1055 N. Ventura Avenue, Oak View CA 93022, within 24 hours of the bid opening.** Failure to do so may result in disqualification and forfeiture of their Bid Bond.

The proposal shall give the price, both in words and in figures, for which the bidder proposes to do the work required by the Specifications and the accompanying Drawings. In the event of disagreement between words and figures, the words will govern and the figures will be disregarded. In the event that the unit price and the total amount named by any bidder for any item are not in agreement, the unit price shall govern and the totals shall be corrected to conform thereto. The bidder shall fill out all blanks of the proposal forms as therein required.

Unauthorized conditions, limitations, or provisions attached to a proposal will render it informal, and may cause its rejection. The completed proposal forms shall be without interlineations, alterations, or erasures. Alternate proposals will not be considered unless asked for. No oral or telephonic proposals or modifications will be considered.

The District reserves the right to waive any informalities which, in the opinion of the Board of Directors, do not materially affect the relationship of the various proposals. The District reserves the right to reject any and all bids for any reason at the sole discretion of the District, with or without cause.

The proposal may be withdrawn upon request by the bidder without prejudice to themselves prior to, but not after, the time fixed for opening of bids, provided that the request is in writing, has been executed by the bidder or their duly authorized representative, and is filed with Casitas Municipal Water District.

Proposal Signature. If the proposal is made by an individual, it shall be signed and proposer's full name and address shall be given; if it is made by a partnership, it shall be signed with the partnership name by a member of the firm, who shall sign their own name, and the name and address of each member shall be given; and if it is made by a corporation, the name of the corporation shall be signed by its duly authorized officer or officers, attested by the corporate seal, and the names and titles of all officers of the corporation shall be given.

Competency of Bidders. In selecting the bidder for award of the contract, consideration will be given not only to the total amount of the bid, but also to the general competency of the bidder for the performance of the work covered by the proposal. To this end, the District has selected qualified contractors through a

pre-qualification process. The names of the pre-qualified contractors are located on page 1 of these specifications.

Bidders' Plan for Construction. As part of the proposal, bidders must furnish a detailed statement of the plan or layout for performing the work. As preparation for the foregoing, each Bidder shall examine carefully the site of the proposed work and the contract documents therefore. It will be assumed that the bidder has investigated, and is satisfied as to, the conditions to be encountered; the characters, quality, and quantities of work to be performed; the quality and quantities of the materials to be furnished, and the requirements of the contract, specifications, and drawings.

Subcontracts. Subcontracts will be permitted, subject to the following provisions. No subcontract will be permitted which has the effect of avoiding the residence or wage requirements, or any other provision of the main contract. Individual subcontractors, or members of the contracting or subcontracting organizations personally engaged upon the work, shall be subject to all the requirements of these specifications applicable to employees working for wages, including but not limited to wages, hours of work, character of workmen and certified payrolls.

Reference is hereby made to the provisions of Chapter 2 of Division 5 of Title 1 of the Government Code of the State of California, commencing with Section 4100, also known as the "Subletting and Subcontracting Fair Practices Act", which is incorporated herein and made a part hereof by reference, and the Contractor is bound thereby and shall be made subject to the consequences named in sections 4110 and 4111 of said Act, in the event of his violation thereof. Each bidder shall, in their bid or offer, set forth: (1) the name and the location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work or improvement, in an amount in excess of one-half of one percent of the Contractor's total bid, or a subcontractor licensed by the State of California who, under subcontract to the prime Contractor, specifically fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the Prime Contractor's total bid; and (2) the portion of the work which will be done by each such subcontractor under said Act. The Contractor shall list only one subcontract for each such portion as defined by the Contractor in their bid. If the Contractor fails to specify a subcontractor, or if the Contractor specifies more than one subcontractor for the same portion of the work to be performed under this contract in excess of one-half of one percent of the Contractor's total bid, the Contractor agrees that they are fully qualified to perform that portion, and that they shall perform that portion themselves.

Subcontractors. Bidders must furnish as a part of the proposal, a complete listing of names, addresses, Department of Labor Relations Registration Number (DIR No.) and contractor license number of all subcontractors who will perform work in an amount in excess of one-half (1/2) of one percent (1%) of the total bid price, and a statement of the work which will be done by each subcontractor. The required statement shall be on the form of Bidder's Statement of Subcontractors, accompanying these specifications.

Prevailing Rate at Per Diem Wages. In accordance with the provisions of Section 1770-1784 of the California Labor Code, the District has ascertained the general prevailing rates of wages applicable to the work to be done. It shall be mandatory upon the Contractor to whom the contract is awarded, and upon

any subcontractor under contractor, to pay not less than the specified rates to all laborers, surveyors and mechanics employed by Contractor in the execution of the contract. The wage can be viewed on the internet at www.dir.ca.gov/dlsr/statistics_research.html. Final payment for services provided shall not be distributed until receipt of proof of prevailing wage payments.

The Contractor and all subcontractors shall be subject to Executive Order 12549, "Debarment and Suspension" and Department of Commerce regulations published at 15 CFR Part 26, Subparts A through E, "Governmentwide Debarment and Suspension (Nonprocurement)" for a drugfree work place.

Disqualification of Bidders. More than one proposal from an individual, partnership, corporation, or association under the same or different names will not be considered. Reasonable grounds for believing that any bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which said Bidder is interested. If there is reason for believing that collusion exists among Bidders, all bids will be rejected, and none of the participants in such collusion will be considered in future proposals.

Return of Proposal Guarantee. Proposal guarantees will be held until the contract has been executed. They will be returned to the respective Bidders whose proposals they accompany upon request.

Insurance and Bonds. The Bidder to whom award is made shall promptly secure Workmen's Compensation Insurance, in accordance with the provisions of the California Labor Code and all amendments thereto, and also shall furnish to the District certificate of insurance showing that they have taken out the insurance of the kinds and in the amounts required under the specifications. The successful Bidder shall also promptly secure, with a reasonable corporate surety or corporate sureties, satisfactory bonds conditioned upon faithful performance by the said Bidder of all requirements under the Contract and upon the payment of claims of materialmen and laborers there under. Refer to Summary of Insurance, Bond and Payment Requirements for Various Construction Contracts attached.

Permits. Casitas has applied for and shall pay the permit fees for:

- County of Ventura Well Permit

The Contractor, at their sole expense, shall be required to obtain all other permits and/or licenses as required. The Contractor shall follow all permit requirements and pay all fees associated with any required additional permits.

Licensing of Contractors. All Contractors submitting bids shall be licensed in accordance with the provisions of Chapter 9, Division 3, of the Business and Professions Code of the State of California. Effective January 1, 1990, Contractors submitting bids must state, under penalty of perjury, the Contractor's license number and expiration date. Any bid not containing this information shall be considered non-responsive and shall be rejected by Casitas (Business & Professions Code 7028.15). The license required for this project is either A-General Engineering Contractor or C-57 Well Drilling Contractor.

Failure of the bidder to meet either of the criteria above shall deem the bid proposal non-responsive and the bid proposal will be rejected.

Supplemental Notices. Full consideration shall be given to all Supplemental Notices in the preparation of Bids, as Supplemental Notices form a part of the Contract Documents. Bidders shall verify the number of Supplemental Notices in the bid. Failure to so acknowledge may cause the Bid to be rejected.

Pre-bid Information Requests. All requests for information and questions regarding this bid proposal, the specifications, permits or the plans shall be submitted to the District. The request can be emailed to the District at vcrary@casitaswater.com. The District will make a reasonable attempt to respond to the request prior to the bid opening. All questions shall be submitted in writing by 4 p.m. on February 19, 2025. If questions are received after that time they will not be answered.

Award of Contract. The award of the contract by the Board of Directors of the Casitas Municipal Water District, if it is awarded, will be to the lowest responsible bidder whose proposal complies with all requirements presented herein. Casitas maintains the right to reject any and all bids for any reason and to waive minor irregularities.

Execution of Contract. The Bidder to whom award is made shall execute a written contract with the Casitas Municipal Water District in the form of agreement provided, and shall furnish certificate of Workmen's Compensation Insurance and good and approved bonds as required in the preceding paragraphs, within seven (7) days from the date of the mailing of a notice from the Casitas Municipal Water District to the Bidder, to the address given by them, of the acceptance of their proposal. At this time Contractor shall also provide District with a completed IRS W-9 form (Request of Taxpayer Identification Number and Certification.)

Failure or refusal to enter into a contract as herein provided, or to conform to any of the stipulated requirements in connection therewith, shall be just cause for the annulment of the award and the forfeiture of the proposal guarantee. If the successful Bidder refuses or fails to execute the contract, the Casitas Municipal Water District may award the contract to the second lowest responsible Bidder.

Notice to Proceed shall be issued by the District within fifteen (15) days of the receipt of the bonds, insurance and agreements documents satisfactory to the District and the execution of the Agreement by the District. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the District and the Bidder. If the Notice to Proceed has not been issued within the period stated herein, the Bidder may terminate the Agreement without further liability on the part of either party.

Time for Completion and Forfeiture Due to Delay. The work for this contract shall be completed within 120 consecutive calendar days from and after the date of Notice to Proceed. Pursuant to Government Code 53069.85, forfeiture for each day completion is delayed beyond the time allowed will be at a rate of \$2,500 per day.

PROPOSAL

MATILIJA GROUNDWATER SUPPLY PILOT WELL DRILLING SPECIFICATION NO. 23-462

TO: Casitas Municipal Water District
1055 Ventura Avenue, Oak View, California 93022

The undersigned proposes to furnish all materials and labor, and provide all necessary tools and machinery for the completion of the above referenced project and specification, and to perform and complete all the work in the manner set forth, described, and shown in the specifications or on the drawings for the work and in the form of agreement.

The bidder agrees that, upon receipt of written notice of the acceptance of this proposal within seven (7) days after the opening of the bids, bidder will execute the contract in accordance with the proposal as accepted and furnish the required bonds and will secure the required insurance, all within seven (7) days from the date of mailing of said notice of acceptance to them at their address as given below; and that, upon failure to do so within said time, then the proposal guarantee accompanying this proposal shall become the property of the Casitas Municipal Water District as liquidated damages for such failure, and shall be deposited as monies belonging to the Casitas Municipal Water District. If said bidder shall execute the contract, furnish the required bonds, and secure the required insurance, the proposal guarantee check or bond shall be returned to them within five (5) days thereafter.

The bidder declares that they have read the Notice Inviting Bids and the Instructions to Bidders, and agrees to all the stipulations contained therein; that they have examined the site of the work, the form of agreement, the specifications and the drawings therein referred to; that they propose and agree, in the event their bid as submitted in the attached Bid Schedule be accepted, to enter into a contract to perform all the work mentioned in the agreement and the specifications, and to complete the same within the time stipulated therein; and that they will accept in full payment therefore the amount named in said Bid Schedule.

The bidder further declares that the surety or sureties named in the space provided below have agreed to furnish bonds in the form and amounts set forth in the Instructions to Bidders, in the event the contract is awarded on the basis of this proposal.

Dated: _____

(Corporate Seal)

By: _____

Title: _____

Telephone No. _____

Corporation organized under
the laws of the State of

Bidder's post office address:

Contractor's License Number:

Names and addresses of all members of the

Date of Expiration: _____

partnership, or names and titles of all officers of

Surety or Sureties agreeing to furnish bond: the corporation:

BID SCHEDULE

MATILJA GROUNDWATER SUPPLY PILOT WELL DRILLING SPECIFICATION NO. 23-462

Schedule of prices for all work, materials and site cleanup for the above-mentioned project and specification in accordance with these specifications. Any item not specifically mentioned shall be considered incidental to the item to which it pertains. The bidder shall list prices for all bid items. Bids received which do not list prices in succession shall be rejected. Quantity and unit are listed for initial contract items list.

Bid Item #	Quantity	Description of Work	Unit Price	Amount \$
1	1	Mobilize and demobilize drilling equipment and accessories, including blow-out protection equipment for the lump sum price of _____ dollars	Lump Sum	\$ _____
2	1	Noise Attenuation Barriers: Furnish and install temporary noise attenuation barriers for the lump sum price of _____ dollars	Lump Sum	\$ _____
3	50	Surface Conductor Casing: Drill 24-inch diameter borehole and install 18-inch-diameter steel conductor casing, encased in cement for the unit price of _____ dollars/LF	\$ _____/LF	\$ _____
4	1,200	SESPE Conductor Casing: Drill 16-inch diameter borehole and after logging, install 11-inch-diameter steel Sespe conductor casing, encased in cement for the unit price of _____ dollars/LF	\$ _____/LF	\$ _____
5	5,000	Coldwater and Cozy Dell Conductor Casing: Drill 11-inch diameter borehole and install 7-inch-diameter steel Sespe conductor casing, encased in cement for the unit price of _____ dollars/LF	\$ _____/LF	\$ _____
6	2,000	Production Borehole Drilling: Drill 7-inch-diameter borehole from base of Tcd/Tcw conductor (5000 feet) to 7000 feet for the unit price of _____ dollars/LF	\$ _____/LF	\$ _____
7	3	Geophysical Logging: Provide downhole geophysical surveying: potential, long- & short-normal, focused resistivity, sonic/VDL, and gamma-ray logs for the unit price of _____ dollars/Each	\$ _____/Each	\$ _____
8	1	Caliper Survey: Provide caliper log after completion of borehole for the lump sum price of _____ dollars	Lump Sum	\$ _____

9	200	Production Well Casing and Screen: Furnish and install 6-inch-diameter HSLA Steel blank water well casing for the unit price of _____ dollars/LF	\$_____/LF	\$_____
10	1	Liner Hanger: Furnish and install appropriate transitional material, Left-hand backoff tool and K-Packer to transition between 6-inch-liner and 7-inch-Tcd/Tcw conductor casing for the unit price of _____ dollars/Each	\$_____/Each	\$_____
11	1,820	Production Well Casing and Screen: Furnish and install 6-inch-diameter HSLA Steel Ful-Flo Louvered water well casing, 0.090-inch-apertures for the unit price of _____ dollars/LF	\$_____/LF	\$_____
12	2,000	Gravel Pack: Furnish and install 6x9 Silica gravel from 4,980 feet to 6,980 feet bgs between 6-inch-casing and 7-inch borehole pumped as slurry from bottom float shoe for the unit price of _____ dollars/LF	\$_____/LF	\$_____
13	20	Cement Grout Seal: Install bottom cement seal after gravel packing via shoe, cement from 6,980 to 7,000 feet bgs for the unit price of _____ dollars/LF	\$_____/LF	\$_____
14	10	Standby time for the unit price of _____ dollars/HR	\$_____/HR	\$_____
15	50	Mechanical Well Development: Mechanically develop water well by swabbing and air-lift pumping to remove drilling muds for the unit price of _____ dollars/HR	\$_____/HR	\$_____
16	1	Flow Meter Survey: Conduct a down-well flow survey during pumping testing for the lump sum price of _____ dollars	Lump Sum	\$_____
17	1	Disinfection of Well & Capping: Disinfect and cap well, including concrete pedestal and valving to shut-in flow for the lump sum price of _____ dollars	Lump Sum	\$_____
Optional Bid Items				
18	550	Chemicals for Well Development: 10% Chlorine Solution for the unit price of _____ dollars/Gal	\$_____/Gal	\$_____
19	125	Chemicals for Well Development: NW-220 (or equivalent) for the unit price of _____ dollars/Gal	\$_____/Gal	\$_____
20	72	Production Testing of Well: Perform constant-rate discharge (aquifer) test for the unit price of _____ dollars/HR	\$_____/HR	\$_____
21	7,000	Abandonment and Destruction: Abandonment (per linear foot basis) for the unit price of _____ dollars/LF	\$_____/LF	\$_____

TOTAL BASE BID AMOUNT (Items 1 – 17) \$ _____ (Figures)

_____ (Words)

TOTAL BID AMOUNT WITH OPTIONAL BID ITEMS (Items 1 – 21) \$ _____ (Figures)

_____ (Words)

The above quantities are based on a quantity take-off of the Plans; measurement and payment for each bid item will be per Part D of these General Specifications and Part G – Special Conditions and Provisions. The contract award will be based on **the combined total base bid of Bid Items 1 - 17. All dimensions shall be field verified with District Engineer.** Bidder will not be released on account of errors. When a discrepancy occurs between the written price and the number listed, the written price shall govern. The Bidder understands that the District reserves the right to reject any or all bids, and to waive any informalities in the bidding. Pursuant to and in compliance with the Notice Inviting Bids and the other documents relating thereto, the undersigned bidder, being fully familiar with the terms of the Contract Documents, local conditions affecting the performance of the contract, the character, quality, quantities, and scope of the work, and the cost of the work at the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated in the contract, including all of its component parts and everything required to be performed, and to furnish any and all of the labor, material, tools, equipment, transportation, services, permits, utilities, and all other items necessary to perform the contract and complete in a conformity with the plans and specifications and other contract documents, including **Addenda Nos. ____ , ____ , ____ , and ____**, for the prices hereinafter set forth.

Date: _____

BIDDER: _____

By: _____

Title: _____

License No. _____ Expiration Date: _____

(CORPORATE SEAL)

License Classifications: _____ DIR No. _____

Telephone. No: _____ Cell No: _____

Fax No: _____ Email: _____

Address: _____

BIDDER'S PLAN FOR CONSTRUCTION

1. The location for the proposed work was examined on _____
(Date)
by _____ on behalf of the bidder.
(Name and Title)

2. Explain briefly your plan and tentative schedule for performing the proposed work and Method of Drilling as described in Part G – Special Conditions and Provisions - Section 1.06.

BIDDER'S STATEMENT OF SUBCONTRACTORS

The bidder is required to state the name and address of each subcontractor who will perform work in an amount in excess of one-half (2) of one percent (1%) of the total bid price and the portion of the work which each subcontractor will do.

The undersigned submits herewith a list of subcontractors whom he proposes to employ on the work, with the proper firm name and business address of each and a statement of the work or bid item which will be done by each subcontractor.

Subcontractor		Portion of Work
Location and Place of Business		DIR No.
License No.	Expiration Date: / /	Phone ()
Subcontractor		Portion of Work
Location and Place of Business		DIR No.
License No.	Expiration Date: / /	Phone ()
Subcontractor		Portion of Work
Location and Place of Business		DIR No.
License No.	Expiration Date: / /	Phone ()
Subcontractor		Portion of Work
Location and Place of Business		DIR No.
License No.	Expiration Date: / /	Phone ()
Subcontractor		Portion of Work
Location and Place of Business		DIR No.
License No.	Expiration Date: / /	Phone ()
Subcontractor		Portion of Work
Location and Place of Business		DIR No.
License No.	Expiration Date: / /	Phone ()

NONCOLLUSION DECLARATION
(MUST BE SUBMITTED WITH BID)

The undersigned declares:

I am the _____ of _____,
(Title) (Company)

the party making the foregoing bid. The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted their bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that they have full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____,
(Date)

at _____,
(City) (State)

This page intentionally left blank.

BIDDER'S BOND

KNOW ALL MEN BY THESE PRESENTS,

That we _____

_____, as PRINCIPAL,

and _____

_____, as SURETY,

are held and firmly bound unto the Casitas Municipal Water District, hereinafter called the District, in the penal sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the Casitas Municipal Water District, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

In no case shall the liability of the surety hereunder exceed the sum of \$ _____

THE CONDITIONS OF THIS OBLIGATION ARE SUCH,

That whereas the Principal has submitted the above-mentioned bid to the Casitas Municipal Water District, for certain construction specifically described as **MATILIJA GROUNDWATER SUPPLY PILOT WELL DRILLING, Specification No. 23-462** which bids are to be opened at the office of Casitas Municipal Water District on **February 26, 2025 at 11:00 am**.

NOW, THEREFORE, if the aforesaid Principal is awarded the contract and, within the time and manner required under the heading Instructions to Bidders, after the prescribed forms are presented to him for signature, enters into a written contract, in the form set forth in said specifications, in accordance with the bid, and files the two bonds with the District, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by Instructions to Bidders and Certificate of Insurance for Workmen's Compensation and Contractor's liability insurance, then this obligation shall be null and void; otherwise, it shall be and remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgement is recovered, the surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

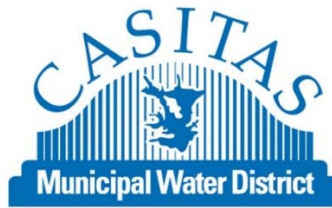
IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 2025.

Principal

By _____

(SEAL)

NOTE: Signatures of those executing for the surety must be properly acknowledged.



AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____ in the year 2025 by and between the Casitas Municipal Water District, hereinafter designated as the District, and hereinafter designated as the Contractor.

WITNESSETH: The parties hereto do mutually agree as follows with respect to the project known as **MATILJA GROUNDWATER SUPPLY PILOT WELL DRILLING Specification No. 23-462.**

ARTICLE I. For and in consideration of the payment of _____ Dollars (\$ _____) in conformance with the specifications hereinafter mentioned, the Contractor agrees with the District to construct the aforementioned project and to perform and complete in a good and workmanlike manner all the work pertaining thereto shown on the Drawings and described in the Specifications therefor, to furnish at its own cost and expense all tools, equipment, labor, and materials necessary therefor, except such materials as in the said specifications are stipulated to be furnished by the District, and to do everything required by this Agreement and the said Specifications and Drawings.

ARTICLE II. For the same consideration set forth in Article I above, Contractor agrees to furnish all said materials and labor, furnishing and removing all plants, temporary work or structures, tools and equipment, and doing all the work contemplated and embraced in this Agreement, also to be responsible at its own expense for all loss and damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties which may arise or be encountered in the prosecution of the work until its acceptance by the District, and for all risks of every description connected with the works, and also for all expenses incurred by or in consequence of the suspension or discontinuance of works, except such as in the said Specifications are expressly stipulated to be borne by the District, and for well and faithfully completing the work and the whole thereof, in the manner shown and described in the said Drawings and Specifications and in accordance with the requirements of the Engineer under them, the District will pay and the Contractor shall receive in full compensation thereof the prices for the several items named in the Bidding Sheet of the Proposal.

ARTICLE III. The District hereby promises and agrees with the said Contractor to employ, and does hereby employ the said 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 Specifications; and the said parties for

themselves, their heirs, executors, administrators, successors and assignees do hereby agree to the full performance of the covenants herein contained.

ARTICLE IV. The Notice Inviting Bids, the Instructions to Bidders, the Proposal, the Specifications and the Drawings mentioned therein, and all addenda issued by the District with respect to the foregoing prior to the opening of bids, are hereby incorporated in and made part of this Agreement.

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

CASITAS MUNICIPAL WATER DISTRICT

By: _____
President of the Board of Directors

ATTEST:

Secretary

Approved as to form:

Attorney

Dated: _____, 2025

CONTRACTOR

By _____

Title

BOND FOR FAITHFUL PERFORMANCE

KNOW ALL MEN BY THESE PRESENTS,

We _____

hereinafter referred to as Contractor, as principal, and _____

_____, as surety,

are held and firmly bound unto the Casitas Municipal Water District, OAK VIEW, California, in the sum ONE HUNDRED PERCENT (100%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the Casitas Municipal Water District, for the work described below, for the payment of which sum in lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such:

whereas, said Contractor has been awarded and is about to enter into a contract with the Casitas Municipal Water District, for construction of the project known as **MATILJA GROUNDWATER SUPPLY PILOT WELL DRILLING Specification No. 23-462**, and is required by said District to give this bond in connection with the execution of the contract. The total bond shall be equal to the funds budgeted for the total of this contract work.

NOW, THEREFORE, if the said Contractor shall well and truly do and perform all the covenants and obligations of said contract on his 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, 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 the Contractor or the surety thereunder, 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.

WITNESS our hands this _____ day of _____, 2025.

Contractor

By: _____

Surety

By: _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS,

We _____

hereinafter referred to as Contractor, as principal, and _____
_____, as surety,

are held and firmly bound unto the Casitas Municipal Water District, OAK VIEW, California, in the sum ONE HUNDRED PERCENT (100%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named, submitted by said Principal to the Casitas Municipal Water District, for the work described below, for the payment of which sum in lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

The condition of the above obligation is such:

Whereas, said principal has been awarded and is about to enter into a contract with the Casitas Municipal Water District, for construction of the project known as **MATILIJA GROUNDWATER SUPPLY PILOT WELL DRILLING Specification No. 23-462**, and is required by said District to give this bond in connection with the execution of the contract.

NOW, THEREFORE, if said principal as Contractor in said contract, or subcontractors, fails to pay for any materials, provisions, provender or other supplies, or teams, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, said surety will pay for the same, in an amount not exceeding the sum specified above, and also, in case suit is brought upon this bond, a reasonable attorney's fee, to be fixed by the court. This bond shall insure to the benefit of any and all persons entitled to file claims under Section 11929 of the Code of Civil Procedure of the State of California.

PROVIDED, 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 thereunder, 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.

WITNESS our hands this _____ day of _____, 2025.

Contractor

By _____

Surety

By _____

SUMMARY OF INSURANCE, BOND & PAYMENT REQUIREMENTS

	Informal Under \$35,000	Formal \$35,000 & Over
<u>Certificates of Insurance</u> (CG 2010 Endorsement required)		
1. Workmen's Compensation	Yes	Yes
2. Commercial, General & Auto Liability	Yes	Yes
a. For one person per accident	\$1,000,000	\$1,000,000
b. More than one person per accident	\$1,000,000	\$1,000,000
3. Property damage per accident	\$1,000,000	\$1,000,000
4. Thirty days written notice prior to cancellation	Yes	Yes
<u>Bonds</u>		
Bidder's Bonds	None	10%
Payment Bonds (Material and Labor)* (Projects bid by CMWD only)	None	100%
Performance Bonds* (Projects bid by CMWD only)	None	100%
Maintenance and Guarantee Provisions	Yes	Yes
<u>Contracts</u>		
Period for Final payment upon acceptance	15 Days	35 Days
Amount of Retention	-0-	5%
Progress Payment (if required, retain 5%)**	None	If Required
Final Cost Statement	None	Yes
Notice of Completion	None	Yes
Labor and Material Releases	Yes	Yes

* At the option of the District and depending upon the type of construction activity, payment bonds and/or performance bonds may be placed as a requirement on the job.

** If progress payments are required for a Purchase Order Contract, provisions therefor must be added.

NOTE: The above listed are the minimum requirements for all construction contracts. Provisions are included within the Terms and Conditions for Purchase Order Contracts which will be issued for all jobs under \$35,000. Provisions should be included within the Specifications for all contracts \$35,000 and over. **The United States (Bureau of Reclamation), Casitas Municipal Water District, their directors, officers, employees or authorized volunteers,** shall be named as additional insured as respects to all coverages listed above when the named insured is Lessee or Licensee of the Casitas Municipal Water District or when work is performed by the named insured for the Casitas Municipal Water District, and in both instances this coverage shall be primary. Casitas, in addition to Certificates of Insurance, shall be provided with the ISO CG 2510 Endorsement or insurer's equivalent.

In accordance with the provisions of Section 1770 of the California Labor Code, the District has ascertained the general prevailing rates of wages applicable to the work to be done. It shall be mandatory upon the Contractor to whom the contract is awarded, and upon any subcontractor under him, to pay not less than the specified rates to all laborers and mechanics employed by him in the execution of the contract. The wage scale is on the internet at www.dir.ca.gov/dlsr/statistics_research.html.

CERTIFICATE OF INSURANCE

**NOTICE TO CONTRACTORS, AGENTS AND INSURANCE COMPANIES,
PLEASE COMPLETE AND RETURN THIS FORM TO**

CASITAS Municipal Water District

CERTIFICATE OF INSURANCE

(This certificate is to be used to list such coverages as the policies listed thereon provide, and does not reflect our insurance requirements.)

TO: **Casitas Municipal Water District** Name and Address of Insured:
P. O. Box 37
Oak View, California 93022

TYPE OF POLICY	COMPANY AND POLICY NO.	POLICY PERIOD	LIMITS OF LIABILITY	
			Bodily Injury	Property Damage
1.—Workmen's Compensation Employers Liability		Eff. Exp.	Statutory	Nil
2.		Eff. Exp.		
3.—Comprehensive Liability (A) Automobile		Eff. Exp.	Each Person \$ Each Occurrence \$	Each Occurrence \$
(B) General*		Eff. Exp.	Each person \$ Each Occurrence \$ Aggregate \$	Each Occurrence \$ Aggregate \$
4.—Comprehensive Liability Auto and General*		Eff. Exp.	Combine Single Limit: Each Occurrence \$ Aggregate \$	
5.		Eff. Exp.		
6.		Eff. Exp.		
7.—Umbrella Liability		Eff. Exp.	Each Occurrence and Aggregate \$ (A) Excess of Items: (B) Total Limit Including Items:	

*COVERAGE includes Contractual Liability, Completed Operations, Protective Liability, Product's - Liability, and Explosion, Collapse and Underground Hazards.

REMARKS: The U.S. Bureau of Reclamation, Casitas Municipal Water District, their directors, officers, employees or authorized volunteers shall be named as additional insured as respects to all coverages listed above when the named insured is Lessee or Licensee of the Casitas Municipal Water District or when work is performed by the named insured for the Casitas Municipal Water District, and in both instances this coverage shall be primary.

These policies shall not be canceled nor reduced in coverage until after 30 days written notice of such cancelation or reduction in coverage shall have been mailed to this certificate holder.

Name and Address of Agent:

Dated _____

By _____

PART B - GENERAL CONDITIONS

1. Definitions.

1.1 Whenever the words defined in this article occur in these Specifications, or in any other contract document, they shall have the meaning here defined:

1.2 The word "specifications" shall include these General Conditions, the Special Conditions and the applicable portions of the Standard Specifications. The form of these Specifications is intended to provide for all of the work performed for Casitas Municipal Water District.

1.3 The word "District" shall mean the Casitas Municipal Water District.

1.4 The word "Board" shall mean the Board of Directors of the Casitas Municipal Water District.

1.5 The words "General Manager" shall mean the person holding the position or acting in the capacity of General Manager of the Casitas Municipal Water District.

1.6 The word "Engineer" shall mean the General Manager, or their duly authorized representative.

1.7 The word "Contractor" shall mean the Contractor in the agreement for the construction of the work and/or the furnishing of materials and/or equipment herein specified, the legal representative, or the agent of said party.

1.8 The word "Subcontractor" shall mean one who, as a subcontractor, performs at the site of the work some part of the Contractor's obligation, the legal representative, or the agent therefor.

1.9 The words "Standard Specifications" shall mean the Casitas Municipal Water District "Stand Details and Specifications for the Construction of Water Mains and Facilities", most recent edition.

1.10 The words "Standard Specifications for Public Works Construction (SSPWC)" shall mean the provisions of the latest edition of the Standard Specifications for Public Works Construction (SSPWC) with all supplements, prepared and promulgated by the Southern California Chapters of the American Public Works Association and Associated General Contractors of America. Part one of the SSPWC is hereby deleted.

1.11 The term "R & R" shall mean remove and replace.

2. Contract Documents.

2.1 The Notice Inviting Bids, Instructions to Bidders, Proposal Bonds, Specifications and Drawings, with the Agreement, supplemental notices, Notice to Proceed, permits and change orders shall be considered as incorporated in the contract. The contract documents are complementary, and what is called for in one shall be as binding as if called for by all. The intent of the contract documents is to provide for the execution and completion of a finished piece of work. The Contractor shall provide all labor and services and furnish all materials and equipment as necessary, except those items definitely stipulated in the Specifications or Drawings to be furnished by the District. Anything shown in the Drawings and not the

Specifications, or in the Specifications and not the Drawings, shall be performed by the Contractor as though shown in both the Drawings and the Specifications.

2.2 The Drawings and the Specifications show conditions as they exist, to the best knowledge and belief of the District. The Contractor shall not be relieved of any liability or responsibility under this contract, and the District or any of its officers shall not be liable for any loss sustained by the Contractor because of any variation between conditions as shown on the Drawings and the actual conditions revealed during the progress of the work, except as provided in Section 4215 of the Government Code.

3. Precedence of Contract Documents.

3.1 Should conflicts occur between Contract Documents, the document highest in precedence shall control. The precedence shall be:

- 3.11 Permits from other agencies as may be required by law.
- 3.12 Proposal.
- 3.13 Special Conditions and Measurement and Payment.
- 3.14 Technical Conditions.
- 3.15 General Conditions.
- 3.16 Contract Drawings.
- 3.17 Standard Plans.
- 3.18 Standard Specifications.
- 3.19 SSPWC.
- 3.20 Reference Specifications.

3.2 Change orders, supplemental agreements and approved revisions to plans and specifications will take precedence over documents listed above. Detailed plans shall have precedence over general plans.

4. Indemnification of District.

Contractor shall indemnify and hold harmless and defend the United States Bureau of Reclamation, the District, their directors, employees, agents or volunteers, and each of them from and against:

4.1 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 District and/or Contractor, or any directors, officers, employees, agents or volunteers of District or Contractor, and damages to or destruction of property of any person, including but not limited to, District and/or Contractor and 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 District or its directors, officers, employees, agents or volunteers, except the sole negligence or willful misconduct or active negligence of District or its directors, officers, employees, agents or volunteers.

4.2 Any and all actions, proceedings, damages, costs expenses, penalties or liabilities, in law or 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 Contractor's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against District or District's directors, officers, employees, agents or volunteers.

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

Contractor shall reimburse District and its 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.

5. Insurance.

5.1 Contractor shall provide and maintain the following commercial general liability and automobile liability insurance:

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

5.11.1 Insurance Services Office Commercial General Liability coverage (Occurrence Form CG 0001).

5.11.2 Insurance Services Office Form Number CA 0001 (ed. 1/87) covering Automobile Liability, Code 1 (any auto).

5.12 The Contractor shall maintain limits no less than the following:

5.12.1 General Liability. One million dollars (\$1,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2501 or insurers equivalent endorsement provided to the district) or the general aggregate limit shall be twice the required occurrence limit.

5.12.2 Automobile Liability. One million dollars (\$1,000,000) per accident for bodily injury and property damage combine single limit.

5.13 The general liability and automobile liability policies are to contain, or be endorsed to contain the following provisions:

5.13.1 The United States Bureau of Reclamation, Casitas Municipal Water District, 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 Contractors, 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 to the United States Bureau of Reclamation, Casitas Municipal Water District, its directors, officers, employees, agents and volunteers.

- 5.13.2 For any claims related to this project, the Contractor's insurance shall be primary insurance as respects the United States Bureau of Reclamation, Casitas Municipal Water District, their directors, officers, employees, agents and volunteers. Any insurance or self-insurance maintained by the United States Bureau of Reclamation, Casitas Municipal Water District, their directors, officers, employees, agents and volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- 5.13.3 Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the United States Bureau of Reclamation, Casitas Municipal Water District, their directors, officers, employees, agents and volunteers.
- 5.13.4 The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- 5.13.5 Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days prior to written notice by certified mail, return receipt requested, has been given to Casitas Municipal Water District.
- 5.13.6 Such liability insurance shall indemnify the Contractor and their subcontractors against loss from liability imposed by law upon, or assumed under contract by, the Contractor or their subcontractors for damages on account of such bodily injury (including death), property damage, personal injury and completed operations and products liability. Such insurance shall be provided on a policy written by underwriters through an agency satisfactory to the District (see Section 4-08.05), which includes a cross-liability clause, and covers bodily injury and property damage liability, owned and non-owned vehicles and equipment, blanket contractual liability and completed operations liability. Such liability insurance shall include explosion, collapse, underground excavation and removal of lateral support. The United States Bureau of Reclamation, Casitas Municipal Water District, their directors, officers, employees, agents and volunteers shall be named as additional primary insured on any such policies. An additional insured endorsement (ISO CG 2010 or equivalent) (modified to include provisions 2-5 above) and a certificate of insurance (Accord Form 25-S or equivalent), shall be provided to the District.

5.14 Any deductible or self-insured retention must be declared to and approved by the District. At the option of the District, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the United States Bureau of Reclamation, Casitas Municipal Water District, 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.

5.15 Insurance is to be placed with insurers having a current A.M. Best's rating of no less than A:VII or equivalent.

5.16 The Contractor shall not commence work under this contract, nor allow any subcontractor to commence work on this subcontract, until they have secured all insurance required under the section and has filed with the District, certificates of insurance in the amounts specified. Such certificates shall contain a provision that they may not be called without at least thirty (30) days' written notice to the District.

5.2 Worker's Compensation Insurance.

5.2.1 By signature hereunder, Contractor certifies they are aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and Contractor will comply with such provisions before commencing the performance of the work of this contract.

5.2.2 The Contractor shall maintain, and shall cause all subcontractors they may employ to maintain adequate workers compensation insurance under the laws of the State of California for all labor employed by them, directly or indirectly, in the execution of the work. The Contractor and all subcontractors shall file with the District certification of such workers compensation insurance prior to beginning construction.

5.3 Evidences and Cancellation of Insurance.

5.3.1 Prior to execution of the contract, the Contractor shall file with the District evidence of insurance from an insurer or insurers certifying to the coverage of all insurance required herein. Such evidence shall include the ISO CG 2010 (or insurer's equivalent) signed by the insurer's representative and certificate of insurance (Accord Form 25-S or equivalent). All evidence of insurance shall be certified by a properly authorized officer, agent or qualified representative of the insurer and shall certify the names of the insured, any additional primary insurers, where appropriate, the type and amount of the insurance, the location and operations to which the insurance applies, the expiration date, and that the insurer will give by certified mail, written notice to the District at least thirty (30) days prior to the effective date of any cancellation, lapse or material change in the policy.

5.3.2 The Contractor shall, upon demand of the District, deliver to the District all such policy or policies of insurance and the receipts for payment or premiums thereon; and should the Contractor neglect to obtain and maintain in force any such insurance or deliver such policy or policies and receipts to the District, then it shall be lawful for the District to obtain and maintain such insurance, and the Contractor hereby appoints the District their true and lawful attorney-in-fact to do all things necessary for this purpose. All money paid by the District for insurance premiums under the provisions of this article shall be charged to the Contractor.

6. Bonds.

6.1 Payment Bond.

The successful bidder shall file with the District a surety bond to be approved by the District in a sum of not less than one hundred percent (100%) of the total amount payable by the terms of the contract, conditional as provided by Section 3247 of the Civil Code.

6.2 Performance Bond.

6.2.1 The successful bidder shall also file with the District a surety bond, to be approved by the District in a sum of not less than one hundred percent (100%) of the total amount payable by the terms and conditions of the Contract. Pursuant to Public Contract Code Section 22300, at the request and expense of the Contractor, securities equivalent to the amounts withheld by the District to ensure performance under this contract, shall be deposited with the District. The District shall pay such monies to the Contractor upon satisfactory completion of the contract. Securities eligible for investment under this section shall include those listed in Government Code Section 16430, or bank or savings and loan certificates of deposit. The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon. If the securities to be deposited by the Contractor pursuant to this provision are in registered form, the registration shall be transferred to the District.

6.2.2 Maintenance and Guarantee. The Contractor hereby guarantees that the entire work constructed under the Contract will meet fully all requirements thereof as to quality of workmanship and of materials furnished by them. The Contractor hereby agrees to make, at their own expense, any repairs or replacement made necessary by defects in material or workmanship supplied by Contractor that becomes evident within one year after the date of final payment, and to restore to full compliance with the requirements of these Specifications, any part of the work which, during said one year period, is found to be deficient with respect to any provision of the Specifications. The Contractor shall make all repairs and replacement promptly upon receipt of written orders from the Engineer to do so. If the Contractor fails to make the repairs and replacements promptly, the District may do the work and the Contractor and Surety shall be liable to the District for the cost thereof.

6.3 Each of said bonds shall be executed by the Contractor and a corporate surety licensed in the State of California. If the amount payable under terms of the Contract exceeds the original bid because of additional quantities and/or the issuance or change orders, said surety shall be required to cover the additional amount.

7. Additional Surety.

If, during the continuance of the Contract, any of the sureties upon the faithful performance bond, in the opinion of the Engineer, are or become insufficient, the Engineer may require additional sufficient sureties,

which the Contractor shall furnish to the satisfaction of the Engineer within 15 days after notice, and in default thereof, the contract may be suspended and the work completed as provided in Section 21 hereof.

8. Assignment Forbidden.

The Contractor shall not assign, transfer, convey or otherwise dispose of this Contract, nor of their right, title or interest in any part thereof, nor any of the monies to become due and payable under the Contract, in any manner without the previous consent in writing of the Engineer. If the Contractor shall, without such written consent, assign, transfer, convey or otherwise dispose of any part of this Contract, or of any of the monies to become due and payable under the Contract, the District may, at its option, terminate the Contract according to Section 21 of these General Conditions. The District shall thereupon be relieved from all liability to the Contractor, and to their assignee or transferee.

9. Time and Order of Work.

The Contractor shall at all times employ such personnel, and provide such services, materials and equipment as will be sufficient, in the opinion of the Engineer, to complete the work or any separable portions thereof according to a progress schedule, and within the time limit fixed by the Contract. If the Contractor should fail to maintain adequate progress, they may be required to employ additional personnel, and provide additional services, materials and equipment, and to modify their plans and procedure in such manner as to ensure completion of the work within the time limit fixed by the Contract. This provision shall not be the exclusive remedy of the District.

10. Protests.

If the Contractor considers any of the work demanded to be outside the requirements of the Contract, or if the Contractor considers any order or ruling of the Engineer or any duly authorized representative to be unfair, they shall immediately ask for written instructions or divisions, whereupon they shall proceed without delay to perform the work or conform to the order or ruling; but unless the Contractor finds such instructions or divisions satisfactory, they shall, within ten (10) days after receipt of same, file a written protest with the Engineer, stating clearly and in detail the objections and the reasons therefor. Except for such grounds for protest or objections as are made of record in the manner specified and within the time stated herein, the Contractor hereby waives all grounds for protests or objections to the order, rulings, instructions, or decisions of the Engineer, and hereby agrees that as to all matters not included in such protest, the order, instructions and decisions of the Engineer shall be final and conclusive.

11. Authority of the Engineer.

The work shall be observed by the Engineer to determine that the work is being completed according to the plan, specifications and design and planning concepts. The Contractor shall be responsible for the supervision of construction processes, site condition, operation, equipment, personnel and the maintenance of a safe place to work or any safety in, on or about the work site until such time as the District files a Notice of Completion. The Engineer, however, reserves the right to determine the adequacy of the Contractor's method, plant, and appurtenance to determine in all cases the amount, quality, acceptability and fitness of the work and material to be provided under the Contract, to determine all questions in relation to said work and construction thereof, and to decide in all cases any question which may arise concerning the fulfillment of this Contract by the Contractor. Should any discrepancy appear or any misunderstanding

arising as the import of anything contained in the Specifications or Drawings, the matter shall be referred to the Engineer and their decision shall be binding on the Contractor. Any differences or conflicts which may arise between the Contractor and other contractors performing work for the District shall be adjusted to the satisfaction of the Engineer.

12. Right of Way and Encroachment.

12.1 Except as otherwise stated in the Special Conditions, the right of way for the work to be constructed under these Specifications will be provided by the District. This shall not be interpreted as giving the Contractor exclusive occupancy of the right of way provided. When the work to be performed is located within State Highway, County or Southern Pacific Railroad rights of way, or within a water course which is under the jurisdiction of the Ventura County Flood Control District, the Contractor will be required to obtain construction permits from those agencies in their own name.

12.2 Right of way to be furnished by the District for construction operations and other purposes will be specifically shown on the Drawings or provided for in the Detailed Specifications. Should the Contractor find it necessary to use any additional lands during the construction of the work, Contractor shall provide for the use of such lands at their own expense.

13. Errors or Discrepancies Noted by Contractor.

13.1 If the Contractor, either before commencing work or during the work, finds any discrepancy between these Specifications and Drawings, or between either of them and the physical conditions at the site of the work, or finds any error or omission in any of the Drawings or in any survey, they shall promptly notify the Engineer in writing of such discrepancy, error, or omission. If the Contractor observes that any drawings or specifications are at variance with any applicable law, ordinance, regulations, order or degree, they shall promptly notify the Engineer, in writing, of such conflict.

13.2 The Engineer, upon receipt of any such notice, shall promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor, either directly or indirectly after this discovery of such error, discrepancy or conflict, will be at Contractor's own risk and they shall bear all costs arising therefrom.

14. Extra Work.

14.1 If, during the performance of the Contract, it shall, in the opinion of the Engineer, become 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 Engineer, are not susceptible of classification under the bid items, the Contractor shall do and perform such work and furnish such materials and equipment as extra work, as hereinafter provided. All extra work shall be ordered in writing before it is started. No extra work shall be paid for unless ordered in writing.

14.2 Extra work will ordinarily be paid for at a lump sum or unit price agreed upon in writing by the Engineer and the Contractor before the extra work shall be ordered.

14.3 When the price of the extra work cannot be agreed upon, the District will pay for the extra work based on the accumulation of costs as provided in sections 4.4 through 4.11. The failure of the

Contractor to comply with the requirements of this section shall deem the Engineer to establish costs as the Engineer deems reasonable.

14.4 At the close of each working day, the Contractor shall submit a daily report to the Engineer, on forms approved by the District, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized. An attempt shall be made to reconcile the report daily, and it shall be signed by the Engineer and the Contractor. In case of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the prime contractor. Said reports shall contain the following information:

14.4.1 The names of workers, classification and hours worked;

14.4.2 A description and the amount of materials used;

14.4.3 The type of equipment, size, identification number and hours of operation, including loading and transportation if available;

14.4.4 Other services and expenditures shall be described in such detail as the District may require.

14.5 The costs of labor will be the actual cost for wages prevailing locally for each craft or type of worker at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessment or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra work costs will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

14.6 The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the job site in the entities involved, plus sales tax, freight and delivery. The District reserves the right to approve material sources of supply, or to supply materials to the Contractor if necessary for the progress of the work. No markup shall be applied to any material provided by the District.

14.7 No payment will be made for the use of tools which have a replacement value of \$100 or less. Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors, at the time the work is performed. If local rental costs are unavailable, the Contractor shall submit their costs to operate the equipment compiled and signed by a Certified Public Accountant. The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals. Necessary loading and transportation costs for equipment used on the extra work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the District than holding it at the work site, it shall be returned, unless the Contractor elects to keep it at the work site at no expense to the District. All

equipment shall be acceptable to the Engineer, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment, and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer. The reported rental time of the equipment already at the job site shall be the duration of its use on the extra work, plus the time required to move it from its previous site and back or to a closer site.

14.8 The District may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required for the work specified in the Contract which are of a type not ordinarily available from the Contractor or any of the subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.

14.9 Vendors' invoices for material, equipment rental, and other expenditures, shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, the District may establish the cost of the item involved at the lowest price which was current at the time of the report.

14.10 The following percentage shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits:

Labor	10%
Materials	10%
Equipment Rental	10%
Other Items and Expenditures	10%

To the sum of the costs and markups provided for in this subsection, one percent (1%) shall be added as compensation for bond and liability insurance.

14.11 When all or any part of the extra work is performed by any of the Contractor's subcontractors, the markups established in Subsection 14.10 shall be applied to the subcontractor's actual cost of such work, to which a markup of five percent (5%) on the subcontracted portion of the extra work may be added by the prime contractor.

14.111 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.

15. Changed Conditions.

15.1 The Contractor shall notify the Engineer in writing of the following work site conditions, hereinafter called changed conditions, promptly upon their discovery and before they are disturbed:

15.1.1 Subsurface or latent physical conditions differing materially from those represented in the Contract; and

- 15.1.2 Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the character of the work being performed.
- 15.1.3 Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

15.2 The Engineer will promptly investigate conditions when notified of any conditions which appear to be changed conditions. If the Engineer determines the conditions are changed conditions and they will materially increase or decrease the costs of any portion of the work, a change order will be issued adjusting the compensation for such portion of the work. If the Engineer determines the conditions of which they have been notified by the Contractor do not justify an adjustment in compensation, the Contractor will be so advised in writing. Should the Contractor disagree with such determination, he may submit a protest to the Engineer, as provided in Section 10 of these General Conditions.

15.3 If the Engineer determines the conditions are changed conditions and they will materially affect the performance time, the Contractor, upon submitting a written request, may be granted an extension of time subject to the provisions of Section 22.

15.4 The Contractor's failure to give notice of changed conditions promptly upon their discovery and before they are distributed shall constitute a waiver of all claims in connection therewith.

16. Disputed Work.

16.1 If unable to reach agreement under any of the foregoing procedures, the District may direct the Contractor to proceed with the work. Payment shall be as later determined by arbitration, if District and Contractor agree thereto, or as fixed in a court of law.

16.2 Although not to be construed as proceeding under extra work provisions, the Contractor shall keep and furnish records of disputed work according to Section 14.

17. Legal Action by Contractor.

17.1 No legal action shall be commenced against the District concerning the Contract until any dispute or decision of the Engineer has been appealed and denied by the District's Board of Directors. The Board's refusal to consider or failure to consider a written appeal within thirty (30) calendar days after receipt shall be deemed denial of such appeal.

17.2 Prior to submitting any appeal to the Board, the Contractor shall exhaust their administrative remedies by attempting to resolve their dispute with the District's staff in the following sequence:

- Construction Inspector
- District Engineer
- General Manager
- Board of Directors

17.3 Should any of the listed persons fail to consider a request by the Contractor for reconsideration of a decision within three (3) working days after receiving written request to do so, the Contractor may proceed directly to the next person in the list. At the option of the District, the person to whom the request for reconsideration is directed may elect to take such request to a higher level and the Contractor's request shall be deemed to be properly submitted to such higher level.

17.4 Nothing in this subsection shall be considered as relieving the Contractor from his duties required by the Contract documents.

18. Changes.

18.1 If either the Engineer or the Contractor, because of conditions which develop during the progress of the work, finds it impracticable to comply strictly with these Specifications, the Engineer may prescribe a modification of requirements or methods of work. For such proposes, the Engineer may, any time during the life of the Contract, by written order, make such changes, as they shall find necessary, in the design, engineer, grade, form, location, dimensions, plan, or material of any part of the work or equipment to be furnished. If such changes increase or diminish the quantity of work to be done, they shall not constitute the basis for a claim for damages or anticipated profits in the work that may be dispensed with; provided that if such changes or alterations render useless any work already done or materials already furnished or used in the work, the Engineer shall make reasonable allowance therefore, which action shall be binding upon both parties.

18.2 In case of increasing or decreasing of work, the total amount of work actually done or materials or equipment furnished shall be paid for according to the unit price established for such work under the contract, wherever such unit price has been established. In the event no prices are named in the Contract but cover such changes or alterations, the cost of such changes shall be determined as provided in Section 14.

19. Discovery of an Unknown Utility.

19.1 The Contractor's attention is directed to Section 4215 of the Government Code which provides that the District assumes the responsibility for the removal, relocation or protection of the existing utilities located on the site of any construction project if such utilities are not identified by the District in the plans and specifications made a part hereof.

19.2 If the Contractor, while performing the Contract, discovers utility facilities not identified by the District in the Contract plans and specifications, the Contractor shall immediately notify the District. The Contractor shall not be assessed liquidated damages for delay in completion of the project, which such delay is caused by the failure of the District or the owner of the utility to provide for removal or relocation of the exiting utility facilities.

19.3 In the event the discovery of said utility facilities may cause extra work, the Contractor is required to obtain written authorization to change or modify the work according to Sections 14 and 18 of these General Conditions, entitled "Extra Work" and "Changes," respectively.

19.4 The Contractor's failure to give said notice promptly upon discovery of an unknown utility or the Contractor's failure to obtain written approval for any work concerning the relocation, protection and/or removal of the said unknown utility or for any work relative to the modification of any portion of the work prior to the beginning of any of said work, shall constitute a waiver of any rights to any claim in connection therewith.

20. Termination of Contract.

20.1 General.

If, at any time before completion of work under the contract, it shall be found by the District that reasons beyond the control of the parties hereto render it impossible, or against the best interest of the District, to complete the work contracted to be done; or if the work shall have been prevented or suspended by injunction issued by a court of competent jurisdiction nor by any other order of constituted authority for a period in excess of 30 consecutive days; the District, by written thirty (30) day notice to the Contractor, may discontinue the work and terminate the contract; or, in the event the entire work shall have been suspended by the District, through no fault of the Contractor, in writing, the Contract shall be discontinued. Upon the service of notice of termination, the Contractor shall discontinue the work in such manner, sequence, and at such times as the Engineer may direct, continuing and doing, after said notice, only such work and only until such time or times as the Engineer may direct. Such work shall be paid for as extra work according to Section 14 of these General Conditions. The Contractor shall have no claim for damages for such discontinuance or termination of the Contract, nor shall the Contractor have any claim for anticipated profits on the work thus dispensed with, nor any other claim; except: (1) for the work actually performed between the date of the notice of termination and the time of complete discontinuance; and (2) for any liquidated damages accruing up to the date of said notice of termination according to the provisions of the Special Conditions.

20.2 Consumable Supplies.

In the event of discontinuance and termination of the contract, the District may, and at the request of the Contractor shall, purchase from the Contractor all consumable supplies of the Contractor on hand, or in transit, or on definite commitment which, in the opinion of the Engineer, are suitable and required, except for such discontinuance and termination, to complete the work, and the District shall pay the Contractor for such consumable supplies the prices paid therefor by the Contractor.

20.3 Completion of Contract.

In the event that the work shall be discontinued and the Contract terminated, the satisfactory completion of such work, as the Engineer may thereafter direct, and satisfactory compliance with the terms of said order shall be deemed the completion of the work specified in the Contract; and the final estimate shall be the amount of work completed to the time of such discontinuance and termination, with such other sums as may be due the Contractor according to the provisions of this section.

21. Suspension of Contract.

21.1 If the work to be done under the Contract shall be abandoned by the Contractor, or if the Contractor shall make a general assignment for the benefit of their creditors or be adjudicated as bankrupt, or if a receiver of their property or business be appointed by a court of competent jurisdiction, or if this

Contract shall be assigned by them otherwise than hereinbefore specified, or if at any time the Engineer shall be of the opinion that the performance of the contract is unnecessarily or unreasonably delayed, or that the Contractor is willfully violating any of the conditions of the Contract, or is executing the same in bad faith or not according to the terms thereof, or if the work be not fully completed within the time named in the Contract for its completion or within the time to which the completion of the Contract may have been extended as hereinafter provided, the Board may, by written notice, instruct the Contractor to discontinue all work, or any part thereof, under this Contract.

21.2 When such written notice is served upon the Contractor, they shall immediately discontinue the work or such part thereof as covered by the notice, and shall not resume the same by written notice from the Board, in which case work shall be resumed in ten (10) days. In any such case, the District may take charge of the work and complete it by a new contract or by force account and charge the expense of completion by either method to the Contractor. In so doing, the District may take possession of and use any of the materials, plans, tools, equipment, supplies and property of every kind provided by the Contractor for the purpose of their work. Any such charges shall be deducted from such monies as may be due or may at any time hereafter become due the Contractor under this contract or at any part thereof. In case such expense shall exceed the amount which would have been due the contractor under the Contract if the same had been completed by them, they shall pay the amount of such excess to the District; and in case such expense shall be less than the amount which would have been payable under this contract if the same had been completed by the Contractor, they shall have no claim to the difference except to such extent as may be necessary, in the opinion of the Engineer, to reimburse the Contractor or the Contractor's sureties for any expense properly incurred for plans, equipment, materials, supplies and labor devoted to the prosecution of the work, of which the District shall have received the benefit which shall not have been otherwise paid for by the District. In computing such expense the salvage value of such plans and equipment, at completion of the work, shall be deducted from the depreciated value thereof at the time taken over by the District and the difference shall be considered the expense. All necessary estimate and appraisals shall be made by the Engineer.

21.3 When any particular part of the work is being carried on by the District, by Contract or otherwise, under the provisions of this section, the Contractor shall continue the remainder of the work in conformity with the terms of the Contract, and in such a manner as to nowise hinder or interfere with the persons or workers employed, as provided above, by the District, to do any part of the work, or to complete the same under the provisions of this section.

22. Extension of Time of Completion.

22.1 If the work shall be delayed in consequence of suspension by the District except as provided in Section 21 or of failure by the District to provide right of way, or of any other act or omission of the District, or by strikes, acts of God, delay of delivery or properly ordered materials for which a delivery time has not been stated in the Proposal, or other unforeseeable causes beyond the control and without the fault or negligence of the Contractor or their subcontractors, the Contractor shall be entitled to so much additional time wherein to perform and complete the contract on their part as the Engineer shall certify in writing to be just.

22.2 Application for extension of time must be made to the Engineer, in writing, stating cause, within the ten (10) days immediately following the end of such delay.

22.3 Permitting the Contractor to continue and finish the work, or any part of it, after the date to which the time fixed for its completion may have been extended, shall in no way operate as a waiver on the part of the District of any of its rights under this Contract.

22.4 The Contractor shall receive no compensation on account of any suspension of the work either in whole or in part or for any delay or hindrance herein mentioned except as provided in the Special Conditions.

22.5 No extension of time shall be made for ordinary delays and accidents and the occurrence of such shall not relieve the Contractor from the necessity of maintaining the required progress. In the case of an extension of time by the Engineer for completion of the contract as provided for in these Specifications, a revised schedule of progress may be prescribed according to such extension of time.

23. Failure to Complete on Time.

23.1 The Contractor shall pay for each and every calendar day that they shall be in default in completing the whole work to be done under this contract, the sum named in these conditions, which sum is by the execution of this agreement mutually agreed upon as liquidated damages which the District shall suffer by reason of such default. The District shall have the right to deduct the amount of such damages from any monies due or to become due the Contractor under this Contract.

23.2 The Contractor shall not be assessed liquidated damages for failure to complete the work on time due to any of the causes stated in Section 22.1.

24. Liquidated Damages.

24.1 Pursuant to Section 23 of these General Conditions, failure of the Contractor to complete the work within the time allowed will result in damages being sustained by the District. Such damages are, and will continue to be, impractical and extremely difficult to determine. For each consecutive calendar day in excess of the time specified for completion of the work (as adjusted by change order), the Contractor shall pay the District, or have withheld from monies due it, the sum of \$2,500, except as otherwise specified in Part C or the Agreement.

24.2 Execution of the Contract under these Specifications shall constitute agreement by the District and Contractor that \$2,500 per day, except as otherwise specified in Part C or the Agreement, is the minimum value of the costs and actual damage caused by failure of the Contractor to complete the work within the allotted time, that such sum is liquidated damages and shall not be construed as a penalty, and that such sum may be deducted from payments due the Contractor if such delay occurs.

25. Contractor's Responsibility.

25.1 The Contractor shall be responsible for safe and efficient execution of the work to secure the safety of the workers, the quality of the work and the stipulated rate of progress.

25.2 The Contractor shall bear all losses resulting to them on account of the amount or character of the work, or from any unforeseen obstruction or difficulties which may be encountered, or because of weather, floods, or other causes, except as follows:

25.2.1 The Contractor shall not be responsible for the cost of repairing or restoring damage to the work which damage was caused by an act of God, as defined in Public Contract Code Section 7105, and shall be the basis for determining the extent of the District's liability, if any.

25.2.2 It shall be the responsibility of the Contractor to take all reasonable and adequate measures to protect the work from damage and/or to minimize any damage to the work.

25.2.3 The District reserves the right to make changes in the plans and Specifications applicable to the portion of the work to be restored. The District reserves the right to terminate the Contract and relieve the Contractor of further obligations to perform the work. In the event that the work damaged is to be repaired or restored either, in kind or changed by the Engineer, a contract change order will be provided according to Sections 14 and 18 of the General Conditions of this Specification. The change order may provide for the Contractor to perform any work deemed by the Engineer as necessary to put the project in satisfactory condition for the termination of all work.

25.2.4 The District may require the Contractor to submit as a separate bid item the insurance premium covering the cost of work destroyed in whole or in part by an "Act of God," as defined in Public Contract Code 7105 and provide such insurance to indemnify the District for any damage to the work caused by an "Act of God," and to rebuild said work with the proceeds of said insurance. If the District elects to do so, said insurance shall be in lieu of the provision of the Public Contract Code 7105.

25.3 The Contractor shall be responsible for all material, except defective material, furnished by the District, and for the care of all work until its completion and final acceptance, and they shall at their own expense replace damaged, lost or stolen material and repair damaged parts of the work, or the same may be done at their expense by the District.

25.4 During the progress of the work, the Contractor shall keep the premises occupied by them in a neat and clean condition. When the work is completed, they will be required to remove all debris caused by them in their operations, repair all damage to existing improvements done by them or their employees and leave the site of the work in a neat condition. In the event of his failure to do so, the same may be done at his expense by the District.

25.5 The Contractor shall be responsible for all damage or injury which may be caused on any property by trespass of the Contractor's employees during their employment, whether the said trespass was committed with or without the consent or knowledge of the Contractor.

25.6 The Contractor shall provide at their own expense, all necessary water, telephone, and power required for their operations under the Contract, except as provided for in the Special Conditions.

25.7 The Contractor shall so conduct their operations as not to close or obstruct any portion of any highway, road, or street, or prevent in any way free access to fire hydrants until permission to do so has been obtained from the proper authorities.

25.8 The Contractor shall be responsible for determining the nature and extent of any simultaneous, collateral, and essential work by others. The Contractor shall coordinate their operation and cooperate with others to minimize interferences, conflicts, and/or any other related conduct during the construction of the work.

26. Shop Drawings.

26.1 Drawings and prints of articles, machinery, or fabricated materials entering into permanent construction which are required to be furnished by the Contractor and for which detailed drawings are not furnished by the District, the Contractor shall submit five (5) copies for approval, three (3) of which will be returned to the Contractor for their distribution, the two (2) other copies shall become the property of the District. The District shall approve such drawings or return them to the Contractor with requirements for approval within ten (10) days after the date of submission.

26.2 Approval by the District on items called for under these Specifications does not relieve the Contractor from the responsibility for errors, omissions or deviations from the Contract documents unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal submitted with the material for approval.

26.3 If the Contractor objects to any conditions imposed by the District in granting said approvals, he==they shall immediately give the District written notification.

27. Trench Shoring Plans.

27.1 In compliance with Section 6705 of the Labor Code, the Contractor, at their sole expense, shall be required to submit detailed shoring plans for review by the District's Engineer for all construction projects and/or any related modifications, revision or changes thereto, which are in excess of \$25,000, for the excavation of any trench, trenches, or other excavation five (5) feet or more in depth.

27.2 Shoring plans shall show the details of the shoring, bracing, sloping and all other provisions to be made for the workers' protection from the hazard of caving ground during the excavation of any trench, trenches, or other excavation.

27.3 Such shoring plans shall be prepared by a qualified Civil or Structural Engineer registered in the State of California in the event that such plans vary or deviate, in any manner, from the shoring system standards as outlined in the State Construction Safety Orders issued by the Division of Industrial Safety, State of California.

27.4 The Contractor shall submit the shoring plans to the Division of Industrial Safety, State of California, for its approval.

27.5 The Contractor shall be required to submit the shoring plans within fifteen (15) days after notification of an award of a contract has been sent.

28. Safety Permit.

28.1 In compliance with Section 6424 of the Labor Code, the Contractor, at their sole expense, shall be required to obtain a permit from the Division of Industrial Safety for the excavation of any trench, trenches, or other excavation five (5) feet or more in depth, prior to beginning any excavation work that is not covered by Section 6422 of the Labor Code.

28.2 A copy of all permits issued and the related construction safety orders approved by the Division of Industrial Safety shall be filed with the District within fifteen (15) days after notification of the award of a contract, or within three (3) days after issuance of the permit, and prior to the beginning of the excavation of any trench, trenches, or other excavation five (5) feet or more in depth.

28.3 Additional permits may be required for each modification, revision or change in the work.

28.4 Safety permits required by Section 6424 of the Labor Code shall be in addition to all other permits required.

29. Personal Attention.

The Contractor shall give their personal attention constantly to the faithful prosecution of the work, and shall be present, either in person or by a duly authorized and competent representative, on the site of the work continually during its progress, to receive directions or instructions from the Engineer. Whenever the Contractor is not present on any part of the work where it may be desired to give directions, orders may be given by the Engineer, and shall be received and obeyed by the superintendent or foreman who may have charge of the particular part of the work in reference to which orders are given.

30. Laws, Regulations and Permits.

30.1 The Contractor shall give all notices required by law and comply with all laws, ordinances, rules and regulations pertaining to the conduct of the work. The Contractor shall be liable for all violations of the law in connection with the work furnished by the contractor. If the Contractor observes that the Drawings or Specifications are at variance with any law or ordinance, rule or regulation, they shall promptly notify the Engineer in writing and any necessary changes shall be made by written instruction or change order. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without giving notice to the Engineer, the Contractor shall bear all costs arising therefrom.

30.2 The Contractor shall submit a certification that they are in compliance with the Civil Rights Act of 1964 as amended by the Equal Employment Opportunity Act of 1972, the California Fair Employment Practice Act of 1959, as amended, California Labor Code Section 1777.5 and Section 1735 and any other applicable Federal and State laws and regulations hereinafter enacted. Certification of Compliance with Executive Order 11246, as amended, will be required when applicable. Such certification shall be on forms satisfactory to the District.

- 30.3 The following are exempted from the above provisions in relation to affirmative action efforts:
- 30.3.1 Contractors, subcontractors and suppliers who have a paid work force of less than fifteen (15) persons.
 - 30.3.2 Contracts and subcontracts which do not exceed \$10,000.00.
 - 30.3.3 Contracts and subcontracts which are deemed by the Board to be an "Emergency" nature or an apparent "Sole Source" purchase.
 - 30.3.4 Exemptions may be denied by the Board pursuant to a finding by the District that the exemption is having an adverse effect on the purpose of these Specifications. Additional exemptions may be granted by the Board for reasons of a similar finding.

30.4 The Contractor shall only use equipment that complies with California air quality regulations and the Ventura County Air Pollution Control District regulations.

31. Sales and/or Use Taxes.

Except as may be otherwise specifically provided herein, all sales and/or use taxes assessed by Federal, State or local authorities on materials used or furnished by the Contractor in performing the work hereunder shall be paid by the Contractor.

32. Construction Schedule.

Prior to commencing the work, the Contractor shall submit a detailed construction schedule. At the beginning of each month as may be required by the Engineer, the Contractor shall submit an updated construction schedule. Said construction schedule shall show the order in which the Contractor proposes to complete the work, the dates when the various parts of the work are to begin and the estimated dates of completion. The detailed schedule shall be a modified bar type and shall show each principal item of work or activity.

33. Inspection.

33.1 All materials furnished and all work done under these Specifications shall be subject to rigid inspection. The Contractor shall furnish the Engineer every reasonable facility for ascertaining whether the work is in accordance with the requirements and intent of these Specifications.

33.2 Work done in the absence of prescribed inspection may be required to be removed and replaced under the proper inspection. The entire cost of removal and replacement, including the cost of all materials which may be furnished by the District and used in the work removed, shall be borne by the Contractor, irrespective of whether the work removed is found to be defective.

33.3 Work covered up without the authority of the Engineer shall, upon order of the Engineer, be uncovered to the extent required, and the Contractor shall bear the entire cost of performing all the work and furnishing all the materials necessary for the removal of the covering and its subsequent replacement, as directed and approved by the Engineer.

33.4 Nothing in these Specifications shall be construed to mean that the District will provide continuous inspection. The Contractor shall cooperate and coordinate their activities in order that the work can be inspected to the satisfaction of the Engineer.

33.5 The Contractor shall keep the Engineer informed, a reasonable time in advance, of the times and places at which they intend to do work, so that the inspection and the necessary measurements may be made with a minimum of inconvenience to the Engineer, or delay to the Contractor.

34. Construction Staking.

34.1 The Engineer will not provide construction staking. The Contractor shall be required to provide all other additional staking and/or measurements necessary for the proper execution of the work.

34.2 The Contractor shall notify the Engineer in writing at least five (5) working days before the time the Contractor will perform the construction staking.

34.3 The Contractor shall be required to preserve all bench marks, monuments, survey marks and construction stakes, and in case of their removal or destruction caused by the Contractor's activities, the Contractor shall be liable of the cost of their replacement.

35. Construction Interferences.

35.1 Insofar as practicable during the progress of the work, the Contractor shall not disturb, but shall support and protect against injury, and maintain in good operating condition at their own expense, all subsurface, surface and overhead utilities, structures and other facilities as are encountered in the prosecution of the work.

35.2 In the event that subsurface, surface, or overhead utilities, structures or other facilities are required to be disturbed or removed out permit the construction of the work, the Contractor shall not do any work that would affect such utilities, structures or facilities, or enter upon the right of way or other lands appurtenant thereto until notified by the Engineer that authority has been obtained to do so. The Engineer will make all necessary arrangements with the owner or other utilities for their relocation and reconnection, without cost to the Contractor, including the reconnection of services and the resurfacing of trenches required for said location; provided such arrangements shall not relieve the Contractor of their responsibilities as outlined in Section 2(b) of these General Conditions, nor the responsibility of proper care and protection of any utilities, structures or facilities encountered because of such varying conditions. The Contractor shall coordinate their operations with those of the owner or owners concerned with the disturbance or removal of facilities to minimize the inconvenience imposed on all affected parties.

35.3 Except as provided in Section 4215 of the Government Code and in the event the Contractor disturbs, disconnects or damages any subsurface, surface, or overhead utility, structure or other facility prior to the making of necessary arrangements by the Engineer with the owner thereof, they shall immediately give to the owner notice of said disturbance, disconnection, or damage, and the Contractor shall assume all responsibility connected therewith, event in the even such damage occurs after backfilling or is not discovered until after completion of backfilling, and the provisions of this subsection shall continue in force until the termination of the guarantee period provided.

35.4 All facilities removed shall be reconstructed as promptly as is possible in its original or other authorized location, and in a condition at least as good as when removed and subject to the inspection of the owner or of the governing body having jurisdiction.

35.5 During the performance of the work under these Specifications, the owners or agencies in control of any of the facilities affected by the work shall have the right to enter, when necessary, upon the project right of way, or upon any street or other public way affected by the Contractor's operations, or any portion thereof, for the purpose of maintaining service and of making changes in or repairs to said facilities.

35.6 The District reserves the right during the progress of the work and upon determination of the actual position of the existing utilities, structures, and other facilities, to make changes in the grade or alignment, or both, of the District's facilities wherever by so doing the necessity for relocation as provided herein of such utility, structures, or other facility will be avoided; provided that such changes shall not entitle the Contractor to additional compensation other than according to the prices named in the Bidding Sheet for the respective contract items.

35.7 In the event the Contractor discovers a substructure as defined in Section 4215 of the Government Code and not identified by the District on the contract plans and Specifications, the Contractor shall be required to notify the District in writing. In the event that such discovery may cause extra work, the Contractor shall be required to obtain written authorization to change or modify the work according to Sections 14 and 18 of these General Conditions of the Specifications.

35.8 Whether the Contractor is entitled to any additional compensation for any work hereinbefore described in Section 36 of these General Conditions shall be governed by the applicable portions of Section 4215 of the Government Code or amendments thereto.

35.9 The Contractor shall make every effort to protect and preserve all trees encountered in the work. Any trees which unreasonably interfere with the work shall, with the approval of the Engineer, be removed by the Contractor. The cost of the removal shall be borne by the Contractor.

36. Materials, Workmanship, and Tests.

The Contractor shall submit samples, specimens, or test pieces of such materials to be furnished or used in the work as the Engineer shall require. All materials must be new and must be of the specified quality and equal to approved samples. The Contractor shall furnish, without cost to the District, such quantities of construction materials as may be required for test purposes, and shall place at the Engineer's disposal all available facilities for and cooperate with them in the sampling and testing of all materials and workmanship. All work shall be done and completed in a thorough workmanlike manner, notwithstanding any omission from these Specifications or the Drawings.

37. Certification of Materials and Equipment.

37.1 All materials and equipment furnished by the Contractor shall be according to these Specifications. Any time when requested by the Engineer, the Contractor shall furnish written certification from the manufacturer of the various materials and equipment that such materials and equipment meet all of the requirements of these Specifications. When requested by the Engineer, such certification shall be

furnished to the District before payment to the Contractor, for the material and/or equipment in question, will be made.

37.2 Where reference is made in these Specifications to a specification or test designation of the American Water Works Association, the American Society for Testing and Materials, the American Association of State Highway Officials, Federal Specifications, or any other recognized national organization, and the number or other identification accompanying the test designation representing the year of adoption of latest revision of the test is omitted, it shall mean the test method in effect on the date of the Notice Inviting Bids for the work.

38. Defective Work or Materials.

38.1 The inspection of the work shall not relieve the Contractor of any of their obligations to fulfill the contract as herein prescribed, and defective work shall be made good, and unsuitable materials may be rejected, notwithstanding that such work and materials have been previously inspected by the Engineer and accepted or estimated for payment. If the work, or any part thereof, shall be found defective at any time before the final acceptance of the whole work, the Contractor shall forthwith make good such defect without compensation in a manner satisfactory to the Engineer and shall be charged for any excess material furnished by the District.

38.2 If any materials furnished and brought upon the ground by the Contractor for use in the work, or selected for the same by them, shall be condemned by the Engineer as unsuitable or not in conformity with the Specifications, the Contractor shall forthwith discard such materials and remove them to a satisfactory distance from the vicinity of the work.

38.3 If the Contractor shall fail or neglect to make ordered repairs of defective work or to remove condemned materials from the work within ten (10) days after the service by the Engineer of an order to do so, the Engineer acting on behalf of the District may make the ordered repairs or remove the condemned materials and deduct the cost thereof from any monies due the Contractor.

39. Use of "Or Equal."

39.1 Any material or article of equipment designated by manufacturer's name, trade name, catalog reference or brand and qualified by "or equal" shall be understood to be a standard of quality and performance. Articles of other make will be acceptable provided they are, in the opinion of the Engineer, of equal quality and/or capable of equal performance. Names, brands and characteristics of proposed substitute materials shall be submitted to the Engineer for approval and no such substitute materials shall be purchased or delivered to the project until the Engineer's approval, in writing, has been obtained.

39.2 The Contractor may be required to obtain certification from a qualified testing laboratory approved by the Engineer that such proposed substitute materials meet the minimum requirements in the Specifications, and/or that such proposed substitute materials are of equal quality and performance of the material or article designated in the Specifications. Such certification shall be required prior to obtaining the Engineer's approval, and shall be at the sole expense of the Contractor.

40. Property Rights in Materials.

40.1 Nothing in this 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 the value of unused material delivered to the site of the work as provided for in Sections 45, 58 through 65 inclusive hereof. All such materials attached or affixed or unused shall become the property of the District.

40.2 The District reserves the right to use any or all of the completed facilities either after said facilities are connected to the existing facilities or otherwise completed by the Contractor as set forth in Section 45 hereof and prior to acceptance of the work by the Board.

41. Title to Materials Found on the Work.

Except as may otherwise be provided in these Specifications, the right to the use of all soil, stone, gravel, sand and all other materials and equipment 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 and/or dispose of the same, are hereby expressly reserved by the District 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 nor shall they, nor any of them, assert or make any claim thereto. The Contractor shall be permitted to use in the work without charge any such materials which meet the requirements of these Specifications.

42. Patents and Copyrights.

The Contractor shall hold and save the District, its officers, agents and employees, harmless from liability of any nature and kind, including costs and expense, for or because of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliances, manufactured, furnished, or used by him in the performance of this contract, including their use by the District, unless otherwise specifically stipulated in this contract.

43. Responsibility for Safe Storage.

The Contractor shall be responsible for the safe storage of the material furnished by or to them and accepted by them and intended for the work until it has been incorporated in the completed project. The interior of all pipe, fittings and other accessories shall be kept free from dirt and foreign matter at all times.

44. Completion.

When in the opinion of the Contractor, the work under this contract has been fully completed according to the plans and Specifications, they shall notify the Engineer. Upon such notification, the Engineer shall, within a reasonable time, make a field inspection of the work and shall satisfy themselves by examination and such tests as may be necessary that the work has been fully and properly completed according to the plans and Specifications. If any deficiencies are found, the Engineer shall notify the Contractor of the measures to be taken to correct them. When all deficiencies, if any, are corrected to the satisfaction of the Engineer, the work shall be deemed completed and the date of such completion shall be used in computing the Liquidated Damages, if any, as set forth in Section 24.

45. Final Cleanup.

Upon completion of the work and before the final inspection and estimate is prepared, the Contractor shall, at their own expense, dispose of and remove from the vicinity of the work, all rubbish, unused materials and other items used under their direction during construction and perform cleanup to the satisfaction of the Engineer.

46. Responsibility for a Safe Place to Work.

46.1 The Contractor's attention is directed to Section 4 of these General Conditions entitled, "Indemnification of District."

46.2 The Contractor shall be responsible for the maintenance of a safe place to work and any safety in or about the work site. The Contractor shall be required to conform to all of the applicable Construction Safety Orders issued by the Division of Industrial Safety of the State of California.

46.3 The Contractor shall execute and maintain their work so as to avoid injury or damage to any person or property. The Contractor shall comply with the requirements of the specifications relating to safety measures applicable in particular operations or kinds of work.

46.4 In carrying out the work, the Contractor shall at all times, exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed, and be in compliance with all federal, state and local statutory and regulatory requirements 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 accidents or injuries; and adequate facilities for the proper inspection and maintenance of all safety measures.

46.5 The names and telephone numbers of at least two medical facilities practicing in the vicinity and the telephone number of the local emergency response services shall be prominently displayed adjacent to telephones at the project site.

47. Public Convenience and Safety.

47.1 The Contractor shall provide for the protection of the traveling public. The Contractor shall be required to furnish and maintain safety devices and other measures required for the public safety, which devices and measures shall conform to the requirements of Section 21406 of the Vehicle Code, any sign manual and current standard specifications of the Division of Highways. The Contractor shall conduct their operation to avoid unnecessary interference with the flow of traffic along highways, streets, roads, etc., used for vehicular traffic. Where any highway, street, road, etc., used for vehicular traffic is required to be kept open, the Contractor shall be required to furnish and maintain warning signs, lights, barricades, flagmen and other safety devices and measures necessary to provide adequate protection of the traveling public. Such protection shall be at the sole expense of the Contractor. Any highway, street maintenance or repair work

required by local authorities concerning necessary operation under this contract shall be performed by the Contractor at their sole expense.

47.2 Vehicular access to any driveway shall be maintained to the property line unless necessary construction precludes such access for reasonable periods of time.

47.3 Vehicular and pedestrian access to any fire hydrant shall be maintained at all times during the construction of the work.

48. Safety, Sanitary and Medical Requirements.

48.1 The Contractor, their employees and the subcontractors, if any, and their employees shall promptly and fully carry out the existing safety, sanitary and medical requirements as may from time to time be prescribed by the District to the end that proper work shall be conserved and safeguarded. In case such regulations and orders are not observed by the Contractor, they may be enforced by the Engineer at the Contractor's expense.

48.2 Contractor shall notify District in writing within twenty-four (24) hours should an employee, officer or agent of Contractor or subcontractor incur personal injury while present on District properties or employed by District. District shall be furnished copies of all medical reports or accident reports filed or required by any local state or federal agency or regulatory body.

49. Character of Workers.

49.1 None but skilled workers shall be employed on work requiring special qualifications. All equipment operators, pipelayers and jointers shall be well qualified and experienced in their work. All welding, however minor, shall be done by competent, certified welders, who have been qualified under Section IX of the ASME Boiler and Pressure Vessel Code, API Publication 1104 or such other standard as may be satisfactory to the Engineer. The Engineer shall have the right any time to call for and witness the making of test specimens by any welding operator according to these standards, and the expense of such tests shall be borne by the Contractor.

49.2 When required in writing by the Engineer, the Contractor, or any subcontractor shall discharge any person who is, in the opinion of the Engineer, incompetent, unfaithful, disorderly or otherwise unsatisfactory, and shall not again employ such discharged person on the work except with the consent of the Engineer. Such discharge shall not be the basis of any claim for compensation or damages against the District or any of its officers.

49.3 Enforcement of Order. The Contractor shall be responsible for maintaining good order at the site 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 the site of the work. The Contractor shall not sell, nor shall they permit or suffer the introduction or use of, intoxicating liquors or narcotics upon the work embraced in these Specifications or upon any of the grounds occupied or controlled by them in connection with such works.

50. Subcontracts.

50.1 Subcontracts will be permitted subject to the following provisions. No subcontract will be permitted which has the effect of avoiding the residence or wage requirements or any other provisions of the main contract. Individual subcontractors or members of contracting or subcontracting organizations personally engaged upon the work shall be subject to all the requirements of these specifications applicable to employees working for wages, including but not limited to, wages, hours of work, character of workers and certified payrolls.

50.2 Reference is hereby made to the provisions of the Subletting and Subcontracting Fair Practices Act, Public Contract Code Section 4100, commencing with Section 4100, also known as the "Subletting and Subcontracting Fair Practices Act," which is incorporated herein and made a part hereof by reference, and the Contractor is bound thereby and shall be subject to the consequences named in Sections 4110 and 4111 of said Act in event of their violation thereof. Each bidder shall, in their bid or offer, set forth: (1) The name and the location of the place of business of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work or improvement in an amount in excess of one-half of one percent of the Contractor's total bid or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the prime contractor's total bid; and (2) The portion of the work which will be done by each such subcontractor under said Act. The Contractor shall list only one subcontractor for each such portion as defined by the Contractor in their bid. If the Contractor fails to specify a subcontractor or if the Contractor specifies more than one subcontractor for the same one-half of one percent of the Contractor's total bid, the Contractor agrees that they are fully qualified to perform that portion themselves, and that they shall perform that portion themselves.

51. Access to the Site and Haul Routes.

51.1 The Contractor shall make their own investigation of the condition of available public or private roads or other access, and of clearances, restrictions, bridge load limits, bond requirements, and other limitations that affect or may affect transportation and ingress and egress at the job site. The unavailability of transportation facilities or limitations thereon shall not become a basis for claims for damages or extension of time for completion of work. It shall be the Contractor's own responsibility to construct and maintain, at their own expense and at their own risk, any haul roads, access roads, bridges, or drainage structures required for construction operations.

51.2 The use of existing roads (public or private) shall be at the Contractor's own expense and risk. It shall be the Contractor's responsibility to anticipate and meet all conditions properly imposed upon the use of existing roads by those having jurisdiction thereover, including (without limitation of the generality of the foregoing) seasonal or other limitations or restrictions, the payment of excess size and weight fees, and the posting of bonds conditioned upon repair of road damage caused by contract-generated traffic.

51.3 The hauling of sand, gravel, asphalt or other intra job hauling, over public highways, roads or bridges, shall be in compliance with the applicable regulations and shall be such as to minimize interference with or congestion of local traffic.

51.4 The cost of all work described in this paragraph shall be included in the prices bid in the schedule for other items of work.

52. Irregular Hours.

52.1 When any work is to be performed at a time other than regular working hours Monday through Friday, the Engineer shall be given advance notice. In the event of Saturday and/or Sunday work, the approval of the Engineer shall be required before such work will be allowed. All costs for inspection attributed to irregular working hours shall be borne by the Contractor and shall be deducted from the contract amount. Irregular working hours shall be defined as follows, except for certain specialized jobs and circumstances:

52.1.1 Before 8:00 a.m. Monday through Friday.

52.1.2 After 4:30 p.m. Monday through Friday.

52.1.3 Anytime Saturday, Sunday, or District's Holidays.

52.2 The Contractor will be exempt from this provision only for such work as required by the Specifications to be completed at other than working hours.

53. Eight-hour Law.

In accordance with the provisions of Articles 1 and 3 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California eight (8) hours constitute a legal day's work. The Contractor shall forfeit, as a penalty to the District, \$25.00 for each worker employed in the execution of the contract by the Contractor or any subcontractor under them: 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, Sections 1810 to 1815 thereof, inclusive, except that work performed by employees of Contractor 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 (1-1/2) times the basic rate of pay as provided in said Section 1815. The Contractor and each subcontractor shall keep accurate records showing the name of and schedule of hours worked by each worker employed by them concerning the contract. The records shall be kept open at all reasonable hours to inspection by the District and the Division of Labor Law Enforcement.

54. Payment of Wages.

The issuance as payment for wages of any evidence of indebtedness is prohibited unless the same is negotiable and payable on demand without discount. Wages must be paid at least semi-monthly on regular pay days established in advance, and shall include all amounts for labor or services performed by employees of every description as required under the provisions of the California Labor Code.

55. Prevailing Rate of Per Diem Wages.

Pursuant to the provisions of Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code of the State of California, not less than the general prevailing rate of per diem wages and not less than the general prevailing rate of per diem wages for legal holiday and overtime work for each craft or type of worker needed to execute the work contemplated under this contract, as determined by the District and as set forth in the schedule of such wages currently on file in the District office, shall be paid to all workers employed on such work by the Contractor or by any subcontractor doing or contracting to do any part of said work. The Contractor shall comply with Labor Code Section 1775. According to said Section 1775, the Contractor shall forfeit, as a penalty to the District, \$25 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. The Contractor and each subcontractor shall keep accurate records showing the name of and schedule of hours worked by each worker employed by them in connection with the contract. The records shall be kept open at all reasonable hours to inspection of the District and the Division of Labor Law Enforcement.

56. Unpaid Claims.

If, upon or before the completion of the work herein agreed to be performed or at any time prior to the expiration of the period within which claims may be filed as prescribed by Section 3184 of the Civil Code, any person or persons shall bring against the District or against any agent or agents thereof any action to enforce such claim, the District shall, until the discharge thereof, withhold from the moneys under its control so much of said moneys due or to become due the Contractor under this contract as shall be sufficient to satisfy and discharge the amount in such notice or under such action claimed to be due, together with the costs thereof; provided, that if the District shall in its discretion permit the Contractor to file such additional bond as is authorized by Section 3196 of the Civil Code, in a penal sum equal to one and one-fourth times the amount of said claim, said moneys shall not thereafter be withheld due to such claim.

57. Monthly Cost Estimates - Progress and Final Progress Payment.

57.1 The Contractor shall submit, by the third calendar day of each month on a form acceptable to the District, their estimate of the amount and value of all acceptable work and any extra work or changes approved by the District, up to the last day of the preceding calendar month, for the District's approval; and the Contractor will request a progress payment for the work completed thereof.

57.2 A deduction of five (5) percent shall be made from the total thus computed, and from the remainder there shall be further deducted any amounts due the District from the Contractor for supplies or materials furnished or services rendered and any other amounts that may be due the District under the terms of the contract. From the balance thus determined shall be deducted the amount of all previous payments and the remainder shall constitute the progress payment for that month. Such progress estimates shall not be

required to be made by strict measurement, but they may be made by measurement or by estimation, or partly by one method and partly by the other, and it shall be sufficient if they are approximate only.

57.3 Pursuant to Public Contract Code Section 22300, at the request and expense of the Contractor, securities equivalent to the amounts, if any, withheld by the District to ensure performance under this contract shall be deposited with the District. The District shall pay such monies to the Contractor upon satisfactory completion of the contract. Securities eligible for investment under this section shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit. The Contractor shall be the beneficial owner of any securities substituted for moneys withheld and shall receive any interest thereon.

If the securities to be deposited by the Contractor pursuant to this provision are in registered form, the registration shall be transferred to the District.

57.4 The Engineer shall approve the amount and value of all acceptable work and any extra work or changes approved by the District. Upon mutual agreement thereto, the Engineer will forward the approved estimate to the Chief Financial Officer for payment of the progress or final progress payment within ten (10) days thereafter.

57.5 In the event the Contractor and the District cannot mutually agree as to the amount and value of any item of work in the progress payment, the District will authorize payment of that portion of the progress and final progress payment to which the Contractor and the District have mutually agreed.

57.6 The Contractor shall file with the District, within five (5) calendar days after the Engineer has issued written notice of the disputed items to the Contractor, a written statement setting forth in complete detail the basis for their disagreement, including, but not limited to, any amount or value in disagreement or dispute.

57.7 Upon receipt of the Contractor's written statement, the General Manager shall investigate and consider the items of disagreement or dispute and render a decision thereon within a reasonable time, which decision shall be conclusive.

57.8 In the event the Contractor disagrees with the General Manager's decision, the Contractor's cost to the Contract for the delay in receiving the disputed balance of any progress or final progress payment, may be an item for arbitration according to Section 65 of the General Conditions.

57.9 In the event the contract or any part thereof shall be suspended as provided in Section 21, the retained percentage as provided in Section 58(b) shall become the sole and absolute property of the District to the extent necessary to repay the District any excess in the cost of the work above the contract price. After issuance of notice to discontinue work, no payment upon progress estimates or otherwise shall thereafter be made to the Contractor for the work covered by said notice until completion of work and final settlement.

57.10 The making of an estimate and payment in accordance therewith shall not preclude the District from demanding and recovering from the Contractor such damages as it may be entitled to under the contract because of their failure to comply with the Specifications.

58. Final Cost Statement.

58.1 Final Cost Statement is a document which summarizes all of the Contractor's earnings under this contract and any amounts due the District from the Contractor, and from which the final payment is made.

58.2 Upon completion of all of the work to be performed under this contract as set forth in Section 45, the Contractor shall submit for approval by the District in a form satisfactory to the District the amount and value of all acceptable work, and all extra work or changes approved by the District.

58.3 The Engineer shall approve the amount and value of all acceptable work and any extra work or changes approved by the District. Upon mutual agreement thereof, this District will prepare the Final Cost Statement document which shall be submitted to the Contractor for their acceptance and signature.

58.4 Upon endorsement by the Contractor of the Final Cost Statement, the District shall accept the work and authorize the final payment according to Sections 61 and 62 hereof.

59. Disputed Final Payment.

59.1 In the event the Contractor and the District cannot mutually agree as to the amount and value of the work, as set forth in this Final Cost Statement, the District will prepare the Final Cost Statement based upon the Engineer's determination of the amount and value of the work to which this Contractor may be entitled. Upon receipt of this Final Cost Statement, the Contractor shall file with the District within five (5) calendar days thereafter, a written statement setting forth in complete detail the basis for their disagreement, including, but not limited to, any amount or value in disagreement or dispute.

59.2 The Board reserves the right to accept the work and file the necessary Notice of Completion.

59.3 The Board shall investigate and consider the items of disagreement or dispute and render its decision thereon as to the amount due the Contractor within a reasonable time.

59.4 The District will authorize payment of that portion of the Final Cost Statement to which the Contractor and the District have mutually agreed according to Section 58 hereof. Reference is made to Section 64 of these General Conditions.

60. Acceptance.

Upon endorsement by the Contractor of the final cost statement, the Engineer shall prepare a memorandum of completion to advise the Board that the work has been satisfactorily completed and is ready for acceptance. At its next succeeding meeting, the Board shall consider acceptance of the work, and upon acceptance, shall authorize payment to the Contractor.

61. Final Payment.

61.1 At the end of thirty-five (35) days after filing the Notice of Completion, as set forth above, the total balance due the Contractor, or in case of a dispute, any portion of the total balance which has been mutually agreed is not in dispute, if unencumbered, or any part thereof unencumbered, shall be paid provided that a guarantee bond shall have been filed with the District.

61.2 For the purposes of this section, unencumbered balance means that portion over and above the face amount of all the stop notices on file with the District plus 25 percent of the face amount for potential interest and the cost of litigation as provided for in the Civil Code Section 3186-7.

62. Final Payment Terminates Liability.

62.1 The acceptance by the Contractor of the final payment aforesaid shall be a release to the District and its agents from all claim liability to the Contractor for anything done related to the work or for any act or neglect of the District related to the work, except the claim against the District for the remainder, if any, of the amounts kept or retained as hereinbefore provided.

62.2 No agent of the District shall be personally responsible for any liability arising under the contract. No claim shall be made or filed, and neither the District nor any of its agents shall be liable for, or held to pay any money, except as specifically provided in the contract.

63. Releases.

63.1 Prior to payment of the final progress payment, the District may require the Contractor to obtain releases from each of the subs, material suppliers, equipment rental firms and employees, whether or not any have filed a preliminary notice with District, who have performed any work for the Contractor under this contract for which any payment may be warranted.

63.2 Releases shall be submitted in a form approved by the District. Conditional releases may be unacceptable and acceptance thereof will be at the discretion of the District.

64. Disputes Settled by Arbitration.

In the event there is a dispute between the parties as to any of the terms and conditions of this agreement, including but not limited to the accounting rendered by the District, and said dispute cannot be resolved according to Section 59 of these General Conditions, the dispute shall be submitted to arbitration before a single arbitrator agreed to by the parties or failing such agreement appointed by the American Arbitration Association and resolved according to Article 1.5 of the Public Contract Code. Regardless of the manner of appointment of said arbitrator, the arbitration shall be conducted according to the then prevailing rules of the American Arbitration Association for commercial arbitration, except that each party shall bear their own costs and attorney's fees which they incur.

64.1 As required under Section 20104, et seq., of the California Public Contract Code (Stats. of 1990), any demand of \$375,000 or less, by the Contractor for a time extension, payment of money, or damages arising from the work done by or on behalf of the Contractor pursuant to this Contract; or payment of an amount which is disputed by District shall be processed in accordance with the provisions of said

Section 20104, et seq., related to informal conferences, non-binding judicially-supervised mediation, and judicial arbitration.

64.2 A single written claim shall be filed under this Article prior to the date of final payment for all demands resulting out of the Contract.

64.3 Within thirty (30) days of the receipt of the claim, District may request additional documentation supporting the claim or relating to defenses or claims District may have against the Contractor. If the amount of the claim is less than \$50,000, the Contractor shall respond to the request for additional information within fifteen (15) days after receipt of the request. The Contractor shall respond to the request within thirty (30) days of receipt if the amount of the claim exceeds \$50,000, but is less than \$375,000.

64.4 Unless further documentation is requested, District shall respond to the claim within forty-five (45) days if the amount of the claim is less than \$50,000, or within sixty (60) days if the amount of the claim is more than \$50,000 but less than \$375,000. If further documentation is requested, District shall respond within the same amount of time taken by Contractor to respond, or fifteen (15) days, whichever is greater, after receipt of the information if the claim is less than \$50,000. If the claim is more than \$50,000 but less than \$375,000 and further documentation is requested by District, District shall respond within the same amount of time taken by the Contractor to respond or thirty (30) days, whichever is greater.

64.5 If the Contractor disputes District's response, or District fails to respond, the Contractor may demand an informal conference to meet and confer for settlement of the issues in dispute. The demand shall be served on District within fifteen (15) days after the deadline of District to respond or within fifteen (15) days of District's response, whichever occurs first. District shall schedule the meet and confer conference within thirty (30) days of the request.

64.6 If following the meet and confer conference the claim or any portion remains in dispute, the claimant may pursue the remedies authorized by law. For purposes of these provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits their written claim until the time the claim is denied, including any period of time utilized by the meet and confer conference.

END OF PART B

PART C - SPECIAL CONDITIONS

1. Requirements.

The work to be performed under this contract shall consist of furnishing all plans, tools, materials, supplies and manufactured articles and for furnishing all transportation, services, including fuel, power and water, and essential communications and the performance of all labor, work or other operations required for the fulfillment of the contract in strict accordance with the Specifications, schedules and Drawings, all of which are made a part hereof, and including such detail sketches as may be furnished by the Engineer from time to time during the construction in explanation of said Drawings. The work shall be complete, and work, materials and services not expressly called for in the Specifications or not shown on the Drawings, which may be necessary for complete and proper construction to carry out the contract in good faith, shall be performed, furnished and installed by the Contractor at no increase in cost to the District.

2. General Description.

Casitas Municipal Water District (District) is soliciting formal bids for the Matilija Groundwater Supply Pilot Well Drilling project. The project includes an approximately 7,000-foot-deep vertical test and monitoring well into the Matilija Sandstone Formation adjacent to the District's Robles Diversion and Fish Passage Facility. The work location is in Meiners Oaks, as shown in the Contract Documents.

3. Beginning and Completion of the Work.

The Contractor shall begin the work within fourteen calendar days after the date on the Notice to Proceed. Work shall be performed on **Mondays through Fridays** unless otherwise approved by the District. All work shall be performed between the hours of **8:00 a.m. and 4:30 p.m with the exception of drilling. No work shall occur on District observed holidays.** The Contractor shall notify the Engineer of work dates 14 calendar days in advance of work start. Time extensions for the project shall be granted with written permission from the District Engineer based on unreasonable weather conditions. Extension of work will be granted only for unfavorable weather conditions or natural disasters.

4. Permits.

The District has applied for a well permit from the County of Ventura. The Contractor is responsible for complying with all applicable conditions listed on the County well permit. The Contractor, at their sole expense, shall be required to obtain all other permits and/or licenses as required, including any duplicate permits required by the permitting agencies.

5. Access to the Site and Haul Routes.

5.1 The Contractor shall make their own investigation of the condition of the available public or private roads or other access, and of clearances, restrictions, bridge load limits, bond requirements and other limitations which affect or may affect transportation and ingress and egress at the job site. The unavailability of transportation facilities or limitation thereon shall not become a basis for claims for damages or extension of time for completion of work. It shall be the Contractor's responsibility to construct and maintain, at Contractor's own expense and at Contractor's own risk, any haul roads, access roads, bridges or drainage structures required by construction operations.

5.2 Existing Public or Private Roads. The use of existing roads shall be at the Contractor's own expense and risk. It shall be the Contractor's responsibility to anticipate and meet all conditions properly imposed upon the use of existing roads by those having jurisdiction there over, including (without limitation of the generality of the foregoing) seasonal or other limitations or restrictions, the payment of excess size and weight fees, and the posting of bonds conditioned upon repair of road damage caused by contract-generated traffic. It shall be the Contractor's responsibility to satisfy all lawful demands for repair of damage to existing roads caused by contract-generated traffic and barricade public access to project sites.

5.3 Haul Routes. The hauling of sand, gravel, earth materials or other intra-job hauling over public highways, roads or bridges shall be in compliance with the applicable local regulations and shall be such as to minimize interference with or congestion of local traffic.

5.4 The Contractor shall provide worker training and follow-up reminders about traffic safety issues and restrictions to all employees and representatives from firms traveling to the work site. Contractor shall promptly take corrective action, including forbidding the offending party from the work site, against parties found to be speeding on roads leading to the job site.

5.5 Cost. The cost of all work described in this paragraph shall be included in the prices bid in the schedule for other items of work.

6. Water and Power.

The Contractor is required to make arrangements for water and power the Contractor may require during construction of the project. If water is obtained from existing District facilities, the Contractor must pay a \$500 deposit for the temporary construction meter which will be placed on a nearby fire hydrant by the District. The water will be furnished free of charge, but Contractor shall install and subsequently remove at Contractor's expense, all temporary facilities required to obtain and use the water. Contractor shall take care not to waste water or allow leakage from temporary water facilities. The Contractor shall provide a suitable backflow prevention device to prevent contamination to the potable water system and pay the required deposit for the meter.

7. Safety.

7.1 The Contractor shall execute and maintain Contractor's work so as to avoid injury or damage to any person or property. The Contractor shall comply with the requirements of the specifications relating to safety measures applicable in particular operations or kinds of work.

7.2 In carrying out the Contractor's work, the Contractor shall at all times, exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed, and be in compliance with all federal, state and local statutory and regulatory requirements 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 lifesaving equipment; adequate illumination for underground and night operations; instructions in accident prevention for all employees; such 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 accidents or injuries; traffic control per jurisdictional agency requirements; and adequate facilities for the proper inspection and maintenance of all safety measures.

7.3 The name and telephone number of at least one medical provider in the vicinity and the telephone number of the local ambulance service shall be prominently displayed adjacent to the work area.

7.4 Contractor shall insure all Contractor and subcontractor employees adhere to traffic laws. The Contractor shall provide worker training and follow-up reminders about traffic safety issues and restrictions to all employees and representatives from firms traveling to the work locations. Any employee or subcontractor the District receives reports regarding failing to abide the traffic regulations shall be removed from the job and replaced at no cost to the District.

8. Public Access.

Contractor shall prioritize the vehicular ingress/egress of residents and visitors to maintain effective traffic control. Traffic control and equipment must be staged in a manner that will minimize impacts to the flow of traffic. Contractor shall maintain vehicle and pedestrian access for all access roads at all times.

9. Noise and Dust.

The Contractor shall comply with Ventura County codes and ordinances regarding noise and dust control. Any violations of such codes and ordinances shall be the responsibility of the Contractor.

10. Environmental Mitigation Measures.

The Contractor shall comply with all the environmental mitigation measures in Part H.

END OF PART C

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PART D - MEASUREMENT AND PAYMENT

1. General.

This section defines rate schedule item prices and the manner in which they will be used to determine measurement and payment for all items included in the bid sheet.

2. Unbalanced Prices.

Proposed rate schedule item prices which are so unbalanced as to be detrimental to the District's interests may be rejected or cause rejection of the Bidder's entire bid at the discretion of the District.

3. Costs Included.

Each bid schedule item price shall cover all costs and charges, including, without limitation, the costs of materials, fabrication, delivery, installation or application, supervision, bond and insurance charges, overhead, profit and taxes. Lump sum prices shall be the exact amount to be applied for the work actually provided for the purpose of establishing the payment due the Contractor.

4. Term of Prices.

Bid schedule item prices accepted by the District shall be held good and in effect until the work is completed and accepted by the District unless modified by change order.

5. Measurement and Payment.

This section defines the manner and method of measurement and payment for all items included in the Proposal and as amended by change order.

Compensation for all plant, equipment, tools, materials, labor, service, safety, permits, and all other items required to complete the work in conformity with the contract documents will be included in the payment provided in this section unless specifically excluded. No other compensation will be made except for the items listed on the bid sheet. Work for which no separate payment has been provided will be considered as a subsidiary obligation of the Contractor and the cost therefor shall be included in the applicable contract price for the item to which the work applies. All measurements of the work done will be made by the Engineer.

Work under this contract will be paid on a unit price or lump-sum basis as outlined on the Bid Schedule for the quantity of work installed.

The unit prices and lump-sum prices include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work included in the contract documents.

The application for payment will be for a specific item based on the percentage completed or quantity installed. The percentage complete will be based on the value of the partially completed work relative to the value of the item when entirely completed and ready for service.

5.01 **Bid Item No. 1 – Mobilization, Demobilization, and Site Preparation**

Payment for mobilization will be made after completion of that work and will constitute 60% of the lump sum bid item. Payment for demobilization will be made after completion of that work and will constitute the remaining 40% of the lump sum bid item. Total payment of Bid Item No. 1 will be made on the amount presented in the original bid item, regardless of actual cost to the Contractor and will constitute full compensation for all labor, materials, equipment, power, and all other items necessary and incidental to completion of the work.

Site Preparation. The Contractor shall prepare the site in a manner to allow work to progress during wet weather conditions. Site preparation shall include the placement of base rock on access roads and throughout the general work area where equipment will be set up and project operations will occur. The Contractor shall not remove base rock at the conclusion of the project.

5.02 **Bid Item No. 2 – Noise Attenuation Barrier**

Payment for Noise Attenuation Barriers will be made after completion of that work. Total payment of Bid Item No. 2 will be made on the amount presented in the original bid item, regardless of actual cost to the Contractor and will constitute full compensation for all labor, materials, equipment, power, and all other items necessary and incidental to completion of the work.

5.03 **Bid Item No. 3 – Conductor (Surface) Casing**

The conductor casing shall be paid at the unit price per linear foot measured from the ground surface to the bottom of the 18-inch diameter steel casing. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to drill a minimum 24-inch diameter borehole, install an 18-inch O.D. steel casing and centering guides, fill the annular space with concrete, and dispose of all drill cuttings at an appropriate location, complete in place per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.04 **Bid Item No. 4 – SESPE Conductor Casing**

The Sespe Conductor drilling, casing, and cementing shall be paid at the unit price per linear foot measured from ground surface to the bottom of the installed and cemented casing as determined by the subsequent geophysical logging. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to drill approximately 1,150 feet of 16-inch diameter borehole between the depths of 50 feet and 1,200 feet below ground surface (bgs) and to dispose of all drill cuttings at an appropriate location (see Section 1.17 in the Special Provisions); furnish and install 1,200 feet of 11-inch ID casing, cemented in place, complete per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.05 **Bid Item No. 5 – Coldwater and Cozy Dell (Tcw/Tcd) Conductor Casing**

The Tcw/Tcd Conductor drilling, casing, and cementing shall be paid at the unit price per linear foot measured from ground surface to the bottom of the installed and cemented casing as determined by the

subsequent geophysical logging. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to drill approximately 3,800 feet of 11-inch diameter borehole between the depths of 1,200 feet and 5,000 feet bgs and to dispose of all drill cuttings at an appropriate location (see Section 1.17 in the Special Provisions); furnish and install 5,000 feet of 7-inch ID casing, cemented in place, complete per plans and specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.06 **Bid Item No. 6 – Production Borehole Drilling**

The pilot borehole drilling shall be paid at the unit price per linear foot measured from the bottom of the 7-inch diameter steel Tcw/Tcd conductor casing to the bottom of the production boring as determined by the geophysical logging. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to drill approximately 2,000 feet of 7-inch diameter pilot borehole between the depths of 5,000 feet and 7,000 feet bgs and to dispose of all drill cuttings at an appropriate location (see Section 1.17 in the Special Conditions), complete per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.07 **Bid Item No. 7 – Geophysical Logging**

Geophysical logging of the pilot borehole shall be paid at the unit price per completed log. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to perform the geophysical logging to the total depth of the pilot borehole, complete per Plans and Specifications. Three separate runs of logs are anticipated. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.08 **Bid Item No. 8 – Caliper Survey**

Caliper surveying of the final ream of the borehole shall be paid at the unit lump sum price basis. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to perform the caliper surveying to the total depth of the ream, complete per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.09 **Bid Item No. 9 – Production Well Casing – 6-Inch Blank High-Strength Low-Alloy (HSLA) Steel Casing**

The 6-inch-I.D. upper blank HSLA casing shall be paid at the unit price per linear foot, if opted. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to place 200 feet of 6-inch I.D., 5/16-inch wall, blank HSLA casing at recommended intervals between 5,000 and 7,000 feet bgs with a grout shoe at base, or as recommended by the Geologist, complete in place per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.10 **Bid Item No. 10 – Production Well Casing – Liner Hanger**

The Liner Hanger or appropriate transition material will be paid at a lump sum, if opted. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to place the liner hanger or backoff tool between the 6-inch production liner and the 7-inch well casing. The material shall be appropriate and compatible and acceptable to the Geologist, complete in place per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.11 **Bid Item No. 11 – Production Well Casing – 6-Inch Ful-Flo Louvered HSLA Steel Well Casing**

The 6-inch louvered casing shall be paid at the unit price per linear foot. The price shall constitute full compensation for all labor, material, equipment and incidentals required to intersperse 1,820 feet of 6-inch I.D., 5/16-inch wall, HSLA Ful-flo louvered well casing between the depths of 5,020 and 6,980 feet, or as recommended by the Geologist, complete in place per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.12 **Bid Item No. 12 – Gravel Pack**

The gravel (sand) envelope shall be paid at the unit price per linear foot. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to install 2,000 linear feet of 6X9 gradation Cal-Silica gravel pack, or equivalent from 5,000 feet to 7,000 feet bgs, excepting any interval to be filled with an optional intermediate cement seal, complete in place per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.13 **Bid Item No. 13 – Cement Grout Seal**

The cement grout seal shall be paid at the unit price per linear foot. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to place 20 linear feet of annular cement grout from 6,980 to 7,000 feet bgs, complete in place per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.14 **Bid Item No. 14 – Standby Time**

Standby time will be paid on an hourly rate. For bidding purposes, a total of 10 hours are estimated for standby time, if required. The actual hours of standby time must be approved by the District and its Geologist in writing and will apply only during working hours.

5.15 **Bid Item No. 15 – Mechanical Well Development**

Mechanical development shall be paid on a per-hour basis. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to mechanically develop the well for a total of 50 hours, complete per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist. Any additional mechanical development time, as

needed to completely develop the well, shall be approved by the District and its Geologist and shall be paid at the same per-hour basis as the originally bid hours for mechanical development.

5.16 **Bid Item No. 16 – Flow Meter Survey**

Flow meter surveying near the end of the constant rate discharge test shall be paid at the unit lump sum price basis. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to perform the flow meter survey from the depth at which the meter enters the well casing to the total depth of the completed well, complete per Plans and Specifications. No partial payment will be allowed unless all work has been completed and accepted by the Geologist.

5.17 **Bid Item No. 17 – Disinfection of Well & Capping**

Installation of a valve assembly and disinfection shall be paid at the unit lump sum price. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to install a well cap and disinfect the well per Plans and Specifications.

OPTIONAL BID ITEMS

5.18 **Bid Item No. 18 – Chemicals for Well Development – 10% Chlorine Solution**

Chemical development shall be paid at the unit price in volume (gallons). The price shall constitute full compensation only for the actual quantities of material used to chemically develop the well per plans and specifications. For bidding purposes, Item No. 18 will consist only of providing, as above, approximately 550 gallons of a 10% chlorine/water solution. For each stage of chemical development, payment for the Contractor’s time and equipment for installing these chemicals into the well are to be included only under Bid Item No. 17.

5.19 **Bid Item No. 19 – Chemicals for Well Development – NW-220 (or equivalent)**

Chemical development shall be paid at the unit price in volume (gallons). The price shall constitute full compensation only for the actual quantities of material used to chemically develop the well per plans and specifications. For bidding purposes, Item No. 19 will consist only of providing, as above, approximately 125 gallons of NW-220 clay dispersant or approved equivalent. For each stage of chemical development, payment for the Contractor’s time and equipment for installing these chemicals into the well are to be included only under Bid Item No. 17.

5.20 **Bid Item No. 20 – Production Testing of Well**

Step-drawdown and constant-rate testing shall be paid at the unit price per hour of testing. The price shall constitute full compensation for all labor, material, equipment, and incidentals required to test the well at three to four drawdown “steps” at three hours each for a maximum of 12 hours followed by a 60-hour constant rate test; recovery testing and monitoring may be done automatically and shall not be separately paid. Additional or fewer testing hours as recommended by the Geologist will be paid for at the hourly rate shown for Bid Item No. 20.

5.21 **Bid Item No. 21 – Abandonment & Destruction**

Abandonment of either the pilot borehole or destruction of the completed well specifically requested by the District shall be paid for on a per linear foot basis in place at the unit price. Payment shall be considered full compensation for furnishing all labor, materials, tools, incidentals, and equipment necessary and incidental to completion of the work, as specifically requested by the District. No payment will be granted for abandonment or destruction due to actions of the Contractor.

6. Sheeting, Shoring, Bracing, and Excavation Safety Measures.

Sheeting, shoring, bracing, and excavation safety measures will not be paid as a separate item.

7. Bid Items.

Full compensation for work including all labor, equipment, materials, tools and incidentals, and for conforming to all applicable provisions of the Standard Specifications, these Special Provisions, and the requirements of the District, shall be included, complete and in place, and no additional compensation will be allowed therefor.

8. Work Not Listed in the Schedule of Work Items.

8.01 The General Conditions and items in the Special Conditions, Special Provisions, general requirements, and specifications which are not listed in the schedule of work items of the Bid Form are, in general, applicable to more than one listed work item, and no separate work item is provided therefor. Include the cost of work not listed but necessary to complete the project designated in the contract documents in the various listed work items of the Bid Schedule.

8.02 The bids for the work are intended to establish a total cost for the work in its entirety. Should the Contractor feel that the cost for the work has not been established by specific items in the Bid Form, include the cost for that work in some related bid item so that the Proposal for the project reflects the total cost for completing the work in its entirety.

END OF PART D

PART E - DRAWINGS

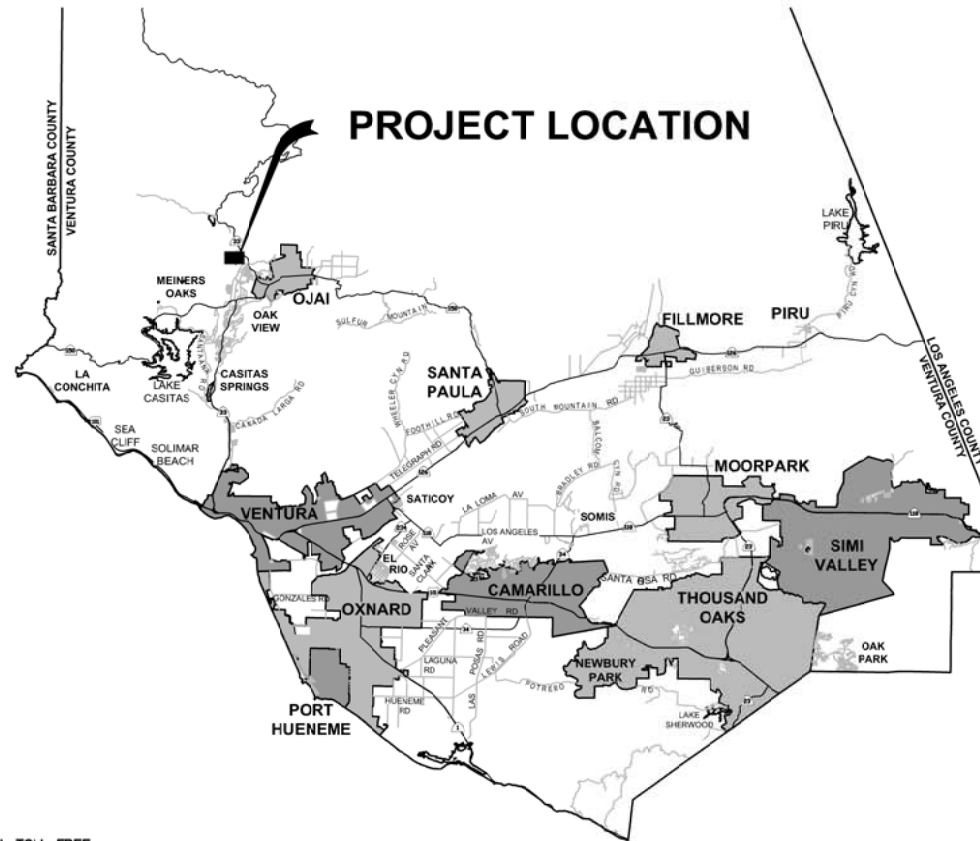
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MATILJA GROUNDWATER SUPPLY PILOT WELL DRILLING SPECIFICATION NO. 23-462

JANUARY 2025

SHEET INDEX		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	G-1	TITLE SHEET
2	G-2	SITE PLAN



VICINITY MAP
NOT TO SCALE



LOCATION MAP
1"=500'

CMWD CONTACT INFORMATION

VIRGIL CLARY, P.E. - PROJECT MANAGER
PHONE: 805-649-2251, EXT. 109
EMAIL: VCLARY@CASITASWATER.COM

JULIA ARANDA, P.E. - ENGINEERING MANAGER
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EMAIL: JARANDA@CASITASWATER.COM

DIAL TOLL FREE
811
AT LEAST TWO DAYS
BEFORE YOU DIG



Know what's below.
Call before you dig.

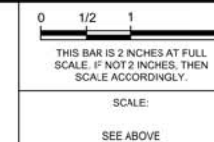
REGULATORY SERVICE ALERT (RSA) OF SOUTHERN CALIFORNIA

REV	DATE	BY	DESCRIPTION



DESIGNED:	JC
DRAWN:	TE
CHECKED:	JA
QA/QC:	VC
CONSTRUCTABILITY:	

PROJECT ENGINEER: _____ DATE: _____
R.C.E. EXP.



MATILJA GROUNDWATER SUPPLY PILOT WELL DRILLING
TITLE SHEET

SPECIFICATION NUMBER	23-462
DRAWING NUMBER	G-1
SHEET NUMBER	1 OF 2



- LEGEND**
- PROPOSED WELL LOCATION
 - - - WELL DISCHARGE TO DETENTION BASINS
 - - - CANAL ROAD ACCESS
 - - - RICE ROAD ACCESS
 - DRILL RIG FOOTPRINT ESTIMATED (150' X 215')
 - SPREADING/DRYING AREA FOR DRILL CUTTINGS (Approx 9 acres)
 - DETENTION BASINS FOR DEVELOPMENT WATER INFILTRATION
 - PROJECT CONSTRUCTION FOOTPRINT (Approx 18 acres)
 - PARCEL BOUNDARY

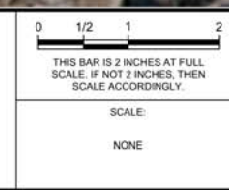
- SITE ACCESS:**
1. ACCESS TO THE SITE FOR DRILLING/HEAVY EQUIPMENT SHALL BE ALONG THE ROBLES CANAL ACCESS ROAD, ACCESSED FROM THE GATE AT DE LA GARRIGUE ROAD.
 2. ONLY WORK TRUCKS MAY USE THE RICE ROAD ENTRANCE AND RIVER CROSSING.

REV	DATE	BY	DESCRIPTION



DESIGNED:	AA
DRAWN:	TE
CHECKED:	JA
QA/QC:	VC
CONSTRUCTABILITY:	

PROJECT ENGINEER: R.C.E.	EXP.	DATE
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MATILJA GROUNDWATER SUPPLY PILOT WELL DRILLING	SPECIFICATION NUMBER 23-462
SITE PLAN	DRAWING NUMBER G-2
	SHEET NUMBER 2 OF 2

PART F – DIVISION 1 SPECIFICATIONS

Summary of Work and Contract Considerations	01 01 00
Coordination and Project Requirements	01 04 00
Environmental Protection	01 14 00
Submittals	01 30 00
Construction Facilities and Temporary Controls	01 50 00
Contract Closeout	01 70 00

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SECTION 01 01 00

SUMMARY OF WORK AND CONTRACT CONSIDERATIONS

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The project includes: drilling a pilot water supply test well to an approximate depth of 7,000 feet vertically and outfitting well with casing and providing valving and appurtenances to sustain 400 psi pressure.

1.02 TYPE OF CONTRACT

- A. The Work covered by these Contract Documents shall be provided under a single lump sum Contract.

1.03 CONTRACTOR'S USE OF SITE AND OWNER'S CONTINUED OPERATIONS

- A. The Contractor shall confine use of the site for work and storage to the Work Area Limits shown on the contract Drawings. The Contractor's use of adjacent lands and roads for access to move onto and off of the site and for daily access of workers, material and equipment shall be arranged and scheduled to minimize interference with the Owner's continued operations.
- B. The Owner intends to continue operation of portions of its existing facility during all or most of the construction period. The Contractor shall plan and schedule its work to minimize impacting the Owner's continued operations and shall, at all times, maintain safe access for the Owner's operating personnel and equipment.
- C. The Contractor shall be responsible for maintaining safe emergency exiting for the Owner's and Contractor's personnel in all areas affected by the Contractor's work.
- D. If operation of the Owner's existing facility is adversely affected by the Contractor's work, the Owner may suffer a financial loss and may make a claim against the Contractor to recover its loss.

1.04 DOCUMENTING EXISTING

- A. Prior to commencing the Work, tour the site with the Owner and the Engineer. Examine and document photographically and in writing the condition of existing buildings, equipment, improvements, and landscape planting on or adjacent to the site. This record shall serve as a basis for determination of subsequent damage due to the Contractor's operations and shall be signed by all parties making the tour.

1.05 APPLICATION FOR PAYMENT

- A. Line items on the Application for Payment shall be the same as those used on the Schedule of Values. Applications for Payment shall contain the Contractor's Certification.

1.06 UNIT PRICE WORK

- A. When the Contract Documents include Unit Price Work, the Contract Price shall include an amount equal to the sum of Unit Prices bid for each item times the estimated quantity for that item listed on the Bid Form.
- A. Unit Prices shall include all of the Contractor's cost including overhead and profit.

1.07 CONTRACT MODIFICATIONS

- A. The following documents may be used by the Engineer:
 - 1. Request for Quotation: Issued by the Engineer, a Request for Quotation is used to describe a proposed change and request a cost quotation from the Contractor but does not authorize a change in the Work or in the Contract Time or Price.
 - 2. Change Order: Signed by the Engineer signifying its recommendation, and signed by the Contractor and Owner signifying their acceptance, a Change Order changes the Scope of Work and possibly the Contract Price and/or Contract Time.
 - 3. Work Directive Change: Signed by the Owner (and in some cases by the Contractor) signifying their acceptance and issued by the Engineer, a Work Directive Change is used: (1) to direct the Contractor to do extra work on a cost accounting basis with a fixed maximum sum when the Owner and Contractor have not agreed on the price and time for the change, and (2) to direct the Contractor to do work that the Contractor contends is not included in the contract scope. Work done under case 1 will be converted to a Change Order when the Contractor and Owner agree on the change in price and time. The Contractor may make a claim under General Conditions Article 10 for recovery of cost and time extension for work done under case 2; but if the claim is denied because the work is determined to be included in the contract scope, then the Contract Time and Price will not be changed.
 - 4. Response to Request for Information: Issued by the Engineer, a Response to Request for Information is used to order or document minor changes in the work consistent with the intent of the Contract Documents and NOT involving a change in price or time. Information issued on a Response to Request for Information shall NOT authorize a change in Contract Price or Contract Time and shall not be considered a Constructive Change Order. If the Contractor considers that a Response to Request for Information would cause a change in Contract Price or Time, it shall notify the Engineer in writing within 15 days of receipt of the Response to Request for Information and shall not proceed with the work.
 - 5. The Contractor hereby expressly waives any claim or right to make a claim for an increase in contract time or price without written notice to the Engineer of the Contractor's intent to make a claim 5 days prior to proceeding to execute the work or portion thereof giving rise to such claim.
 - 6. The Contractor agrees that it shall not consider any Response to Request for Information, order, instruction, clarification, suggestion or any other communication either written or oral, given intentionally or unintentionally by the Engineer, Owner or any other person as authorization or direction to do any work that would cause a change in Contract Time or Price unless it is a formal written Change Order or Work Directive Change signed by the Owner.

1.08 REGULATORY REQUIREMENTS

- A. The latest edition of the requirements in effect at the date of submission of bids shall apply.
- B. In cases where the Contract Documents are more restrictive than applicable codes, the Contractor shall comply with the Contract Documents.

1.11 REFERENCE STANDARDS

- A. When these specifications state that Work or tests shall conform to specific provisions in a referenced standard, specification, code, recommendation or manual published by an association, organization, society or agency the referenced provisions, as they apply to the Work of the Contractor only shall be considered a part of these specifications as fully as if included in total. When these specifications or applicable codes contain higher or more restrictive requirements than those contained in reference standards these specifications or applicable codes shall govern.
- B. The latest edition of a referenced standard published at the time of submission of bids shall apply unless a specific date for the referenced standard is cited in these specifications.
- C. General Provisions in referenced standards, specifications, manuals or codes shall not change the specific duties and responsibilities between any of the parties involved in this work from those described in the General Conditions. Provisions in referenced standards with regard to measurement and payment shall not apply to this Work unless specifically cited.

1.12 SPECIFICATION LANGUAGE AND STYLE

- A. Many parts of the Specifications as well as notes on the Drawings are written in the active voice and are addressed to the Contractor.
 - 1. When words or phrases requiring an action or performance of a task are used, it means that the Contractor shall provide the action or perform the task. For example: provide, perform, install, furnish, erect, connect, test, operate, adjust or similar words mean that the Contractor shall perform the action or task referred to.
 - 2. When words or phrases requiring selection, acceptance, approval, review, direction, designation or similar actions are referred to, it means that such actions are the Owner's or the Engineer's prerogative and that the Contractor must obtain such action before proceeding.
- B. Requirements in the Specifications and Drawings apply to all work of a similar type, kind or class even though the word "all" or "typical" may not be stated.

1.13 DEFINITIONS

- A. The following terms, when used in the Contract Documents, shall have the meanings listed:

ACCEPTABLE "acceptable to the Owner"

PERFORM	"perform all operations required to complete the work referred to in accordance with the intent of the Contract Documents"
PROVIDE	"furnish and install the work referred to including proper anchorage, connection to required utilities or other work, testing, adjustment and startup ready to put in service and perform the intended function"
REQUIRED	"required by the Contract Documents or required to complete the Work and produce the intended results"
SATISFACTORY	"acceptable to the Owner"
SHOWN	"as indicated on the Drawings/Figures"
SITE	"geographical location of the Project and land within the work area shown on the contract drawings and within which the Work will be installed or built"
SPECIFIED	"as written in the Contract Documents including the Specifications and the Drawings"
SUBMIT	"submit to the Owner"

1.14 ABBREVIATIONS

- A. The following acronyms or abbreviations are used in these specifications for the organizations listed.

<u>Abbreviation</u>	<u>Stands for</u>
CAL/OSHA	State of California Department of Industrial Relations, Division of Industrial Safety
OSHA	Occupational Safety and Health Act
SWPPP	Storm Water Pollution Prevention Plan

END OF SECTION

SECTION 01 04 00

COORDINATION AND PROJECT REQUIREMENTS

1.01 PROJECT COORDINATION

- A. Coordinate scheduling, submittals and work of various Sections of the Specifications and subcontractors to assure efficient and orderly sequence of interdependent construction.

1.02 CONNECTIONS TO UNDERGROUND UTILITIES, CONDUITS, OR PROCESS PIPING

- A. Obtain best available current information on location, identification and marking of existing utilities, piping and conduits and other underground facilities before beginning any excavation. In areas where utilities that participate in Underground Service Alert may occur, call 811 for information at least 48 hours in advance of beginning work. Give District 5 days' notice before beginning work.
- B. The location of existing utilities and underground facilities known to the Owner are shown in their approximate location based on information available at the time of preparing the Drawings. The actual location, size type and number of utilities and underground facilities may differ from that shown and utilities or underground facilities may be present that are not shown.
- C. Use extreme care when excavating or working in areas that may contain existing utilities, process piping, conduits or other underground facilities. Use careful potholing, hand digging and probing to determine the exact location of underground installation. Some locations contain multiple pipes or conduits. Prior to performing any subsurface work, investigate, determine and prepare a plan to turn off or disconnect each utility believed to be in the within 100 feet of the subsurface work in the event of an accidental breach of a utility conduit.

1.03 FIELD ENGINEERING AND LAYOUT

- A. Upon submission of Notice of Award, Contractor shall meet the Owner at the project site to field verify all installation locations based on the requirements of these Contract Documents.

1.04 PRECONSTRUCTION MEETINGS

- A. Prior to beginning the Work, the Contractor and its key personnel and Subcontractors including the Contractor's Superintendent, Project Manager, and Field Engineer shall attend a meeting with the District to discuss the following:
 - 1. Name, Authority, and Responsibilities of Parties Involved
 - 2. Project Procedures:
 - a. Progress meetings
 - b. Correspondence
 - c. Notification
 - d. Submittal of Product Data, Shop Drawing Samples, and Proposed Equivalents
 - e. Requests for Information
 - f. Response to Requests for Information

- g. Requests for Quotation
- h. Work Directive Change
- i. Change Orders
- j. Engineer's "Items of Concern List"
- 3. Temporary Schedule and Contractor's Construction Schedule
- 4. Temporary Facilities and Controls
- 5. Contractor's Coordination
- 6. Maintenance of Record Drawings
- 7. Owner Provided Items or Work
- 8. Early Beneficial or Partial Occupancy
- 9. Final Testing and Startup
- 10. Punch Lists and Project Closeout Procedures
- 11. Final Deliverables including Record Drawings

1.05 PROGRESS MEETINGS

- A. The Owner will conduct weekly progress meetings with Contractor at the project site. Attendance is required by Contractor's Project Manager, Superintendent and affected Subcontractors and suppliers. The Owner will prepare, maintain and distribute agenda and dated record of: (1) actions required and taken and (2) decisions needed and made.
- B. Agenda:
 - 1. Review critical items/action list.
 - 2. Review work progress. Compare actual progress with planned progress shown on Contractors. Discuss Corrective action required. Compare actual and projected progress with Contractor's Construction Schedule, propose methods to correct deficiencies.
 - 3. Review status of Submittals; review delivery dates and date of need for critical items.
 - 4. Review coordination problems.
 - 5. Schedule needed testing and critical inspections.
 - 6. Review critical requirements for each trade or major piece of equipment prior to beginning work or installation.
 - 7. Discuss Contractor Quality Control.
 - 8. Discuss open items on Engineers "Items of Concern List."
 - 9. Discuss impact of proposed changes on progress Schedule.
 - 10. Other business.

1.06 MATERIAL AND EQUIPMENT

- A. General:
 - 1. Verify that products delivered meet requirements of Contract Documents and the requirements for Favorably Reviewed submittals.
- B. Compatibility of Equipment and Material:
 - 1. Similar items, equipment, devices or products furnished under a single specification section shall all be made by the same maker and have interchangeable parts.
 - 2. In addition, but only if so stated in each affected Specification Section, similar items furnished under two or more Specification Sections shall be made by the same maker and have interchangeable parts.

3. All similar materials or products that are interrelated or used together in an assembly shall be compatible with each other.
- C. Transportation and Handling:
1. Transport and handle products in accordance with manufacturer's instructions.
 2. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
 3. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- D. Storage and Protection:
1. Store and protect products in accordance with manufacturer's instructions. Seals and labels shall be intact and legible.
 2. For exterior storage of fabricated products, place items on sloped supports, aboveground.
 3. Cover products subject to deterioration from moisture, dust, or sunlight with opaque watertight but breathable sheet covering. Provide ventilation to avoid condensation.
 4. Provide offsite storage and protection including insurance coverage when site does not permit onsite storage or protection.
 5. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
 6. Provide facilities, equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
 7. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.
- E. Installation Standards and Manufacturers' Recommendations:
1. Install all products and materials in strict compliance with the most restrictive of the following:
 - a. The manufacturer's or provider's written instructions or recommendations. Follow step-by-step installation procedures.
 - b. Recommendations of referenced trade associations or standards.
 - c. These specifications and drawings.
 2. Where conflicts exist, present alternatives with advantages and disadvantages to Owner for decision.
- F. If reference standards or manufacturer's instructions contain provisions that would alter or are at variance with relationships between the parties to the Contract set forth in the Contract Documents, the provisions in the Contract Documents shall take precedence.

1.07 SAFETY

- A. In accordance with generally accepted construction practice and applicable law, the Contractor shall be solely and exclusively responsible for:
1. Construction means and methods.
 2. Safety of employees engaged in the work while on and off the site.
 3. Safety of the Owner, the Engineer, the Design Engineer, and others who may visit or be affected by the work.
 4. Safety of the work itself including material and equipment to be incorporated

- therein.
5. Safety of other property at the site or adjacent thereto.
 6. Safety programs, equipment and protective devices required to assure the safety of persons and property for whom/which the Contractor is responsible.
- B. The duties of the Owner in conducting review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing, scaffolding or safety measures in, on, or near the construction site.
- C. The Contractor is hereby informed that work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as required to prevent injury to personnel and damage to property, and to comply with all applicable laws and regulations including State OSHA, Federal OSHA, and other regulations referenced in these Contract Documents.
- D. The Contractor shall, at all times, maintain the job in a condition that is safe for the Owner, the Geologist and their Consultants to make site visits and to conduct construction reviews. If the Owner or the Geologist cannot allow personnel to visit the job because it is not safe, the Contractor is not providing required safe access to the Work.
- E. The Contractor shall prepare a Safety Plan meeting the requirements of applicable regulations. As a minimum, the Contractors Safety Plan shall set forth definite procedures for informing workers about safety, for instructing workers in safe practices, for assuring that workers are using appropriate safety equipment and safe work practices and for reporting accidents.

1.08 EXCAVATION AND TRENCHING; WORK WITHIN CONFINED SPACES

- A. Submit specific plans to the Owner showing details of provisions for worker protection from caving ground in accordance with Section 6705 of the California State Labor Code. The detailed plans shall show the design of shoring, bracing, sloping banks or other provisions and shall be prepared, signed and stamped by a Civil or Structural Engineer licensed in the State in which the Work is performed and retained by the Contractor. The Owner's acceptance of the detailed plans submitted is only an acknowledgment of the submission and does not constitute review or approval of the designs, design assumptions, criteria, completeness, applicability to areas of intended use, or implementation of the plans, which are solely the responsibility of the Contractor and their Registered Engineer.
- B. Work Within Confined Spaces: Work within confined spaces is subject to applicable laws, regulations and safety orders including applicable regulations.
- C. The foregoing provisions do NOT reduce the requirement for the Contractor to maintain safety in ALL operations performed by the Contractor or its Subcontractors.

1.09 CONTRACTOR'S QUALITY CONTROL

- A. The Contractor shall be fully responsible for inspecting the work of its suppliers and Subcontractors to assure that the work when completed will comply with the standards for materials and workmanship required by the Contract Documents.
- B. Inspections, periodic observations and testing performed by the Owner or the Engineer are for the Owner's benefit and information only and shall not be construed as partial or incremental acceptance of the work and shall not be deemed to establish any duty on the part of the Owner or the Geologist to the Contractor, its subcontractors or suppliers.
- C. The Contractor shall:
 - 1. Monitor quality control over suppliers, manufacturer, products, services, site conditions, and workmanship, to produce work of specified quality.
 - 2. Comply fully with manufacturer's installation instructions, including performing each step in sequence as recommended by the manufacturer.
 - 3. Submit a Request for Information to Engineer before proceeding with work when manufacturers' instructions or reference standards conflict with Contract Documents.
 - 4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
 - 5. Perform work by persons specializing in the specific trade and class of work required and qualified to produce workmanship of specified quality.
 - 6. Secure products in place with positive anchorage devices designed and sized to withstand seismic, static and dynamic loading, vibration, and physical distortion or disfigurement.
- D. If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with relationships between the parties to the Contract set forth in the Contract Documents, the provisions in the Contract Documents shall take precedence.
- E. The Contractor shall provide assistance required by the Owner and Geologist to adequately inspect the Work including ladders, scaffolding, lighting, ventilation and other aids to facilitate access and provide a safe working environment.

1.10 TESTING LABORATORY SERVICES AND CERTIFIED LABORATORY REPORTS

- A. Provide testing service in accordance specific requirements contained in each technical specification section. Submit Certified Laboratory Reports required by technical specification sections.

END OF SECTION

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SECTION 01 14 00

ENVIRONMENTAL PROTECTION

1.01 SCOPE

- A. During the progress of the work, keep the work areas occupied by the Contractor in a neat and clean condition and protect the environment both onsite and offsite, throughout and upon completion of the construction project.

1.02 SUBMITTALS

- A. Develop an Environmental Protection Plan in detail and submit to the Owner in the Product Information category within seven (7) days from the date of the Notice to Proceed. Distribute the favorably reviewed plan to all employees and to all subcontractors and their employees. The Environmental Protection Plan shall include, but not be limited to, the following items:
 - 1. Copies of required permits.
 - 2. Proposed sanitary landfill site.
 - 3. Other proposed disposal sites.
 - 4. Copies of any agreements with public or private landowners regarding equipment, materials storage, borrow sites, fill sites, or disposal sites. Any such agreement made by the Contractor shall be invalid if its execution causes violation of local or regional grading or land use regulations.
 - 5. Water pollution control plan.

1.03 MITIGATION OF CONSTRUCTION IMPACTS

- A. Requirements: All operations shall comply with all federal, state and local regulations pertaining to water, air, solid waste and noise pollution.
- B. Definitions of Contaminants:
 - 1. Sediment: Soil and other debris that have been eroded and transported by runoff water.
 - 2. Solid Waste: Rubbish, debris, garbage and other discarded solid materials resulting from construction activities, including a variety of combustible and non-combustible wastes, such as ashes, waste materials that result from construction or maintenance and repair work, leaves and tree trimmings.
 - 3. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, disinfectants, organic chemicals and inorganic wastes. Some of the above may be classified as "hazardous."
 - 4. Sanitary Wastes:
 - a. Sewage: That which is considered as domestic sanitary sewage.
 - b. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing and consumption of food.
 - 5. Hazardous Materials: As defined by applicable laws and regulations. Undisclosed hazardous material contamination, if encountered will constitute a changed site condition. The Owner may retain a separate contractor to dispose of undisclosed hazardous material encountered.

C. Protection of Natural Resources:

1. General: It is intended that the natural resources within the project boundaries and outside the limits of permanent work performed under this Contract be preserved in their existing condition or be restored to an equivalent or improved condition upon completion of the work. Confine construction activities to areas defined by the public roads, easements, and work area limits shown on the Drawings. Return construction areas to their pre-construction elevations except where surface elevations are otherwise noted to be changed. Maintain natural drainage patterns. Conduct construction activities to avoid ponding stagnant water conducive to mosquito breeding.
2. Land Resources: Do not remove, cut, deface, injure or destroy trees or shrubs outside the work area limits. Do not remove, deface, injure or destroy trees within the work area without permission from the Owner.
 - a. Protection: Protect trees that are located near the limits of the Contractor's work areas which may possibly be defaced, bruised or injured or otherwise damaged by the Contractor's operations. No ropes, cables or guys shall be fastened to or attached to any existing nearby trees or shrubs for anchorages unless specifically authorized. Where such special emergency use is permitted, the Contractor shall be responsible for any damage resulting from such use.
 - b. Trimming: Trim and seal tree limbs overhanging the line of the work and in danger of being damaged by the Contractor's operations in accordance with recognized standards for such work. Remove other tree limbs under the direction of the Owner, so that the tree will present a balanced appearance.
 - c. Treatment of Roots: Do not cut roots unnecessarily during excavating or trenching operations. Expose major roots encountered in the course of excavation and do not sever. Wrap them in burlap as a protective measure while exposed. Neatly trim all other roots larger than 1 inch in diameter that are severed in the course of excavation at the edge of the excavation or trench and paint them with a heavy coat of an approved tree seal.
 - d. Repair or Restoration: Repair or replace any trees or other landscape features scarred or damaged by equipment or construction operations as specified below. The repair and/or restoration plan shall be favorably reviewed prior to its initiation.
 - e. Temporary Construction: Obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction as directed by the Owner. Level all temporary roads, parking areas and any other areas that have become compacted or shaped. Any unpaved areas where vehicles are operated shall receive a suitable surface treatment or shall be periodically wetted down to prevent construction operations from producing dust damage and nuisance to persons and property, at no additional cost to the Owner. Keep haul roads clear at all times of any object that creates an unsafe condition. Promptly remove any contaminants or construction material dropped from construction vehicles. Do not drop mud and debris from construction equipment on public streets. Sweep clean turning areas and pavement entrances as necessary.

3. Water Resources:

- a. Investigate and comply with all applicable federal, state and local regulations concerning the discharge (directly or indirectly) of pollutants to the underground and natural waters. Exercise every reasonable precaution to protect streams, lakes, reservoirs, bays and coastal waters from pollution with fuels, oils, bitumens, calcium chloride and other harmful materials and conduct and schedule operations so as to avoid or minimize muddying and silting of said streams, lakes, reservoirs, bays and coastal waters.

Water pollution control work is intended to provide prevention control and abatement of water pollution to streams, waterways and other bodies of water, and shall consist of constructing those facilities that may be shown on the Drawings, specified herein or in the Special Provisions, or directed by the Owner.

In order to provide effective and continuous control of water pollution, it may be necessary for the Contractor to perform the Contract work in small or multiple units, on an out of phase schedule, and with modified construction procedures. The Contractor shall provide temporary water pollution control measures, including but not limited to, dikes, basins, and ditches, and shall apply straw and seed, which become necessary as a result of their operations. The Contractor shall coordinate water pollution control work with all other work done on the Contract.

- b. Submit a plan to control water pollution effectively during construction of the Work. Such program shall show the schedule for the erosion control work included in the Contract and for all water pollution control measures, which the Contractor proposes to take in connection with construction of the project to minimize the effects of their operations upon adjacent streams and other bodies of water. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the Owner, until such plan has been accepted.

The Owner will not be liable to the Contractor for failure to accept all or any portion of an originally submitted or revised water pollution control plan, nor for any delays to the work due to the Contractor's failure to submit an acceptable water pollution control plan.

The Contractor may request the Owner to waive the requirement for submission of a written plan for control of water pollution when the nature of the Contractor's operation is such that erosion is not likely to occur. Waiver of this requirement will not relieve the Contractor from responsibility for compliance with the other provisions of this Section. Waiver of the requirement for a written plan for control of water pollution will not preclude requiring submittal of a written plan at a later time if the Owner deems it necessary because of the effect of the Contractor's operations.

- c. If the measures being taken by the Contractor are inadequate to control water pollution effectively, the Owner may direct the Contractor to revise their operations and water pollution control program. Such directions will be in writing and will specify the items of work for which the Contractor's water pollution control measures are inadequate. No further work shall be performed on said items until the water pollution control measures are adequate; and if also required, a revised water pollution control plan has been accepted.
- d. Where erosion which will cause water pollution is probable due to the nature of the material or the season of the year, the Contractor's operations

- shall be so scheduled that permanent erosion control features will be installed concurrently with or immediately following grading operations.
- e. Nothing in the terms of the Contract nor in the provisions in this Section shall relieve the Contractor of the responsibility for compliance with applicable statutes relating to prevention or abatement of water pollution.
 - f. The Contractor shall also conform to the following provisions:
 - 1) Where working areas encroach on live streams, barriers adequate to prevent the flow of muddy water into streams shall be constructed and maintained between working areas and streams and during construction of such barriers, muddying of streams shall be held to a minimum.
 - 2) Removal of material from beneath a flowing stream shall not be commenced until adequate means, such as a bypass channel, are provided to carry the stream free from mud or silt around the removal operations.
 - 3) Should the Contractor's operations require transportation of materials across live streams, such operations shall be conducted without muddying the stream. Mechanized equipment shall not be operated in the stream channels of such live streams except as may be necessary to construct crossings or barriers and fills at channel changes.
 - 4) Water containing mud or silt from aggregate washing or other operations shall be treated by filtration, or retention in a settling pond, or ponds, adequate to prevent muddy water from entering live streams.
 - 5) Oily or greasy substances originating from the Contractor's operations shall not be allowed to enter or be placed where they will later enter a live stream.
 - 6) Portland cement or fresh portland cement concrete shall not be allowed to enter flowing water of streams.
 - 7) When operations are completed, the flow of streams shall be returned as nearly as possible to a meandering thread without creating possible future bank erosion and settling; pond sites shall be graded so they will drain and will blend in with the surrounding terrain.
 - 8) Material derived from roadway work shall not be deposited in a live stream channel where it could be washed away by high stream flows.
 - 9) Where there is possible migration of anadromous fish in streams affected by construction on the project, the Contractor shall conduct their operations so as to allow free passage of such migratory fish.
 - g. Chlorinated Water: Take special measures to prevent chlorinated water from entering the ground or surface waters. Dechlorinate chlorinated water prior to discharge.
4. Fish and Wildlife Resources: Perform all work and take such steps required to prevent any interference or disturbance to fish and wildlife. The Contractor will not be permitted to alter water flows or otherwise significantly disturb native habitat adjacent to the project area which are critical to fish and wildlife except as may be indicated or specified.
5. Cultural Resources: The project does not pass through any known archaeological sites. However, it is conceivable that unrecorded archaeological sites could be discovered during the construction. In the event that artifacts, human remains, or other cultural resources are discovered during excavations

at locations of the Work, the Contractor shall protect the discovered items, notify the Owner, and comply with applicable law.

6. Revegetation of Disturbed Areas:
 - a. Tree and Shrubs Replacement: Replace trees and shrubs damaged by the construction or as noted on the Drawings after completion of earthwork in the area. Plant nursery stock of the same species and variety, in 5-gallon cans on a one-for-one basis. Plant in the early fall. If planting is not feasible in early fall, the Owner will reschedule the tree planting operations.
 - b. Planting of Trees and Shrubs:
 - 1) Selection: Deliver trees and shrubs to the site in the nursery containers, with the nursery tags identifying the species and variety. The trees and shrubs should be selected for shape and symmetrical branching habit, which at maturity will produce strong, full foliated specimens. The specimens shall have grown in the designated size of container for a sufficient length of time for the root system to hold the earth when taken from the container, but not long enough to become rootbound or cause a "hardening off" of the root system. Specimens which are loose in the root ball will be rejected. Remove all rejected specimens from the site and replace with specimens as specified. Specimens shall be sound, healthy, vigorous and free from insects, pests, plant diseases and injuries.
 - 2) Protection: Specimens which cannot be planted within one day of delivery shall be properly protected and kept moist to prevent drying.
 - 3) Planting Procedure: Planting hole shall be twice the width of the root ball and at least one and one-half times the height of the root ball. Fill the planting hole with water and let drain away. Mix excavated soil with a planting mix appropriate for the type and condition of the soil and the species of tree or shrub and place the mixed soil in the planting hole to the depth necessary to bring the root ball slightly higher than the surrounding soil. Remove the specimen from the container carefully so that the root ball remains unbroken. Place in planting hole and fill with mixed soil to one-half the height of the root ball, tamp thoroughly, then water. Set specimens at such a level that after settlement the top of the root ball is level with the surrounding finish grade. Add mixed soil to form watering basin, fill basin twice with water immediately after planting. Water as frequently as required to keep the specimens adequately moist until well established. The Contractor will be responsible for maintaining specimens for a minimum of one year after final acceptance or planting, whichever is later.
 - 4) Staking: Use 2-inch x 2-inch redwood or cedar stakes of length adequate to support each tree. Drive a stake on each side of each specimen outside of the root ball, to a depth of 3 feet. Support tree to stakes using twisted galvanized wire covered with reinforced rubber hose where in contact with the specimen.
 - 5) Mulching: Fill all watering basins of trees and shrubs with a layer of mulch not less than 2 inches thick.
7. Noise Control: The following noise control procedures shall be employed:
 - a. Maximum Noise Levels within 1,000 Feet of any Residence, Business, or Other Populated Area: Noise levels for trenchers, pavers, graders and

- trucks shall not exceed 90 dBA at 50 feet as measured under the noisiest operating conditions. For all other equipment, noise levels shall not exceed 85 dBA at 50 feet.
- b. Equipment: Jack hammers shall be equipped with exhaust mufflers and steel muffling sleeves. Air compressors should be of a quiet type such as a "whisperized" compressor.
 - c. Operations: Keep noisy equipment as far as possible from noise-sensitive site boundaries. Machines should not be left idling. Use electric power in lieu of internal combustion engine power wherever possible. Maintain equipment properly to reduce noise from excessive vibration, faulty mufflers, or other sources. All engines shall have mufflers.
 - d. Scheduling: Schedule noisy operations so as to minimize their duration at any given location.
 - e. Monitoring: To determine whether the above noise limits are being met and whether noise barriers are needed, the Contractor shall use a portable sound level meter meeting the requirements of American National Standards Institute Specification S1.4 for Type 2 sound level meters. If non-complying noise levels are found, the Contractor shall be responsible for monitoring and correction of excessive noise levels.
8. Dust Control, Air Pollution and Odor Control: Employ measures to prevent the creation of dust, air pollution and odors.
- a. Unpaved areas where vehicles are operated shall be periodically wetted down or given an equivalent form of treatment, to eliminate dust formation.
 - b. Store all volatile liquids, including fuels or solvents in closed containers.
 - c. No open burning of debris, lumber or other scrap will be permitted.
 - d. Properly maintain equipment to reduce gaseous pollutant emissions.
9. Construction Storage Areas: As shown on drawings.
- a. Store and service equipment at the designated Contractor's storage area where oil wastes shall be collected in containers. Oil wastes shall not be allowed to flow onto the ground or into surface waters. Containers shall be required at the construction site for the disposal of materials such as paint, paint thinner, solvents, motor oil, fuels, resins and other environmentally deleterious substances. No dumping of surplus concrete or grout on the site will be permitted.
10. Sanitation: During the construction period, provide adequate and conveniently located chemical sanitation facilities, properly screened, for use of construction crews. Facilities shall be regularly maintained.
11. Fire Prevention: Take steps to prevent fires including, but not limited to the following:
- a. Provide spark arrestors on all internal combustion engines.
 - b. Store and handle flammable liquids in accordance with the Flammable and Combustible Liquids Code, NFPA 30.
 - c. Provide fire extinguishers at hazardous locations or operations, such as welding.
12. Erosion and Sediment Transport Control: This project does not meet the requirements for preparation of a SWPPP; however, Contractor shall comply with all applicable regulations and shall:
- a. Discharge construction runoff into small drainages at frequent intervals to avoid buildup of large potentially erosive flows.
 - b. Prevent runoff from flowing over unprotected slopes.
 - c. Keep disturbed areas to the minimum necessary for construction.
 - d. Keep runoff away from disturbed areas during construction.

- e. Direct flows over vegetated areas prior to discharge into public storm drainage systems.
- f. Trap sediment before it leaves the site, using such techniques as check dams, sediment ponds, or siltation fences.
- g. Remove and dispose of all project construction-generated siltation that occurs in offsite retention ponds.
- h. Stabilize disturbed areas as quickly as possible.

1.04 DISPOSAL OPERATIONS

- A. Solid Waste Management:
 - 1. Supply solid waste transfer containers. Daily remove all debris such as spent air filters, oil cartridges, cans, bottles, combustibles and litter. Take care to prevent trash and papers from blowing onto adjacent property. Encourage personnel to use refuse containers. Convey contents to a sanitary landfill.
 - 2. Washing of concrete containers where wastewater may reach adjacent property or natural water courses will not be permitted. Remove any excess concrete to the sanitary landfill.
- B. Chemical Waste and Hazardous Materials Management: Furnish containers for storage of spent chemicals used during construction operations. Dispose of chemicals and hazardous materials in accordance with applicable regulations.
- C. Garbage: Store garbage in covered containers, pick up daily and dispose of in a sanitary landfill.
- D. Dispose of vegetation, weeds, rubble, and other materials removed by the clearing, stripping and grubbing operations off site at a suitable disposal site in accordance with applicable regulations.
- E. Excavated Materials:
 - 1. Spoil Material:
 - a. Remove all material which is excavated in excess of that required for backfill, and such excavated material which is unsuitable for backfill, from the site and dispose of offsite in accordance with applicable regulations at the disposal site indicated in the Environmental Protection Plan. No additional compensation will be paid to the Contractor for such disposal. Include all such costs in the lump sum prices bid for the project. Remove rubbish and materials unsuitable for backfill immediately following excavation. Remove material in excess of that required for backfill immediately following backfill operations.
 - b. Rubbish shall consist of all materials not classified as suitable materials or rubble and shall include shrubbery, trees, timber, trash and garbage.

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SECTION 01 30 00

SUBMITTALS

1.01 SUBMITTAL PROCEDURES

- A. Accompany each submittal with a Submittal form which contains the following information:
 - 1. Contractor's name and the name of Subcontractor or supplier who prepared the submittal.
 - 2. The project name and identifying number.
 - 3. Description of the submittal and reference to the Contract requirement or technical specification section and paragraph number being addressed.
- B. All submittals may be provided electronically to the Owner and will be returned electronically to the Contractor. Follow the procedures described below or in other paragraphs in this Section.
 - 1. Designation of Superintendent: Include name, address, home telephone number and a brief resume.
 - 2. List of Subcontractors and Major Suppliers: Include address, telephone number and name of responsible party.
 - 3. Environmental Protection Plan. Submit for information.

1.02 SCHEDULE OF SUBMITTALS

- A. Within 5 days after the Notice to Proceed, provide a Schedule of Submittals showing the date by which each submittal required for Product Review or Product Information will be made. Identify the items that will be included in each submittal (see paragraph 1.05 of this Section) by listing the item or group of items and the Specification Section and paragraph number under which they are specified. Indicate whether the submittal is required for Product Review of Proposed Equivalents, Shop Drawings, Product Data or Samples or required for Product Information only.

1.03 PLAN OF OPERATIONS

- A. Before beginning site work, submit a plan showing Contractor's intended use of the site. Show location for Contractor's and Subcontractor's parking. Show location of Contractor's and Subcontractor's work areas and storage areas.

1.04 CONSTRUCTION SCHEDULE

- A. Submit for information.

1.05 SHOP DRAWING, PRODUCT DATA AND SAMPLES SUBMITTED FOR PRODUCT REVIEW

- A. This paragraph covers submittal of Shop Drawings, Product Data and Samples required for the Engineer's review referred to as Product Review submittals in the Technical Specifications (Division 2 through 17). Submittals required for information

only are referred to as Product Information submittals in the Technical Specifications and are covered in paragraph 1.07 of this Section.

- B. Number and type of submittals:
 - 1. Shop Drawings: Submit electronically to the Owner and Geologist. Owner shall return marked submittal electronically to Contractor. The Contractor shall distribute to its superintendent, subcontractors and suppliers.
 - 2. Product Data: Engineer shall return marked submittal electronically to Contractor. The Contractor shall distribute to its superintendent, subcontractors and suppliers.
 - 3. Samples: Submit three labeled samples or three sets of samples of manufacturers full range of colors and finishes. Comply with requirements in Technical Specification Sections. One sample will be returned to Contractor.

- C. The Contractor shall make all Product Review submittals early enough to allow adequate time for the Owner's review, for manufacture and for delivery at the construction site without causing delay to the Work. Submittals shall be made early enough to allow for unforeseen delays such as:
 - 1. Failure to obtain Favorable Review because of inadequate or incomplete submittal or because the item submitted does not meet the requirements of the Contract Documents.
 - 2. Delays in manufacture.
 - 3. Delays in delivery.

- D. Content of Submittals:
 - 1. Each submittal shall include all of the items and material required for a complete assembly, system or Specification Section.
 - 2. Submittals shall contain all of the physical, technical and performance data required by the specifications or necessary to demonstrate conclusively that the items comply with the requirements of the Contract Documents.
 - 3. Include information on characteristics of electrical or utility service required and verification that requirements have been coordinated with services provided by the Work and by other interconnected elements of the Work.
 - 4. Provide verification that the physical characteristics of items submitted, including size, configuration, clearances, mounting points, utility connection points and service access points, are suitable for the space provided and are compatible with other interrelated items that are existing or have or will be submitted.
 - 5. Label each Product Data Submittal, Shop Drawing and Sample with the information required in paragraph 1.01A of this Section. Highlight or mark every page of every copy of all Product Data submittals to show the specific items being submitted and all options included or choices offered.
 - 6. Additional requirements for Product Review submittals are contained in the Technical Specification sections.
 - 7. Designation of work as "NIC" or "by others," shown on Shop Drawings, shall mean that the work will be the responsibility of the Contractor rather than the subcontractor or supplier who has prepared the Shop Drawings.

- E. Compatibility of Equipment and Material: Verify that items contained in the same or in different submittals meet the requirements in the paragraph titled "Material and Equipment" in Section 01040 especially the subparagraphs titled "Compatibility of Equipment and Material."

- F. The Contractor shall review and stamp submittals prepared by the Contractor or by Subcontractors or suppliers prior to submitting them to the Owner.
- G. Submittals that contain deviations from the requirements of the Contract Documents shall be accompanied by a separate letter explaining the deviations. The Contractor's letter shall:
 - 1. Cite the specific Contract requirement including the Specification Section and paragraph number for which approval of a deviation is sought.
 - 2. Describe the proposed alternate material, item or construction and explain its advantages and/or disadvantages to the Owner.
 - 3. State the reduction in Contract Price if any that is offered to the Owner.
- H. Owner's Review Procedure and Meaning:
 - 1. The Owner will stamp and mark each Product Review submittal prior to returning it to the Contractor. The stamp will indicate whether or not the review was favorable and what action is required of the Contractor. Review categories "No Exceptions Taken" and "Make Corrections Noted" both indicate Favorable Review.
 - 2. The Owner's Favorable Review is contingent on:
 - a. The compatibility of items included in a submittal with other related or interdependent items included in previous or future submittals.
 - b. Future submittal of items related to or required to be part of this submittal that were not included with this submittal.
 - 3. Favorable Review of a submittal does not constitute approval or deletion of items required as part of the submittal but not included with the submittal. Favorable Review of items included in the submittal does not constitute deletion of specified features, options or accessories that were not included in the submittal.
 - 4. The action required by the Contractor for each category of review is as follows:
 - a. **NO EXCEPTIONS TAKEN.** NO RESUBMITTAL REQUIRED.
 - b. **MAKE CORRECTIONS NOTED:**
 - (1) **NO RESUBMITTAL REQUIRED.** The Contractor shall make corrections noted prior to manufacture.
 - (2) **PARTIAL RESUBMITTALS REQUIRED.** The Contractor shall submit related accessory or optional items as noted which are required but were not included with the submittal and/or shall resubmit unsatisfactory portions or attributes of items as noted. The Contractor may proceed to manufacture those portions of the submittal that will be unaffected by required resubmittals.
 - c. **AMEND AND RESUBMIT.** The Contractor shall amend and resubmit the submittal as noted or required to comply with the Contract Documents.
 - d. **REJECTED - RESUBMIT.** The item submitted does not comply with the Contract Documents in a major way. Resubmit items that comply with the requirements of the Contract Documents.
 - 5. The letter of transmittal accompanying the returned Product Review submittal may contain numbered notes. Marking a corresponding number on a Shop Drawing or Product Data submittal shall have the same affect as applying the entire note to the submittal.
- I. Re-submittals that contain changes that were not requested by the Owner on the previous submittal shall be accompanied by a letter explaining the change.

- J. Favorable Review Required Prior to Proceeding: Do not proceed with manufacture, fabrication, delivery or installation of items prior to obtaining the Owner's Favorable Review of Product Review submittals.
- K. Intent and Limitation on Engineer's Review:
 - 1. The Contractor has primary responsibility for submitting and providing work that complies with the requirements of the Contract Documents. That responsibility cannot be delegated in whole or in part to subcontractors or suppliers. Neither the Engineer's Favorable Review nor the Engineer's failure to notice or comment on deficiencies in the Contractor's submittals shall relieve the Contractor from the duty to provide work, which complies with the requirements of the Contract Documents.

1.06 PROPOSED EQUIVALENTS

- A. Submit Proposed Equivalent submittal form.
- B. Time of Submittal:
 - 1. Submittal of Proposed Equivalents is required within 5 days of the Notice to Proceed. The Engineer may agree to a later submittal date if requested in writing within 5 days of the Notice to Proceed. The request shall identify the item, give the Specification reference, and proposed manufacturer and model number of the item that will be submitted and the proposed submittal date.
 - 2. The Engineer's agreement to a later submittal date shall be in writing and shall not be construed as Favorable Review or acceptance of the manufacturer or item proposed.
- C. Content of submittals shall be the same as that required for Product Data, Shop Drawings and Samples submitted for Product Review in another paragraph of this Section. In addition, the Contractor shall provide information on several recent similar installations of the item to verify its suitability. The information shall include the project name and location, the Owner's name, address, telephone number and name of a knowledgeable person to contact for information on performance of the product.
- D. If a non-equivalent substitute is submitted for review, it shall be accompanied by a proposed reduction in Contract Price which shall include the increased cost of Engineering service required to evaluate the proposed substitute (which shall be paid to the Owner whether or not the substitute is accepted) plus the greater of
 - 1) the difference in price between the first specified item and the item submitted and
 - 2) the difference in value to the Owner between the two items.

1.07 PRODUCT INFORMATION SUBMITTALS

- A. Product Information submittals are required for the Owner's permanent records and will be used for future maintenance, repair, modification or replacement work. Product Information submittals will be examined only to verify that the required submittals have been made; they will NOT be reviewed for compliance with the Contract Documents.

- B. Make Product Information submittals prior to delivering material, products or items for which Product Information submittals are required.
- C. The Contractor has the sole and exclusive responsibility for furnishing products and work that meets the requirements of the Contract Documents.
- D. The Owner reserves the right to comment on any submittal and to reject any product or work delivered, installed or otherwise at any time that the Engineer become aware that it is defective or does not meet the requirements of the Contract Document.

1.08 MANUFACTURER'S CERTIFICATES

- A. Submit electronically.
- B. When specified in Technical Specification section, submit manufacturers' certificate to Owner for review. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate. Certificates may be recent or previous test results on material or Product, but must be acceptable to the Owner.

1.09 CONSTRUCTION PHOTOGRAPHS

- A. Each month submit photographs to Owner with Application for Payment.
- B. Contractor shall take pre-construction and post-construction photographs to cover the site.
- C. Identify photographs with date, time, orientation and project identification.
- D. Digital photographs in JPEG format are acceptable.

END OF SECTION

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SECTION 01 50 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.01 TEMPORARY CONSTRUCTION

- A. The Contractor is solely and exclusively responsible for the design, construction and maintenance of all temporary construction including forms, falsework, shoring, scaffolding, stairs, ladders and all other similar items.
- B. Construct adequate and safe forms and falsework, to rigidly support partially completed structures. Provide temporary bridges and decking to maintain vehicular and pedestrian access. Design and construct temporary forms, falsework, bridges and decking in accordance with applicable regulations and codes.

1.02 BARRICADES, FENCES AND ENCLOSURES

- A. Barricades: Provide temporary guard rails, ladders, stairs, guards, and barricades to protect persons in accordance with applicable regulations, including California Code of Regulations Title 8 and Cal/OSHA.

1.03 PROTECTION OF INSTALLED WORK

- A. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.
- B. Provide heavy planking to protect curbs, gutters, culverts, paving and similar surfaces from damage by heavy equipment or vehicles.

1.04 SECURITY

- A. Provide security and facilities to protect the Work from unauthorized entry, vandalism, or theft.

1.05 ACCESS ROADS AND PARKING AREAS

- A. Provide facilities offsite or on public streets on which parking is permitted by local and state codes and ordinances.
- B. Contractor to coordinate access to private property with property owners.

1.06 TEMPORARY CONTROLS

- A. Cleaning:
 - 1. During Construction: Maintain the site and all work in a clean orderly fashion free of waste debris and rubbish. Store debris in covered containers. Pick up and remove debris daily if required, but not less frequently than weekly. Burning debris on site is not permitted. Remove debris from permanently closed spaces prior to enclosing them. Clean mud from vehicles before leaving the site.

2. If work under this Contract creates dusty, dirty or unsightly conditions in adjacent areas, the Contractor shall immediately cleanup the affected areas.
 3. Final cleanup is specified in Section 01700.
- B. Pest and Rodent Control: Avoid creating conditions conducive to pests and rodents. Comply with regulations governing the use of chemicals to control pests and rodents.
- C. Water Control: Maintain excavations free of water.

1.07 TRAFFIC REGULATION

- A. Conduct operations so as to offer the least possible obstruction and inconvenience to public traffic. Do not overload or damage paved or improved surfaces, sidewalks, curbs or gutters.
- B. Provide temporary barricades, lights, flag persons and other means to safely control pedestrian and vehicular traffic entering and leaving the project site and on the project site.

END OF SECTION

SECTION 01 70 00

CONTRACT CLOSEOUT

1.01 FINAL CLEANUP

- A. Prior to Final Inspection, clean the entire construction area and all other areas affected by the performance of work under this Contract. Perform cleaning using personnel specializing in and skilled in cleaning and maintenance work. Perform repair work using personnel skilled in executing the type of work being repaired. Perform all work to the highest trade standards applicable to that type of work.
 - 1. Remove all temporary construction, signs, tools, equipment, excess material and debris.
 - 2. Remove all lumps, splatters, spots and stains caused by paint, adhesive, asphalt, concrete, mortar, sealant or other foreign material from exposed or finished surfaces. Remove all temporary labels.
 - 3. Repair, patch or replace new or existing work including pavement, sidewalks, curbs, gutters, catch basins, gratings, manholes, covers, landscaping, plant materials and other items that have been damaged, broken, cracked or chipped as a result of performing this Work.
 - 4. Sweep clean and wash down all exterior pavement. Remove all hazardous material and material that may cause sediment in drainage systems prior to washdown. Remove all grease and oil stains on pavement caused by Contractor's equipment.

1.02 SEMIFINAL INSPECTION/SUBSTANTIAL COMPLETION

- A. When the Contractor considers the Work nearly complete, the Contractor shall review the Contract Documents, inspect the Work, and use the Contractor's action list to prepare a Contractor's Punch List of all deficient or uncompleted items. The Contractor shall complete or correct items on the Punch List. When the Work is Substantially Complete, the Contractor shall notify the Engineer in writing that the Contractor has reviewed the Contract Documents, inspected the Work and believes that the Work is Substantially Complete and ready for Semifinal Inspection.
- B. On receipt of the Contractor's Punch List and notice that the work is ready for Semifinal Inspection, the Owner will inspect the Work. The Owner may add additional items to the Contractor's Punch List, may find that the work is not ready for inspection, is ready for inspection but not Substantially Complete or that the Work is Substantially Complete. When the Owner finds the Work is Substantially Complete, it will prepare a Final Punch List and a notice of Substantial Complete, which will state the date of Substantial Completion and the time agreed to by the Owner and the Contractor (not to exceed 30 days) in which the Work shall be fully complete and ready for Final Inspection.

1.03 FINAL INSPECTION, FINAL COMPLETION AND FINAL PAYMENT

- A. When the Contractor has completed or corrected all the items on the Owner's Final Punch List, the Contractor shall give the Owner written notice that the Work is ready for Final Inspection. When the Owner finds the Work acceptable and fully complete in accordance with the Contract Documents, and upon receipt of a final Application

for Payment and all final submittals, the Owner will issue a Notice of Final Completion, make Final Payment and Accept the Work stating that to the best of the Owner's knowledge, information and belief, and on the basis of the Owner's observations and inspection, the Work has been fully completed in accordance with the terms and conditions of the Contract Documents.

- B. Final Submittals include:
 - 1. Record Drawings
 - 2. Special Guarantees
 - 3. Insurance Certificate showing required continuation of coverage beyond Final Payment.
 - 4. Release of Liens.
 - 5. Waiver of Claims by Contractor.
 - 6. And any other submittals required by the Contract Documents and not previously received.
- C. The Owner will record the Notice of Final Completion at the County Recorders Office.
- D. The Owner will make Final Payment to the Contractor 40 days after recording the Notice of Final Completion.

1.04 RECORD DRAWINGS

- A. The Contractor shall maintain on the jobsite, a complete set of Contract Documents and a complete file of all addenda, contract modifications and favorably reviewed submittals. The Contractor shall prepare a set of Record Drawings concurrently with the construction of the Work and in accordance with the following:
 - 1. Show the horizontal location of underground utilities measured from permanent visible physical features such as face of building, face of tank, or centerline of manhole.
 - 2. Comply with detailed requirements in technical specification sections describing the type of information required on Record Drawings. The Contractor's copy of Contract Documents, Contract modifications and Record Drawings shall be available to the Engineer for weekly verification the records are being currently updated.
- B. Submit Record Drawings and obtain acceptance prior to completion.

1.05 SPECIAL GUARANTEES

- A. Contractor is responsible to remedy defects due to faulty workmanship and materials which appear within one year from the date of Final Completion and acceptance by the Owner.

END OF SECTION

PART G - TECHNICAL PROVISIONS

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TECHNICAL PROVISIONS
MATILIJA GROUNDWATER SUPPLY
PROJECT
WELL DRILLING, CONSTRUCTION,
DEVELOPMENT AND TESTING
PILOT PROJECT
CASITAS MUNICIPAL WATER DISTRICT

Note: All features and details required to complete work as shown per the Plans and Specifications and not specifically itemized in the Definition of Bid Items shall be considered included in and a part of the Unit Prices of all Bid Items and an aggregate of the Total Bid Amount.

SECTION 1.00 - PURPOSE

The purpose of the project is to provide Casitas Municipal Water District (“the District” or “CMWD”) with a new pilot water supply test well, to be known as MGWS Pilot Well, as specified herein. The design operational capacity of the well is on the order of 1,000 gallons per minute (gpm) though artesian flow may render much higher yields if pressure and volumes sustain. At completion of this project, the test well will be shut-in via proper pressure valves and ready for subsequent phases of development and long-term testing.

SECTION 1.01 - PROJECT LOCATION

The proposed well construction site for the MGWS Pilot Well is at the District-owned Robles spoils area (APN 011-0-270-030), just west of the Robles Canal and the Ventura River in Ventura County, California. Access will be via the locked gates and crossings of the river and canal via the north end of Rice Road or via alternate canal roads from the west.

Heavy equipment must use the Robles Canal access road. Regular work trucks may use the Rice Road access.

The well site is centrally located on a 19.83-acre parcel that is mostly usable during the project. Sheet 1 illustrates the location of the proposed well site.

SECTION 1.02 - OVERVIEW OF WORK TO BE DONE

Work includes the furnishing of all materials, labor, equipment, fuel, tools, transportation, and services for drilling, construction, development, testing, and valve-sealing of one new pilot test well as described in these specifications. The depths of drilling and the types and lengths of blank and screened casing specified herein are approximate values and serve only as a guide in the bidding process. Actual drilled depths and final well design parameters will be identified after each

concentric borehole has been drilled and may differ from that outlined in these Special Conditions and in the Special (Technical) Provisions, based on review of newly generated geologic and geophysical logging data.

The general work required for construction of the well includes, but is not limited to, the following:

- Move equipment onto and from the site.
- Construct temporary noise attenuation barriers and fencing as needed to comply with Ventura County noise ordinances.
- Build temporary berms to allow for test water infiltration.
- Provide temporary storage tanks for settlement of solids from development water prior to discharge to the proximal infiltration area.
- Drill the upper 50 feet of the hole to a minimum of 24 inches in diameter and install approximately 50 feet of 18-inch O.D. conductor (surface) casing. Grout the annular space between the casing and the wall of the hole from the bottom of the conductor to ground surface.
- Provide and install appropriate blow-out protection equipment (BOPE) for the project.
- Drill approximately 1150 feet of pilot borehole below the bottom depth of the conductor (approximately to the base of the Sespe formation) to a total depth of 1200 ft below ground surface (bgs) with a 16-inch diameter drill bit, collect drill cuttings, keep a drilling time log, and prepare drilling logs.
- Conduct geophysical logging with spontaneous potential (SP), short- normal and long-normal resistivity surveys, a focused resistivity (guard) survey, deviation, and a gamma-ray survey in the borehole.
- Furnish and install a “Sespe Conductor” casing consisting of an 11-inch steel casing with a drillable grout shoe, and cement pumped to the annulus with returns to ground surface.
- Drill approximately 3,800 feet of 11-inch-diameter borehole below the bottom depth of the Sespe conductor (approximately to the base of the Cozy Dell formation) to a total depth of 5,000 ft bgs, collect drill cuttings, keep a drilling time log, and prepare drilling logs.
- Conduct geophysical logging with spontaneous potential (SP), short- normal and long-normal resistivity surveys, a focused resistivity (guard) survey, deviation, and a gamma-ray survey in the borehole.

- Furnish and install a “Tcd/Tcw Conductor” casing consisting of a 7-inch steel casing with a drillable grout shoe, and cement pumped to the annulus with returns to ground surface.
- Drill approximately 2,000 feet of 7-inch-diameter borehole below the bottom depth of the Tcd/Tcw conductor (approximately to the base of the Matilija formation) to a total depth of 7,000 ft bgs, collect drill cuttings, keep a drilling time log, and prepare drilling logs.
- Conduct geophysical logging with spontaneous potential (SP), short- normal and long-normal resistivity surveys, a focused resistivity (guard) survey, deviation, and a gamma-ray survey in the borehole.
- Furnish and install a production liner casing consisting of a 6-inch-diameter, louvered HSLA steel casing with a grout shoe, gravel pack pumped to the annulus and cement pumped to the annulus and a short bottom cement seal.
- Develop the well by such methods as surging and simultaneously air lifting of water in each section of well screen, swabbing, addition of chemicals, if needed, and pumping.
- Conduct pumping/artesian flow tests to evaluate well/aquifer characteristics.
- Provide well head completion via -pressure valves that are appropriate for the formation fluids pressures that will prevent undesired flow and provide a means for pressure measurement until longer term testing can be conducted.
- Conduct final site cleanup and restoration to pre-existing conditions, including replacement of damaged pavement, divots, holes, and irrigation lines, etc.

It will be the sole responsibility of the Contractor to have inspected the well site and to make all necessary provisions for physically moving onto and off the drilling site with personnel, equipment, supplies and material.

SECTION 1.03- PERMITS & NOTIFICATIONS

The District will make a preliminary application to the County of Ventura for the construction of a deep water well. Upon selection, the Contractor shall complete and comply with the permit by providing his licensure and signature where required. The Contractor shall obtain all other permits/licenses that may be required, including applicable permits for equipment and offsite transport of wastes. Such applicable permits will be obtained and/or maintained at the driller’s expense.

It will be the responsibility of the Contractor to notify Underground Services Alert (USA) at least 48 hours in advance of performing any excavation onsite. Further, the Contractor will also need to

notify the Ventura County Groundwater Section inspector at least 48 hours in advance of setting each cement seal in the well.

SECTION 1.05 – LOCAL CONDITIONS

The proposed well site is located on a vacant parcel adjacent to the Robles Canal access opposite the Robles Canal. Shown on Sheet 3, the well is anticipated to be located in the central portion of the parcel, bearing County Assessor's Parcel Number 011-0-270-030.

The nearest similar well is a 1920s-era oil exploration well known as the EJ Miley "Industrial No. 1" bearing API No. 11101371. Logs indicate sandstones and shales are expected in this area, to the total depth of 5,021 feet in what is interpreted to be the Matilija formation and the target of the MGWS Pilot Well project. The 23-page data sheet for this well is appended. Neither the District nor its Geologist guarantees that the logs of proximal wells are indicative of conditions that will be encountered during drilling of the new well. The driller's log and the information presented therein are to be used by the Contractor at their own risk.

Groundwater is considered to generally occur under highly confined conditions in the aquifers to be screened in the new well. Based on outcrop elevations of the target formation, typically 1200 feet above the ground surface elevation at the well site, the well is anticipated to flow under significant artesian pressure and if shut-in, may hold a pressure of greater than 600 pounds per square inch (psi). However, shallower groundwater, due to the presence of shallower or intermediate water bearing formations, unconfined or perched groundwater conditions (and depending on the season in which the well is constructed), may also be encountered during drilling. Lost circulation is a possibility, and fluid management is entirely the responsibility of the Contractor.

The drill site is part of an active outdoors environment, with occasional hikers traversing, District maintenance personnel passing by, and wildlife in the adjacent Los Padres National Forest. Along with the adjacent canal road access, the site is large enough to house Contractor's staging area and operations for the drilling of the MGWS Pilot Well.

SECTION 1.06 – METHOD OF DRILLING

The new well shall be drilled by the direct-circulation drilling method. The drilling equipment shall be in good condition and of sufficient mast capacity to permit drilling of the borehole required by these specifications to a depth of approximately 7,000 feet below ground surface (bgs). All drilling equipment including mast and draw-works, air compressors, drilling fluid pumps, drill pipe, etc., must be of requisite size, sufficient capacity, and in suitable condition to drill and set casing to the anticipated depths. The mast and all running gear (hoists, cables, etc.) shall have sufficient and demonstrated capacity to lift two (2) times the buoyant weight of either the drill string or the casing and screen assembly (whichever is greater).

The Contractor shall furnish with their bid, detailed information documenting the capacity of the various components of the rig used including, but not limited to, derrick/mast capacity, drill pipe type and rating, all line and hook load capacities, air compressor rating, etc. The drill rig utilized must have the ability to fully lift and land the anticipated casing loads without the use of cranes, float plugs, or other similar methods.

Drilling Rig information to be supplied by bidder includes:

1. Rated hook load and safe load for substructure
2. Mast height
3. Available rotary table horsepower
4. Available draw works horsepower
5. Available mud pump horsepower
6. Drilling fluid circulating rate
7. Total available rig horsepower
8. Drilling rig Year, Make, and Model

The rig shall be equipped with the following accessory equipment:

1. Weight indicator
2. Mud pressure gauge
3. Approved equipment for measuring drilling fluid properties
4. De-sander
5. Shale shaker (or other approved equipment for separation of cuttings).
6. Drilling-rate recorder.
7. Deviation-survey tool.

The Contractor shall also submit their proposed drilling program and schedule, including:

1. Type(s) of bits
2. Number, diameters, lengths and weights of drill collars
3. Size and weight of drill pipe
4. Expected rotary RPM

The description of the shut-in valve equipment and instruments shall include the following:

1. Valve type and sizes
2. Pressure ratings
3. Pressure gauges
4. Manual valve operation instruction
5. Type, size, flow range and accuracy range of gauges and sample ports

SECTION 1.07 - PRE-BID SITE WALK

A mandatory pre-bid site walk of the well site and environs will be conducted by the District on the date and time indicated in the Notice Inviting Bids.

The purpose of the pre-bid site walk is to acquaint prospective bidders with the well site, access for equipment, local physical features, proximity of residences and other structures, site logistics, obstructions, water and power sources, and points of discharge for development and testing water. However, the conditions and requirements of these Specifications will govern over any information presented at the pre-bid site walk. Addenda, if necessary, will be issued by the District.

Submission of a bid by the Contractor shall constitute acknowledgment that, if awarded the contract, the Contractor is relying solely on their own examination of: the site of the work; access to and from the site; the physical conditions (both surface and subsurface) and the contractual conditions under which the work is to be performed; and all other data and matters pertaining to the fulfillment of the work.

SECTION 1.08 - PRE-CONSTRUCTION MEETING

Upon award of contract, the District will arrange a pre-construction meeting to be attended by the District, the District's Geologist, the Engineer, the Contractor and their Field Superintendent/Foreman, and others whose input may be desired by the Contractor or the District. The pre-construction meeting will be held within approximately 15 days after the Notice of Award is received by the Contractor. The purpose of this conference will be to establish and discuss the following aspects of the project:

- communication and liaison between the parties;
- clarify any questionable areas of work on the project; outline the construction schedule;
- identify casing manufacturers and electric logging subcontractors;
- define drilling methods;
- define development techniques by mechanical/chemical/pumping methods;
- discuss and define disposal of drill cuttings and water generated during drilling, development, and testing operations;
- discuss construction costs and payments/invoices and processing; and
- discuss any other subjects and submittals deemed appropriate to the project.

SECTION 1.09 - CONSTRUCTION SCHEDULE

The Contractor shall conduct drilling and well construction operations around-the-clock (24 hours per day, 7 days a week). Compliance with all applicable laws and regulations regarding construction operations at all hours, including noise ordinance compliance and proximal residential nuisance issues, are the Contractor's responsibility from mobilization to demobilization of all equipment and materials. Other operations, such as mechanical development, pumping development and testing, shall be conducted at the Contractor's discretion and within a time schedule adequate to complete the entire project on time.

The District recognizes that drilling efficiency and rapid borehole advance rates are critical to the successful and timely completion of the well. The Contractor shall be expected to drill the well from commencement of drilling below the surface conductor casing, reaming the pilot borehole, setting casing, gravel packing, and cementing without significant delays. A construction schedule including starting date shall be submitted with the bid, for review by the Geologist.

SECTION 1.10 - SUPERVISION AND COOPERATION

The Contractor shall provide a qualified and experienced foreman and drilling superintendent, one of whom shall be constantly in attendance throughout the drilling and construction of the well. In addition to directing all well construction and well testing activities, the foreman shall be capable of coordinating the work with all personnel, subcontractors, and the District so that the overall project is successfully executed and completed without conflicts or delays.

SECTION 1.11 - COMPLETION OF WORK

All work within the project shall be completed within 120 calendar days from the date of the Notice to Proceed.

SECTION 1.12 - TERMINATION

The District reserves the right to terminate the work on the well at any time. In such an event, the Contractor will be paid for the value of their work successfully completed at the time on the basis of the unit values shown on the Bid Schedule.

The District reserves the right to select an alternative well site to replace any pilot borehole/reamed hole that required destruction. If such an alternative site is chosen by the District, the Contractor will be paid for the work done at the alternate site on the basis of the unit price items shown on the Bid Schedule. Mobilization-demobilization items may be subject to a negotiated price because of the probable close proximity of the two sites.

SECTION 1.14 - FIELD OFFICES AND FACILITIES

The Contractor shall furnish for the project a temporary field office for the joint use of their personnel, the District and its representatives, and the Geologist. The field office is considered

necessary for 24-hour per day availability of a clean, dry shelter to protect logging equipment (logs, separated samples, computers, microscopes, scales, etc.) and personnel from the elements. This will also be used so that the aforementioned parties can meet and review geologic and geophysical logs and other data in order to discuss and decide casing completion details and any other in-the-field determinations. A small house-type trailer supplied with electricity and lighting is considered acceptable for use as a field office. Special plan racks, air conditioning or hot running water will not be required.

The Contractor shall provide minimum daily updates via email to the Geologist during drilling, construction, and development and testing operations.

Suitable sanitary facilities are to be provided and maintained by the Contractor.

SECTION 1.15 - JOB SITE PROTECTION

Throughout the construction period, the Contractor shall keep the work site clean and free of all rubbish and debris. The Contractor shall provide for the disposal of all surplus materials, waste products, debris, etc., and shall make necessary arrangements for such disposal. Debris may be contained on the site, but only in approved containers, until it is hauled away and disposed of at an approved site.

The Contractor shall keep the adjacent trails, roads, graded ground, and forest lands free of all materials including but not limited to mud, dust, dirt, oils, greases, and debris originating from their activities throughout the construction period, in compliance with applicable ordinances and regulations.

At completion of the work, the Contractor shall remove all waste materials, rubbish and debris from and about the well site as well as all tools, construction equipment, fuel tanks, machinery, temporary structures, and surplus materials. The Contractor shall leave the site clean and ready for use by the District, with a securely welded/bolted/flanged set of valves on top of the well casing(s) and a secure perimeter fence around the well head. The Contractor shall restore to their original condition all temporary work areas, including replacement of damaged pavement, filling of divots or impressions, and irrigation lines, etc.

Throughout all phases of work on this project, the Contractor shall maintain job site and wellhead security to preclude accidental or intentional damage and/or contamination of the well and the water supply. Whenever the well site is unattended, the borehole or installed well casing shall be covered to prevent entry by animals, humans, or equipment/tools. In addition, the site shall be secured whenever drilling operations are not being performed.

It is anticipated that nuisance water, such as rainfall, irrigation water, or local surface runoff may occur within the construction site during the period of construction under this contract. The Contractor, by submitting their bid, will be held to have investigated the risks arising from such waters and shall take all due measures to prevent delays in progress of the work caused by such waters.

The Contractor shall prevent damage to the site and adjacent properties (including bridges, crossing, trails, roads, and streets) due to pumping water during drilling, development, or testing or due to interruption or diversion of storm or wastewater during execution of the work. The Contractor shall properly dispose of drilling waste and nuisance water. The Contractor shall provide drilling fluid tanks of adequate sizes to clarify and re-circulate the fluids used for the drilling.

SECTION 1.16 - TEMPORARY WATER & POWER SERVICES

Temporary water service for construction purposes shall be supplied to the Contractor from a hydrant near the project site. Use of a water meter will be necessary but there will be no cost to the Contractor for the water used. A \$500 deposit for the meter is required. Arrangements to obtain a water meter can be made by contacting the District offices at (805)649-2251.

The Contractor shall provide all electric power at their own cost, as required for construction, testing, general lighting (including the Field Office), security lighting, and for any other purposes whether supplied through temporary or permanent facilities. Should the Contractor arrange with the local utility to provide any required electrical service at a mutually agreeable location (rather than supply via power generating facilities) the Contractor shall provide adequate job site distribution facilities for the power which conforms to applicable codes and safety regulations.

SECTION 1.17 - DISPOSAL OF MATERIALS

The Contractor shall stockpile and dry all drill cuttings and/or drill fluids for transfer to a proper location on the property as directed by District personnel. Drill cuttings shall not be spread on the drill site area unless dry. The Contractor shall be required to convey all water discharged during development and testing in a closed pipe to a suitable discharge site (see Section 1.18). Drilling fluids/muds and/or muddy and dirty water shall be discharged only at a District-designated area, under the conditions outlined above. All other waste materials/items generated as a result of drilling operations (e.g., bins, buckets, cartons, pallets, bags) must be hauled away for disposal.

SECTION 1.18 - DISCHARGE OF DEVELOPMENT AND TESTING WATER

Discharge of development and testing water will be conducted to the local infiltration gallery after clarification via Contractor-supplied vessels. To meet the standards of permitting, the Contractor shall have numerous large temporary storage tanks (Baker, Adler, or Rain-for-Rent types, or equal) of sufficient capacity to store and treat (clarify) water primarily from mechanical development and flow testing operations prior to discharge to the local infiltration gallery. The temporary storage tanks shall be connected, in series, through the use of flexible hose, aluminum, PVC or steel piping. The minimum number of tanks required will be discussed at the mandatory pre-bid meeting, but the ultimate number used will be that which are required to render the discharge water free and clear of suspended impediments to infiltration when applied to the gallery and provided at the costs included in the Contractor's bid.

Mechanical development water that is to be eventually discharged into the infiltration gallery shall

be pumped to the fluids circulation tank and then to settlement tanks as required to allow the solids to settle before finally discharging. It may become necessary to treat this discharge water to meet this requirement. Treatment may include, but not be limited to, adding a flocculent, dechlorinator, or blending the discharge water with make-up water in order to mitigate total suspended solids (TSS), nitrate, residual chlorine, or other contaminants.

NO DEVELOPMENT FLUIDS MAY BE DISCHARGED FROM THE STORAGE TANKS UNTIL TESTING HAS BEEN COMPLETED AND THE FINAL METHOD FOR DISCHARGING (e.g., settling, treatment or blending) HAS BEEN DETERMINED.

Water from development and testing operations may be discharged directly to the nearby infiltration gallery via a Contractor-supplied discharge pipeline. However, this is contingent upon the discharge meeting all requirements, including any residual drilling fluids or chlorine. It may be necessary to allow for further solids settlement or to blend the discharge with make-up water to bring TSS or residual chlorine concentrations below specified limitations. The District may assist the Contractor in determining the feasibility of either the use of temporary storage tanks to store water for later disposal or direct discharge of the development and testing water to the infiltration gallery, presentative samples of the discharge will be collected at the discharge point by the Geologist or District and analyzed by the District's contract laboratory to check ability to safely discharge the water. The District will pay for all laboratory costs for sampling. Sampling and analyses may be required prior to the first discharge of any fluids from the well site to the storm drain. It is the Contractor's responsibility to adhere to the stipulations of the District's requirements. Any penalty for violation thereof during the course of work under this contract will be borne by the Contractor. Additionally, no standby time will be paid to the Contractor while awaiting analyses for permitted discharge.

SECTION 1.19 - SUBMITTALS.

All records shall be available to the District at all times on the job site. Copies of all records shall be submitted to the District or the District's Geologist. The records to be submitted by the Contractor shall include:

1. All geophysical logs (5 copies of each) and in PDF and LAS/ASCII format (on a flash drive or via email).
2. All construction information necessary to complete a State Driller's Log.
3. Mechanical development (air lifting and swabbing) records.
4. Steel certification for all blank and perforated casing and tubing.
5. Cement weigh tickets for the conductor casing and for the cement annular seal of the new well.
6. Water Well Driller's Reports in accordance with the State of California Department of Water Resources (DWR) requirements.

During and following all construction activities, time is of the essence in submitting the required records and forms to the Geologist. The Contractor shall submit all of the above information to the Geologist within 14 days following completion of work.

TECHNICAL PROVISIONS

SECTION 2.01

MOBILIZATION AND DEMOBILIZATION

Bid Item No. 1

2.01-1 SCOPE

2.01-1 MOBILIZATION

Mobilization and demobilization shall include the following: completion and compliance with the County of Ventura Well Permit; the transportation of personnel, equipment, and operating supplies and materials to and from the site; preparation of and ensuring successful crossings of rivers, creeks, and canals to reach the well site, construction of any temporary chain-link fencing to isolate any staging area in the project area; establishment of a field office and ancillary facilities; obtaining an adequate source of fresh water from the District; and other preparatory work at the site and mobilization for work required by the Contractor.

The Contractor shall provide a complete direct circulation drilling unit; all tools, accessories, power, fuel, materials, supplies, lighting, water, and other equipment; and experienced personnel necessary to conduct efficient drilling operations. The drilling unit shall be in good condition and of such capacity as to drill the hole and set casing required by these Specifications to a depth of approximately 7,000 ft bgs. The contractor shall also include any blow out prevention equipment (BOPE) that will be needed for this project in his bid under the mobilization/demobilization costs.

Following demobilization, the Contractor shall restore the parcel to approximate pre-existing conditions, including, but not limited to: removal of any fencing, replacement or repair of damaged pavement, bridges, dry crossings, culverts or roadways; filling and compacting wheel, jack, tank, or other depressions in soil, and replacement of damaged water lines or other subsurface utilities.

SECTION 2.02
NOISE ATTENUATION BARRIERS
Bid Item No. 2

2.02-1 **SCOPE**

2.02-1 **FURNISH AND INSTALL NOISE ATTENUATION BARRIERS**

Noise Attenuation Barriers shall consist of construction of an estimated 800 linear feet of temporary noise attenuation barriers that will facilitate compliance with County noise ordinances and applicable light ordinances. Under this bid item the contractor shall maintain, repair, or replace noise attenuation barriers to comply with County codes and ordinances as necessary throughout the project. It is anticipated that the barriers may only be required on the east side of the drilling rig, such that noise at the adjacent neighborhood is not in excess of the County noise limits. However, the linear footage of 800 feet is specified as complete rig encompassing may be required to comply with noise limitations.

Following demobilization, the Contractor shall remove the barriers and restore the supporting locations of the barriers to approximate pre-existing conditions, including, but not limited to: filling and compacting of post holes, replacement of damaged pavement; filling and compacting wheel, jack, tank, or other depressions in soil, and replacement of damaged irrigation or other subsurface utility lines.

SECTION 2.03
CONDUCTOR (SURFACE) CASING
Bid Item No. 3

2.03-1 **SCOPE**

The Contractor shall bore a minimum 24-inch diameter hole from ground surface to a depth of at least 50 feet, or as directed by the Geologist, into which a minimum 18-inch outer diameter (O.D.) surface conductor casing shall be installed. The conductor casing will provide near-surface hole stability and conduct drilling fluids and cuttings safely to the surface. Bidders are advised that cobbles and boulders may be present in the area of the conductor casing borehole, and addressing issues of perched water, caving, overexcavating, etc. must be included in the unit price for this bid item.

2.03-2 **MATERIAL REQUIREMENTS**

The conductor casing shall be a minimum 18 inches outside diameter steel pipe having a wall thickness of not less than 5/16-inch and a length of not less than 50 feet. Conductor casing shall be manufactured in accordance with ASTM Designation A-139, Grade B, without copper. All joints in the conductor casing shall be securely welded and shall be watertight. Field joints shall be either collared or butt welded. Centering guides shall be welded to the conductor casing with a minimum of two sets of guides (one near the bottom and one near the top). Each set shall consist of three guides equally spaced circumferentially.

After the conductor casing has been installed, the annular space between the borehole and the conductor casing shall be filled and sealed by means of a grout pipe and pumping mixed concrete (minimum 8-sack mix with ASTM C150 Type I or II Portland cement). Upon completion of cementing, concrete shall be visible above the surface of the ground outside the conductor casing and witnessed by a County Inspector (with proper notification by Contractor) or their designee. After cementing operations are completed, the concrete shall be left undisturbed for a period of not less than 24 hours before drilling is resumed. Figure 2.02-1 presents a preliminary design of the well including the conductor casing.

SECTION 2.04
SESPE CONDUCTOR CASING
Bid Item No. 4

2.04-1 **SCOPE**

This item shall consist of drilling a 16-inch-diameter borehole by the direct circulation drilling method and, after geophysical logging (Bid Item No. 7), furnishing and installing an 11-inch-diameter steel casing with a drillable grout shoe at base, and cementing the casing into place via a tremie pipe set at depth and grouted bottom-up and inside-out until cement returns are visible at ground surface. The borehole shall extend from the bottom of the surface conductor casing to a depth of approximately 1200 ft bgs or as determined by the Geologist.

2.04-2 **CONSTRUCTION MATERIALS**

2.04-2.1 **11-INCH I.D. BLANK STEEL CASING and CEMENT (BID ITEM No. 4)**

The Sespe conductor blank casing shall be high strength steel of API 5CT J55/K55 specification. The casing shall be 11-inch-inside diameter, minimum. The casing shall also have threaded ends and coupled with adequate couplers to withstand pressures of installation and operation. The wall thickness shall be 0.333-inch minimum. Length of 11-inch blank casing is estimated to total 1200 ft. A drillable cement grout shoe shall be affixed to the deepest section of pipe through which the cement can be pumped.

The cement grout seal shall be a 10-sack mix sand-cement grout. Cement used for the seal shall be Portland cement conforming to ASTM C150, Type II. There shall be not more than two parts by weight of sand to one part by weight of cement. The water-cement ratio shall be about 7 gallons per sack of cement (94 pounds). All onsite water additions shall be metered. Up to 5 percent bentonite gel and 2 percent calcium chloride may be added. An estimated 1200-foot length of the annulus between the well casing and the 16-inch-diameter borehole is anticipated for the cement grout seal.

2.04-3 **CONSTRUCTION METHODS**

2.04-3.1 **BOREHOLE DRILLING**

Only fresh water shall be used in the drilling fluid whether employed alone or in combination with drilling additives. All water used during drilling shall meet California State Department of Health standards for safe drinking water. The drilling fluid shall possess such characteristics as are required to adequately maintain the walls of the hole to prevent caving of the wall as drilling progresses and to permit recovery of representative samples of cuttings. The drilling fluid shall also possess such characteristics that it can be readily removed from the hole during the placement of the gravel pack and during development of the well. Drilling fluid additives may be a biodegradable, polymer

system such as HEC, Drispack, Kim Mud, Dual-Vis, or a clay base bentonite system, providing the properties specified below can be maintained to the satisfaction of the Geologist. The Contractor is advised that excessive water loss in clay zones can lead to swelling, loss of shear strength, substantial caving, and hole stability problems. Significant fluid loss may be encountered in the highly permeable gravels and sands expected to be encountered in the bore and must be addressed by the contractor under his bid amounts. The drilling fluid and additives to be utilized should contain properties to inhibit these possibilities.

The Contractor must possess sufficient mud tank volume and access to effectively separate cuttings and keep sand and solids contents below the specified amounts. If drilling fluid conditions as outlined below are exceeded, the Contractor will be required to immediately suspend further drilling until corrected. Reference is made to Section 1.18 in the Special Conditions for disposal of drilling fluid/mud.

Excavated mud pits cannot be used. Portable mud tanks with internal baffles, which allow drill cuttings to settle are required. Sediment shall be removed periodically from the tank in order to maintain tank volume and keep drilling fluid properties within specifications.

The drill rig must be provided at all times with the following Standard API drilling fluid measuring devices to measure the following properties:

- a) Drilling fluid weight
- b) Drilling fluid viscosity
- c) Drilling fluid sand content

The drilling fluid shall have the following properties in accordance with API Code RP 13B (or latest revisions) "Recommended Standard Procedure for Testing Drilling Fluids." In the event the Contractor cannot attain these properties, the mud shall be replaced.

- 1) Weight – a maximum to 80 pounds per cubic foot (10.7 pounds per gallon) during borehole drilling.
- 2) Marsh funnel viscosity – maximum to 50 seconds during borehole drilling.
- 3) Sand content of mud entering the pump – a maximum of five percent by volume during all aspects of drilling.

At the completion of drilling operations, drill cuttings cleaned from the tank, as well as drilling fluids, are to be removed from the site and properly disposed of by the Contractor at his expense. See Section 1.17 for disposal of these cuttings.

At completion of the borehole, adequately thinning the drilling fluid, as necessary, and after conducting the geophysical surveys, the Contractor shall install the well casing at intervals as

determined by the Geologist. The estimated casing lengths shown on the Bid Schedule are approximate and are for bidding purposes only.

2.04-3.2 SESPE CONDUCTOR CASING

Prior to the installation of any casing, the Contractor shall inspect for and remove any tags, labels or other deleterious matter attached to the interior or exterior of the pipe and screen sections delivered to the job site.

The casing shall be plumb and shall be centered in the hole. All field joints shall be properly screwed into place per standard practice and torque ratios.

Centralizers with 120-degree spacing are to be attached directly to the casing. This is for the purpose of centering and holding the casing in the proper position until the cement is in place. The centralizers shall be of compatible chemical and physical properties as used for each casing. The maximum amount of separation between the centralizers shall be 80 feet in the blank Sespe Conductor casing.

The casing shall be suspended in tension from the surface by means of an appropriate hanger or clamp. The use of float plugs to land and set casing is not permitted. The bottom of the casing shall be at a sufficient distance above the bottom of the reamed hole so that none of the casing will be supported from the bottom of the hole.

If, for any reason, the casing cannot be landed in the correct position or at a depth acceptable to the Geologist, the Contractor shall destroy the hole and construct another well. This well will be located adjacent to the original well location, and the Contractor shall complete this well in accordance with the Specifications at no additional cost to the District. The abandoned hole shall be sealed and destroyed in accordance with directions from the District and in accordance with any laws pertaining to proper well destruction, all at no additional cost to the District.

If any of the casings should collapse prior to well completion, they shall be withdrawn and replaced at Contractor's expense. All work required to be repeated and all additional materials, labor, and required equipment shall be furnished by the Contractor and at the expense of the Contractor. No additional compensation for the work and materials shall be made or allowed.

2.04-3.3 CEMENTING

Cement grout shall be injected in the annular space between the well casing and the bore hole from bottom to top by means of a temporary tremie pipe. Cement grout materials shall be placed by a positive displacement method using pumping.

The temporary tremie pipe shall extend from the surface to the bottom of the casing to be cemented. Cement shall be placed, from bottom to top, in a continuous operation unless determined by the Contractor that a staged placement is required to prevent casing collapse. The grout pipe shall be maintained full, to the surface, at all times until completion of the grouting of the entire specified

zone before being flushed with the appropriate volumes and pressure of water to displace cement from the tremie pipe. Cement returns to surface must be observed to determine that the cementing job is complete.

Following grouting, no further work shall be performed in the well for a minimum of 24 hours. No standby time will be paid while cement is setting.

The Contractor shall be responsible for computing the casing collapse potential during grouting and shall take whatever precautions necessary, including staging the grouting operation, in order to prevent damage. In the event the borehole or casing collapses prior to completion of the cement grout seal, the Contractor, at their own expense, shall take whatever remedial steps are necessary to reopen the borehole annulus and place the seal as specified.

The Contractor shall keep a record of the volume of cement used. The cement volume shall not be less than the calculated volume of the annular space between the conductor casing or the reamed borehole and the well casing.

2.04-4 CONSTRUCTION RECORDS

The Contractor must keep records providing the following information:

- 1) A log of drilling bit types and depths of changes.
- 2) A record of drilling fluid properties at 4-hour intervals. The record shall show mud weights, Marsh funnel viscosity, sand content, solids content, water additions, and any mud additives or lost circulation materials used.
- 3) The log for the completed well shall show the following parameters: diameter, wall thickness, depths, and quantities of casing and screen installed; borehole ream diameters; cemented sections; gradation of gravel envelope; any other pertinent details deemed necessary by the District or the Geologist.

- 4) All measurements for depths shall be referenced to existing ground surface at the well site. During development and production testing, all water-level measurements shall be referenced to an arbitrary reference point established at the top of the sounding line as specified by the Geologist.

During drilling of the borehole, at 10-foot or less intervals, or as directed by the Geologist, the Contractor shall take representative samples of drill cuttings from the interval and shall place cuttings in suitably labeled locking plastic bags supplied by the Contractor. All bags shall be labeled to indicate the depth interval, date, and well number of the collected sample. The samples shall be properly stored by the Contractor in a manner as to prevent breakage or loss until the samples are accepted by the Geologist.

Upon completion of the borehole, geophysical logging of the borehole shall be conducted for the purpose of providing information for the final design of the well. The geophysical logging is described in Section 2.07.

SECTION 2.05
COLDWATER AND COZY DELL (Tcw/Tcd) CONDUCTOR CASING
Bid Item No. 5

2.05-1 **SCOPE**

This item shall consist of drilling an 11-inch-diameter borehole by the direct circulation drilling method and, after geophysical logging (Bid Item No. 7), furnishing and installing a 7-inch-diameter steel casing with a drillable grout shoe at base, and cementing the casing into place via a tremie pipe set at depth and grouted bottom-up and inside-out until cement returns are visible at ground surface. The borehole shall extend from the bottom of the Sespe conductor casing to a depth of approximately 5000 ft bgs or as determined by the Geologist.

2.05-2 **CONSTRUCTION MATERIALS**

2.05-2.1 **7-INCH I.D. BLANK STEEL CASING and CEMENT (BID ITEM No. 5)**

The Tcw/Tcd conductor blank casing shall be high strength steel of API 5CT J55/K55 specification. The casing shall be 7-inch-inside diameter, minimum. The casing shall also have threaded ends and coupled with adequate couplers to withstand pressures of installation and operation. The wall thickness shall be 0.333-inch minimum. Length of 7-inch blank casing is estimated to total 5000 ft. A drillable cement grout shoe shall be affixed to the deepest section of pipe through which the cement can be pumped.

The cement grout seal shall be a 10-sack mix sand-cement grout. Cement used for the seal shall be Portland cement conforming to ASTM C150, Type II. There shall be not more than two parts by weight of sand to one part by weight of cement. The water-cement ratio shall be about 7 gallons per sack of cement (94 pounds). All onsite water additions shall be metered. Up to 5 percent bentonite gel and 2 percent calcium chloride may be added. An estimated 5000-foot length of the annulus between the well casing and the 11-inch-diameter borehole is anticipated for the cement grout seal.

2.05-3 **CONSTRUCTION METHODS**

2.05-3.1 **BOREHOLE DRILLING**

Only fresh water shall be used in the drilling fluid whether employed alone or in combination with drilling additives. All water used during drilling shall meet California State Department of Health standards for safe drinking water. The drilling fluid shall possess such characteristics as are required to adequately maintain the walls of the hole to prevent caving of the wall as drilling progresses and to permit recovery of representative samples of cuttings. The drilling fluid shall also possess such characteristics that it can be readily removed from the hole during the placement of the gravel pack

and during development of the well. Drilling fluid additives may be a biodegradable, polymer system such as HEC, Drispack, Kim Mud, Dual-Vis, or a clay base bentonite system, providing the properties specified below can be maintained to the satisfaction of the Geologist. The Contractor is advised that excessive water loss in clay zones can lead to swelling, loss of shear strength, substantial caving, and hole stability problems. Significant fluid loss may be encountered in the highly permeable gravels and sands expected to be encountered in the bore and must be addressed by the contractor under his bid amounts. The drilling fluid and additives to be utilized should contain properties to inhibit these possibilities.

The Contractor must possess sufficient mud tank volume and access to effectively separate cuttings and keep sand and solids contents below the specified amounts. If drilling fluid conditions as outlined below are exceeded, the Contractor will be required to immediately suspend further drilling until corrected. Reference is made to Section 1.18 in the Special Conditions for disposal of drilling fluid/mud.

Excavated mud pits cannot be used. Portable mud tanks with internal baffles, which allow drill cuttings to settle are required. Sediment shall be removed periodically from the tank in order to maintain tank volume and keep drilling fluid properties within specifications.

The drill rig must be provided at all times with the following Standard API drilling fluid measuring devices to measure the following properties:

- d) Drilling fluid weight
- e) Drilling fluid viscosity
- f) Drilling fluid sand content

The drilling fluid shall have the following properties in accordance with API Code RP 13B (or latest revisions) "Recommended Standard Procedure for Testing Drilling Fluids." In the event the Contractor cannot attain these properties, the mud shall be replaced.

- 4) Weight – a maximum to 120 pounds per cubic foot (16.1 pounds per gallon) during Tcw/Tcd borehole drilling.
- 5) Marsh funnel viscosity – maximum to 60 seconds during Tcw/Tcd borehole drilling.
- 6) Sand content of mud entering the pump – a maximum of five percent by volume during all aspects of drilling.

At the completion of drilling operations, drill cuttings cleaned from the tank, as well as drilling fluids, are to be removed from the site and properly disposed of by the Contractor at their expense. See Section 1.17 for disposal of these cuttings.

At completion of the borehole, adequately thinning the drilling fluid, as necessary, and after conducting the geophysical surveys, the Contractor shall install the blank casing at intervals as determined by the Geologist. The estimated casing lengths shown on the Bid Schedule are approximate and are for bidding purposes only.

2.05-3.2 Tcw/Tcd CONDUCTOR CASING

Prior to the installation of any casing, the Contractor shall inspect for and remove any tags, labels or other deleterious matter attached to the interior or exterior of the pipe and screen sections delivered to the job site.

The casing shall be plumb and shall be centered in the hole. All field joints shall be properly screwed into place per standard practice and torque ratios.

Centralizers with 120-degree spacing are to be attached directly to the casing. This is for the purpose of centering and holding the casing in the proper position until the cement is in place. The centralizers shall be of compatible chemical and physical properties as used for each casing. The maximum amount of separation between the centralizers shall be 80 ft in the blank Tcw/Tcd Conductor casing.

The casing shall be suspended in tension from the surface by means of an appropriate hanger or clamp. The use of float plugs to land and set casing will not be permitted. The bottom of the casing shall be at a sufficient distance above the bottom of the reamed hole so that none of the casing will be supported from the bottom of the hole.

If, for any reason, the casing cannot be landed in the correct position or at a depth acceptable to the Geologist, the Contractor shall destroy the hole and construct another well. This well will be located adjacent to the original well location, and the Contractor shall complete this well in accordance with the Specifications at no additional cost to the District. The abandoned hole shall be sealed and destroyed in accordance with directions from the District and in accordance with any laws pertaining to proper well destruction, all at no additional cost to the District.

If any of the casings should collapse prior to well completion, they shall be withdrawn and replaced at Contractor's expense. All work required to be repeated and all additional materials, labor, and required equipment shall be furnished by the Contractor and at the expense of the Contractor. No additional compensation for the work and materials shall be made or allowed.

2.05-3.3 CEMENTING

Cement grout shall be injected in the annular space between the well casing and the bore hole from bottom to top by means of a temporary tremie pipe. Cement grout materials shall be placed by a positive displacement method using pumping.

The temporary tremie pipe shall extend from the surface to the bottom of the casing to be cemented and properly affixed to the grout shoe. Cement shall be placed, from bottom to top, in a continuous

operation unless determined by the Contractor that a staged placement is required to prevent casing collapse. The grout pipe shall be maintained full, to the surface, at all times until completion of the grouting of the entire specified zone before being flushed with the appropriate volumes and pressure of water to displace cement from the tremie pipe. Cement returns to surface must be observed to determine that the cementing job is complete.

Following grouting, no further work shall be performed in the well for a minimum of 24 hours. No standby time will be paid while cement is setting.

The Contractor shall be responsible for computing the casing collapse potential during grouting and shall take whatever precautions necessary, including staging the grouting operation, in order to prevent damage. In the event the borehole or casing collapses prior to completion of the cement grout seal, the Contractor, at their own expense, shall take whatever remedial steps are necessary to reopen the borehole annulus and place the seal as specified.

The Contractor shall keep a record of the volume of cement used. The cement volume shall not be less than the calculated volume of the annular space between the conductor casing or the reamed borehole and the well casing.

2.05-3 CONSTRUCTION RECORDS

The Contractor must keep records providing the following information:

- 1) A log of drilling bit types and depths of changes.
- 2) A record of drilling fluid properties at 4-hour intervals. The record shall show mud weights, Marsh funnel viscosity, sand content, solids content, water additions, and any mud additives or lost circulation materials used.
- 3) The log for the completed well shall show the following parameters: diameter, wall thickness, depths, and quantities of casing and screen installed; borehole ream diameters; cemented sections; gradation of gravel envelope; any other pertinent details deemed necessary by the District or the Geologist.
- 4) All measurements for depths shall be referenced to existing ground surface at the well site. During development and production testing, all water-level measurements shall be referenced to an arbitrary reference point established at the top of the sounding line as specified by the Geologist.

During drilling of the borehole, at 10-foot or less intervals, or as directed by the Geologist, the Contractor shall take representative samples of drill cuttings from the interval and shall place cuttings in suitably labeled locking plastic bags supplied by the Contractor. All bags shall be labeled to indicate the depth interval, date, and well number of the collected sample. The samples shall be properly stored by the Contractor in a manner as to prevent breakage or loss until the samples are

accepted by the Geologist.

Upon completion of the borehole, geophysical logging of the borehole shall be conducted for the purpose of providing information for the final design of the well. The geophysical logging is described in Section 2.07.

SECTION 2.06
PRODUCTION BOREHOLE DRILLING
Bid Item No. 6

2.06-1 **SCOPE**

This item shall consist of drilling a 7-inch diameter borehole by the direct circulation drilling method. The production borehole shall extend from the bottom of the Tcw/Tcd conductor casing to a depth of approximately 7000 ft bgs. The total estimated length of this borehole below the conductor casing is 2000 feet.

2.06-2 **CONSTRUCTION METHODS**

Only fresh water shall be used in the drilling fluid whether employed alone or in combination with drilling additives. All water used during drilling shall meet California State Department of Health standards for safe drinking water. The drilling fluid shall possess such characteristics as are required to adequately maintain the walls of the hole to prevent caving of the wall as drilling progresses and to permit recovery of representative samples of cuttings. The drilling fluid shall also possess such characteristics that it can be readily removed from the hole during the placement of the gravel pack and during development of the well. Drilling fluid additives may be a biodegradable, polymer system such as HEC, Drispac, Kim Mud, Dual-Vis, or a clay base bentonite system, providing the properties specified below can be maintained to the satisfaction of the Geologist. The Contractor is advised that excessive water loss in clay zones can lead to swelling, loss of shear strength, substantial caving, and hole stability problems. Significant fluid loss may be encountered in the highly permeable gravels and sands expected to be encountered in the bore and must be addressed by the contractor under his bid amounts. The drilling fluid and additives to be utilized should contain properties to inhibit these possibilities.

The Contractor must possess sufficient mud tank volume and access to effectively separate cuttings and keep sand and solids contents below the specified amounts. If drilling fluid conditions as outlined below are exceeded, the Contractor will be required to immediately suspend further drilling until corrected. Reference is made to Section 1.18 in the Special Conditions for disposal of drilling fluid/mud.

Excavated mud pits cannot be used. Portable mud tanks with internal baffles, which allow drill cuttings to settle are required. Sediment shall be removed periodically from the tank in order to maintain tank volume and keep drilling fluid properties within specifications.

The drill rig must be provided at all times with the following Standard API drilling fluid measuring devices to measure the following properties:

- g) Drilling fluid weight
- h) Drilling fluid viscosity
- i) Drilling fluid sand content

The drilling fluid shall have the following properties in accordance with API Code RP 13B (or latest revisions) "Recommended Standard Procedure for Testing Drilling Fluids." In the event the Contractor cannot attain these properties, the mud shall be replaced.

- 1) Weight – a maximum to 120 pounds per cubic foot (16.1 pounds per gallon) during Tcw/Tcd borehole drilling.
- 2) Marsh funnel viscosity – maximum to 60 seconds during Tcw/Tcd borehole drilling.
- 3) Sand content of mud entering the pump – a maximum of five percent by volume during all aspects of drilling.

At the completion of drilling operations, drill cuttings cleaned from the tank, as well as drilling fluids, are to be removed from the site and properly disposed of by the Contractor at their expense. See Section 1.17 for disposal of these cuttings.

2.06-3 CONSTRUCTION RECORDS

The Contractor must keep records providing the following information:

- 1) A log of drilling bit types and depths of changes.
- 2) A record of drilling fluid properties at 4-hour intervals. The record shall show mud weights, Marsh funnel viscosity, sand content, solids content, water additions, and any mud additives or lost circulation materials used.
- 3) All measurements for depths shall be referenced to existing ground surface at the well site. During development and production testing, all water-level measurements shall be referenced to an arbitrary reference point established at the top of the sounding line as specified by the Geologist.

During drilling of the pilot borehole, at 10-foot or less intervals, or as directed by the Geologist, the Contractor shall take representative samples of drill cuttings from the interval and shall place cuttings in suitably labeled locking plastic bags supplied by the Contractor. All bags shall be labeled to indicate the depth interval, date, and well number of the collected sample. The samples shall be properly stored by the Contractor in a manner as to prevent breakage or loss until the samples are accepted by the Geologist.

Upon completion of the pilot borehole, geophysical logging of the pilot borehole shall be conducted for the purpose of providing information for the final design of the well. The geophysical logging is described in Section 2.07. Determination of the final depth of the reamed borehole shall be made after completion of the geophysical logging.

SECTION 2.07
GEOPHYSICAL LOGGING
Bid Item No. 7

2.07-1 **SCOPE**

This item shall consist of performing downhole geophysical surveys in the open borehole at the completion of each deep bore prior to casing installation. The Geologist shall approve the geophysical logging subcontractor and witness the surveying. The geophysical logs to be performed in the pilot borehole will include: a spontaneous potential log; short-normal (16-inch) and long-normal (64-inch) resistivity surveys; a focused resistivity log; a sonic/variable density log (VDL); and a gamma-ray log. The geophysical log vertical scale is to be 1 inch on the log graph equals 50 vertical feet of borehole.

2.07-2 **LOGGING METHODS**

The Contractor shall furnish or provide for geophysical logging services in the pilot borehole. Geophysical logs, consisting of spontaneous potential (SP), resistivity, focused resistivity, sonic/VDL and gamma-ray surveys shall be made of the pilot borehole by the Contractor as directed by the Geologist. No standby time will be paid during the geophysical surveying. Drilling fluid circulation shall continue during the geophysical logging to maintain downhole conditions suitable for logging. An estimated three (3) hours of time without compensation will be allotted to the Contractor, during which time the Geologist will review the logs and provide recommendations for the casing installations.

The logging will be performed using digital equipment and recording continuously with a minimum of one data point per vertical foot. The vertical logging speed shall be no greater than 40 feet per minute, or as directed by the Geologist.

If the logging probe fails to descend to the desired depth, the Contractor, at their own expense, shall recondition the pilot borehole to permit the logging probe to descend to the bottom of the pilot borehole. Neither standby time nor drilling footage will be paid for additional cleaning and conditioning of the pilot borehole to enable logging operations to proceed. Standby time will also not be paid while awaiting the electric logging subcontractor or his delays.

If review of the electric log of the pilot borehole by the District and its Geologist reveals that the completion of the borehole into a water well is not desirable at this site, the District reserves the right to terminate all further work at the site. In such an event, the Contractor will be paid for the value of work completed to that time and on the basis of the lump sum unit prices provided on the Bid Schedule and no additional compensation will be allowed. If further work at the site is terminated, the specified items in Section 2.21 of these Special Provisions will be applicable, as the District may direct the Contractor to destroy the borehole.

A minimum of five (5) field copies of the geophysical logs will be provided to the Geologist shortly

following completion of logging. In addition, the geophysical logs will be provided in PDF and in ASCII format (via electronic mail, flash drive, or on a CD-ROM) to the Geologist following the completion of logging, as noted in Section 1.19.

SECTION 2.08
CALIPER SURVEY
Bid Item No. 8

2.08-1 **SCOPE**

This item shall consist of performing a caliper survey of the final 7-inch diameter borehole and all overlying casings to ground surface. This survey will be conducted shortly following completion of the 7-inch diameter portion of the bore, circulation of fluids, and removal of bit from the estimated 7000 ft depth.

2.08-2 **SURVEY METHOD**

The Contractor shall furnish services for performing a caliper log survey of the final reams of the borehole. The caliper tool shall have the ability to measure borehole diameters up to a minimum of 48 inches. The intent of the caliper survey is to provide an assessment of the condition of the borehole and zones of overbreakage, as well as estimate borehole and annular volumes. The Contractor should, upon inspection of the caliper survey, assess his ability to successfully land the production casing to the required depth on the basis of this inspection. Based on an inspection of the caliper survey, the Contractor shall also submit estimates of the volumes of gravel and cement required. In addition, a minimum of three (3) field copies will be provided to the Geologist. The Contractor shall also submit logs to the Geologist in PDF and LAS/ASCII format (via electronic mail or on a flash drive or CD-ROM as described in Section 2.04-2).

If the caliper log shows that the borehole does not meet the specified diameter at any point, the Contractor shall re-ream the borehole to the proper diameter and final depth, and then repeat the caliper survey. The Contractor will not be entitled to additional compensation for the re-reaming and the re-logging of the borehole. After the caliper survey has been made and approved along with onsite casing and onsite gravel pack, installation of the well casing may commence.

SECTION 2.09
PRODUCTION WELL CASING
Bid Item Nos. 9-11

2.09-1 **SCOPE**

This item shall consist of providing and installing blank and screened casing, grout shoe, and liner hanger as specified. The types of casing, and their approximate depth settings, diameters and wall thicknesses and total lengths are listed on the Bid Schedule. Figure 2.02-1 illustrates the preliminary well design.

Prior to the installation of any casing, the Geologist will review and approve the casing for compatibility with the onsite gravel pack and with the final casing design. Any deviation unacceptable (such as: incorrect louver apertures, damaged casing, incorrect steel components, used casing, bent casing, casing soiled by foreign substances, odd lengths of casing) to the Geologist may be cause to reject the casing (and/or gravel pack). If the casing is unacceptable and rejected by the Geologist, the Contractor shall replace the casing with an acceptable replacement at the Contractor's expense.

2.09-2.1 **6-INCH I.D. BLANK HSLA STEEL CASING (BID ITEM No. 9)**

The lower blank casing shall be HSLA steel of 6-inch I.D. size and manufactured in accordance with ASTM standard A606 Type 4. The casing shall also have welded collars attached, or approved equal, such as threaded couplers or flush-threaded pipe ends. The wall thickness shall be 5/16-inch. Estimated total length of 7-inch blank casing includes all intervals of blank casing between perforated intervals are estimated to total 200 ft. The bottom casing section shall be affixed with a grout shoe.

2.09-2.2 **LINER HANGER (BID ITEM No. 10)**

The Liner Hanger shall be a compatible casing hanger capable of suspending 2,000 feet of production casing and setting it slightly within the 7-inch casing at the grout shoe. The tool must be appropriate and may be either a hanger type or left-hand backoff tool with adequate packer assembly to create a competent seal between the 6-inch casing and 7-inch casing.

2.09-2.3 **6-INCH I.D. FUL-FLO LOUVERED HSLA STEEL WELL SCREEN (BID ITEM No. 11)**

The well screen shall consist of 304L stainless steel, 20-inch I.D. size, with a 5/16-inch wall thickness, and manufactured in accordance with ASTM Standard A606 Type 4. The well screen shall also have welded collars attached, or approved equal, such as threaded couplers or flush-threaded pipe ends. The openings in the well screen shall be machine-made, 0.090-inch aperture (preliminarily), horizontal to the long axis of the casing, and of a louver form with the aperture facing downward. The well screen shall be designed and fabricated to withstand the stresses associated with casing installations and usage to depths of at least 7,000 feet. For bidding purposes,

approximately 1,820 feet of well screen are estimated to be interspersed in the depth range of 5,020 to 6,980 feet.

The well screen shall be equal in all respects to Roscoe Moss Ful-flo louvered HSLA steel well casing. The well screen shall be factory assembled in 20-foot or 40-foot lengths as required for the final well design.

Slot openings of well screen will be determined by the Geologist, based upon lithologic samples, sieve analysis and hydrogeologic characteristics of the aquifers. For bidding purposes, slot openings shall be estimated at 0.090-inch.

2.09-3 CONSTRUCTION METHODS

Blank and Screened Well Casing

At completion of the pilot borehole ream, adequately thinning the drilling fluid, as necessary, and after conducting the caliper log survey, the Contractor shall install the blank and screened well casing at intervals as determined by the Geologist. The estimated casing lengths shown on the Bid Sheet are approximate and are for bidding purposes only.

Prior to the installation of any casing, the Contractor shall inspect for and remove any tags, labels or other deleterious matter attached to the interior or exterior of the pipe and screen sections delivered to the job site.

The casing shall be plumb and shall be centered in the hole. All field joints shall be properly lap-welded during installation with a minimum of two passes per circumference unless flush-threaded joints are implemented

The casing shall be suspended in tension from the surface by means of an appropriate hanger or clamp. The use of float plugs to land and set casing will not be permitted. The bottom of the casing shall be at a sufficient distance above the bottom of the reamed hole so that none of the casing will be supported from the bottom of the hole. Construction and permanent tremie pipes, which will be used to install gravel, shall be lowered with the casing.

If, for any reason, the casing cannot be landed in the correct position or at a depth acceptable to the Geologist, the Contractor shall destroy the hole and construct another well. This well will be located adjacent to the original well location, and the Contractor shall complete this well in accordance with the Specifications at no additional cost to the District. The abandoned hole shall be sealed and destroyed in accordance with directions from the District and in accordance with any laws pertaining to proper well destruction, all at no additional cost to the District.

If any of the casings should collapse prior to well completion, they shall be withdrawn and replaced

at Contractor's expense. All work required to be repeated and all additional materials, labor, and required equipment shall be furnished by the Contractor and at the expense of the Contractor. No additional compensation for the work and materials shall be made or allowed.

Field Welding Procedures

Unless threaded joints are used, all field welding shall be performed in accordance with the American Welding Society Standards by a certified welder.

The following field welding procedures shall apply:

- a) A length of casing shall be lowered via elevator in the well with the collar facing upward.
- b) The plain end of the following casing length shall be inserted in the collar. True contact of the two joints must be verified by observation through the inspection windows.
- c) Spot welds and/or plugs shall be placed through the three windows in order to hold the contact position.
- d) A fillet type weld shall be made covering the top edge of the collar continuously for the entire circumference. Two passes or welds shall be applied to joints in 5/16-inch and thicker wall material.
- e) The inspection windows on blank casing sections shall be sealed (welded) to assure a leakproof connection.

The following electrodes shall be utilized for various casing and screen materials, as appropriate:

Casing Material	Electrode Number
Mild Steel	E-6011 or E-7018
Copper Bearing Steel	E-6011 or E-7018
Low Alloy Steel (ASTM A 242 or equivalent)	E-7018
Stainless Steel (Type 304)	E-308L-16

Depending on wall thickness, the following electrode sizes shall apply

Wall Thickness	Electrode Size
1/8-inch to 3/16-inch	1/8 inch
3/16- to 1/4 inch	5/32 to 3/16 inch
Over 1/4 inch	3/16 to 1/4 inch

**SECTION 2.10
GRAVEL PACK
Bid Item No. 12**

2.10-1 SCOPE

This item shall consist of providing and installing an engineered gravel (sand) pack, as recommended by the Geologist, in the annulus of the well adjacent to the screen and blank well casing.

2.10-2 CONSTRUCTION MATERIALS

The sand used for packing shall be hard, waterworn, and washed clean of silt, fine sand, dirt, and foreign matter. Crushed gravel will not be accepted. The sand shall be well-rounded and graded, and subject to the approval of the Geologist. The sand pack gradation must be compatible with the formation sediments encountered and the approximately 0.090-inch slot size opening being considered for use. A 6X9 gradation Raptor Filter Sand (RFS6) , or equivalent, sand installed in an estimated 2000-foot length (from 5000 ft to 7000 ft) of the annulus of the production borehole is anticipated for the sand envelope. All sand must be brought to and stored at the site in closed containers (e.g. “supersacks”).

A description and current sieve analysis of the actual sand packing materials to be delivered to the site must be submitted for approval to the Geologist prior to anticipated placement of the material in the well. The Geologist may elect to have a certified testing laboratory perform a sieve analysis to verify conformance with approved sample. Failure to meet gradation of the approved sample shall be grounds for rejection. The sand may not be stockpiled at the well site. While in the “supersacks” at the well site, the gravel pack shall be protected and kept free of all foreign matter.

Prior to the installation of any casing, the Geologist will review and approve the delivered gravel pack for compatibility with the casing and with the final casing design. Any deviation unacceptable to the Geologist may be cause to reject the casing (and/or gravel pack). If the casing is unacceptable and rejected by the Geologist, the Contractor shall replace the casing with an acceptable replacement at the Contractor’s expense.

2.10-3 CONSTRUCTION METHODS

Prior to placement of the sand pack in the well, the drilling fluid shall be thinned with clean water. The Contractor shall also submit an estimate of the volume of sand to be installed based on their review of the caliper log. If a significant difference (greater than 35% due to the difference between the dry volume and saturated volume of the gravel pack) exists between the estimate and the final volume of sand added, the discrepancy may be grounds for rejection of the well by the District.

The sand pack, as specified, shall be installed in the annular space between the reamed hole and the well casing through a temporary tremie pipe set into the grout shoe at the base of the 6-inch-production casing. A circulating system with one or more positive displacement pumps utilizing fresh water shall be used for the purpose of introducing the sand into the annular space. The sand pack shall be placed by pumping through the temporary tremie pipe extending to the bottom of the well.

During the placement of the sand pack in the annulus, calcium hypochlorite in granular or tablet form shall be added to the sand at a uniform rate of one pound of the granular form per cubic yard or two tablets per cubic foot (approximately 50 tablets per cubic yard).

The Contractor must provide, prior to installation, current gradation analyses for the sand pack intended for use in the annular space of the well, and all weigh tickets for the sand transported to the site for examination. If the specified sand is not available at the time of construction, then the driller will submit a sample and a gradation analysis of a comparable type of sand to the District. The Geologist will make a determination prior to construction as to the adequacy of the sand to be used for the pack.

SECTION 2.11
CEMENT GROUT SEAL
Bid Item No. 13

2.11-1 **SCOPE**

This item shall consist of providing and installing sand-cement grout in the annular space from the top of the gravel pack to the top of the well. Depth of the cement grout seal is estimated to be 20 ft in length from 6,980 to 7,000 ft bgs, but may be shallower or deeper.

2.11-2 **CONSTRUCTION MATERIALS**

The cement grout seal shall be a 10-sack mix sand-cement grout. Cement used for the seal shall be Portland cement conforming to ASTM C150, Type II. There shall be not more than two parts by weight of sand to one part by weight of cement. The water-cement ratio shall be about 7 gallons per sack of cement (94 pounds). All onsite water additions shall be metered. Up to 5 percent bentonite gel and 2 percent calcium chloride may be added. An estimated 20-foot length of the annulus between the well casing and the reamed borehole is anticipated for the cement grout seal.

2.11-3 **CONSTRUCTION METHODS**

Cement grout shall be injected in the annular space between the well casing and the bore hole near the bottom of the production string by means of a temporary tremie pipe. Cement grout materials shall be placed by a positive displacement method using pumping.

The temporary tremie pipe shall extend from the surface to the bottom of the zone to be grouted and inserted into the grout shoe. Cement shall be placed, from bottom to top, in a continuous operation unless determined by the Contractor that a staged placement is required to prevent casing collapse. The temporary tremie pipe shall be maintained full, to the surface, at all times until completion of the grouting of the entire specified zone.

Following grouting, no further work shall be performed in the well for a minimum of 24 hours. No standby time will be paid while cement is setting.

The Contractor shall be responsible for computing the casing collapse potential during grouting and shall take whatever precautions necessary, including staging the grouting operation, in order to prevent damage. In the event the borehole or casing collapses prior to completion of the cement grout seal, the Contractor, at their own expense, shall take whatever remedial steps are necessary to reopen the borehole annulus and place the seal as specified.

The Contractor shall keep a record of the volume of grout used. The grout volume shall not be less than the calculated volume of the annular space between the conductor casing or the reamed borehole and the well casing.

**SECTION 2.12
STANDBY TIME**

Bid Item No. 14

2.12-1 SCOPE

During the progress of drilling operations, it may be necessary for the Geologist, the District, and/or its other contractors to perform work that will require the drilling crew and equipment to stand idle. In such event, the Geologist shall recommend and the District shall request the Contractor in writing to cease operations and shall state the anticipated extent or duration thereof. The Contractor shall promptly furnish such assistance and cease operations. However, this bid item specifically excludes approximately 3 hours of time reserved by the Geologist following receipt of the electric log, during which period completion recommendations will be prepared. The Contractor shall factor any and all costs associated with this 3-hour period into Bid Item No. 7. Also specifically excluded from chargeable standby time is any rig time associated with providing and reviewing the caliper log (Bid Item No. 8), as well as time periods waiting for laboratory analytical results associated with permit compliance or aquifer characterization such as between borehole reaming or awaiting casing manufacture.

SECTION 2.13
MECHANICAL WELL DEVELOPMENT
Bid Item No. 15

2.13-1 **SCOPE**

Mechanical well development is conducted after appropriate cement seal set-up time and shall consist of surging the well within the screen intervals to wash drilling fluids and cuttings from the gravel pack and well bore and removing these materials from the well by simultaneous air-lift pumping. Temporary storage tanks will be used to contain the water, if necessary. Refer to Section 1.18 of the Special Conditions for details regarding disposal of water.

2.13-2 **MECHANICAL DEVELOPMENT PROCEDURES**

This work shall be accomplished in two phases. The purpose of the first phase is to clean out the majority of the heavy fluids and sediment within the well casing. This first phase consists of using an open-ended, single-swab block tool attached to the end of the drill pipe. This tool shall be moved up and down three or four times in each section of well screen during air lifting. After working the tool to the bottom of the well, all sediment in the bottom shall be airlifted out.

If drilling fluid additives are used and chemical well development is to be conducted (see Section 2.16), the chemicals shall be injected into the well through the single-swab tool during its removal from the well. Chemical injection shall be in intervals determined by the Geologist. The single-swab tool shall be moved up and down the extent of the Kelly several times after each injection of chemicals. After swabbing, with the single-swab tool, and emplacement of chemicals, the single-swab tool shall be removed from the well and replaced with a double-swab tool in order to perform the second phase of mechanical development.

The second phase of mechanical development shall be accomplished with the double- swab, surge block tool consisting of a rubber packer assembly near each end separating an approximately 10- or 20-foot long perforated tubing for pumping intake. The downhole end of the perforated tubing shall be capped during this phase.

Development shall begin at the uppermost screen section with simultaneous swabbing and air lifting of each successive 10- or 20-foot screen length until the discharge becomes reasonably clear as determined by the Geologist. Following such determination, the assembly shall be lowered to the next 10- or 20-foot interval of screen and the procedure repeated until all screen sections have been mechanically developed. It is anticipated that each 10- or 20-foot screen zone will require on the order of to 2 to 3 hours of such simultaneous swabbing and airlifting.

While in each 10- or 20-foot screen section, the Kelly bar shall be used to move the tool assembly up and down three or four times within shorter sections of the respective 10- or 20-foot screen zone. Following this, tool movement shall then cease for approximately 10 minutes while continuing to airlift water from the well. When the discharge clears again, the tool assembly shall again be moved

up and down, while continuing to airlift. The process shall be repeated until water produced from the 10- or 20-foot screen section has cleared sufficiently to permit moving the entire tool assembly to the next 10- or 20-foot section.

The Contractor shall provide adequate air compressor capacity in both volume (CFM) and pressure (PSI) to maintain the proper relationships between air pressure/air volume capacity and diameters and lengths of both drill pipe and air tubing in order to maintain airlifting efficiency during mechanical development and entrain solids in discharge.

Upon completion of mechanical development, the well shall be accurately sounded to determine the level of accumulated sediment in the well. The sediment level shall be recorded in the driller's daily log.

NO DEVELOPMENT FLUIDS MAY BE DISCHARGED FROM THE STORAGE TANKS UNTIL TESTING HAS BEEN COMPLETED AND THE FINAL METHOD FOR DISCHARGING (*e.g.*, treatment or blending) HAS BEEN DETERMINED. No standby time will be paid while such determination is made.

If the sediment fill level is within 5 ft of the screened interval, this fill shall be removed by bailing prior to installation of the test pump. If the fill level is lower than 5 ft below the bottom of the lowermost section of well screen, the Contractor may proceed with installation of the test pump.

SECTION 2.14
FLOW METER SURVEY
Bid Item No. 16

2.16-1 **SCOPE**

This section covers the performance of a vertical flow meter survey (spinner log test). The flow meter survey shall be performed near the end of the constant discharge test. This is an optional item and is dependent on the emplacement of the valves and chambers for access as specified.

2.16-2 **FLOW METER SURVEY METHODS**

The flow meter survey shall be conducted from ground surface to the bottom of the lowest perforated section of the well casing. The survey shall be run after the constant discharge test has been running for a period of at least 24 hours and after the water level has stabilized, which will be determined in the field by the Geologist. Both static and dynamic tests shall be made from the bottom of the well to ground surface, as directed by the Geologist. Each static test shall consist of two-minute readings made at depths adjacent to blank sections of casing, or as recommended by the Geologist. Each dynamic test shall be conducted at the rate of 1-foot per second, unless otherwise approved by the Geologist. The record for each test shall indicate either meter speed or percentage of total meter speed with depth. The meter used for the survey shall be calibrated within the lowermost blank section of the well casing.

The flow meter survey shall become the property of the District at the time the survey is completed. The survey shall be run in the presence of the Geologist. The Contractor shall provide five (5) field copies of the survey to the Geologist immediately upon completion and final copies and reproducible original at no additional cost. Flow meter survey measurements shall also be run on digital equipment and provided in PDF and LAS/ASCII digital format as were the geophysical logs and the caliper log.

SECTION 2.15
DISINFECTION OF WELL & CAPPING
Bid Item No. 17

2.17-1 **SCOPE**

This item shall consist of disinfecting the well against bacteria and shall be conducted following the testing of the fully constructed, developed, and tested well. The well will be capped following disinfection by affixing high-pressure valves to flanges over the opening of the 7-inch well casing at ground surface.

2.17-2 **DISINFECTANTS**

Chlorine approved by state or local regulatory agencies shall be used as disinfectant. The disinfectant shall be delivered to the work site in original closed containers bearing the original label indicating the percentage of available chlorine. Dry, granule, 65% HTH calcium hypochlorite is considered an acceptable disinfectant. The disinfectant shall have been purchased within 30 days of use. Chlorine compounds in dry form shall not be stored for more than one year. During storage, disinfectants shall not be exposed to the atmosphere or to direct sunlight. Unless superseded by governmental regulation, the quantity of chlorine compounds used for disinfection shall be sufficient to produce a minimum of 100 parts per million available chlorine in solution when mixed with the total volume of water in the well. A dosage of five (5) pounds per 100 feet of water filled casing and screen is considered an acceptable method of estimating the amount of disinfectant needed. Liquid sodium hypochlorite may be used instead of dry calcium hypochlorite.

2.17-3 **DISINFECTION METHODS**

The disinfecting agent shall be uniformly applied throughout the entire water depth of the well. This may be accomplished by using a perforated, capped container (basket) containing the dry chemical and lowering and raising the container by cable throughout the full column of water in the well for a minimum of two (2) hours. Disinfection also may be accomplished by pre-dissolving the chemical or using a liquid disinfectant and using the test pump for surging for a minimum of 2 hours without discharge. The dispersion of the disinfectant shall be assisted by pouring into the well a volume of water equal to the volume of water contained in the well, after the disinfectant has been emplaced. This will cause the disinfectant to flow out of the well into the area adjacent to the screen.

All accessible portions of the well above the water level shall be maintained in a damp condition with water containing the required concentration of disinfecting agent for a period of not less than 20 minutes. The disinfecting agent shall be left in the well for a period of at least 12 hours.

2.17-4 **WELL CAPPING**

The well shall be shut-in upon completion of well disinfection. The cap shall consist of at least a 1.5-inch-thick bolted flange and a high-pressure valve assembly. The flange and valve assembly shall completely seal and cover the opening to the top of the well casing. Under this bid item, the

Contractor shall ensure that all casing and accessory tubing extends to a height of 3 feet above ground surface. The valve shall be bolted to prevent later entry into the well casing by unauthorized personnel.

Ultimate furnishing of the valve assembly shall include a monoblock Christmas tree type connected to the 7-inch-diameter casing string. While ultimate valve numbers and ratings will be determined by encountered formation fluid pressures, the system will consist of at least a lower master valve and an upper master valve, and potentially two wing valves, a swab valve and a pressure gauge on a tree cap. The system shall be furnished and installed in accordance with API Specification 6A, "Specification for Wellhead and Tree Equipment," 21st edition, November 2019, with anticipated pressure capacity of 1000 psi. A graphical depiction of the assembly is appended.

SECTION 2.16
CHEMICALS FOR WELL DEVELOPMENT
Bid Item Nos. 18 & 19

2.14-1 **SCOPE**

Work shall consist of superchlorination of the well and/or furnishing a polymer dispersant such as NW-220, or equivalent, for the purpose of dispersing any residual wall cake at the bore. Chemical well development shall be done at a time after sand packing and cement seal placement as recommended by the Geologist, but typically during the first phase of mechanical development. This is an optional task. The District and its Geologist reserves the right to delete this task.

2.14-2 **METHOD OF CHEMICAL DEVELOPMENT**

The Contractor will perform chemical development in two stages, following the first stage of mechanical development which consists of the initial removal of the heavy fluids from the lower portion of the well.

The first stage of chemical development will consist of superchlorination of the well and will be necessary if bentonitic mud additives were used in the drilling fluid. This stage will consist of installing and agitating into each 20-foot zone of perforations, using the open-ended single-swab tool, a 10% chlorine/water solution. This solution will be pre-mixed prior to placing it downwell. Following placement of the chlorine solution, the zone shall be agitated by moving the single-swab tool up and down throughout each zone of perforations, beginning in the lowermost zone of perforations and continuing upward in the well until completed. This chemical shall remain in the well for a period of not less than 12 hours. For estimation purposes, approximately 15 gallons of 10% chlorine solution per 50-feet of screen is to be used during installation. Hence approximately 550 gallons of 10% chlorine is needed for the 1820 feet of perforations estimated in the entire well. The Contractor will not be compensated for any “downtime” incurred during this 12-hour period. Following this “downtime” period, the Contractor will re-enter the well with the single-swab tool and evacuate water from casing storage in the well.

The second stage of chemical development shall consist of placing NW-220, or acceptable equivalent, into each zone of perforations in the well. Sodium acid pyrophosphate (SAPP) or other chemicals containing phosphates or other potential biological nutrients shall not be permitted to be used for chemical development. The NW-220, or equivalent, can be added immediately to each 20-foot-long zone of perforations following evacuation of water from the chlorinated well with the single-swab tool. Following installation of the NW-220, throughout the perforated sections of the casing, the Contractor shall agitate the fluid column in the well. For estimation purposes, a total of 125 gallons of NW-220, or equivalent, will be used for the 1820-feet of perforated casing in the well. Following the installation of NW-220, mechanical development using the double-swab tool can commence.

SECTION 2.17
PRODUCTION TESTING OF WELL
Bid Item No. 20

2.15-1 **SCOPE**

This item shall consist of testing the well to determine the optimum rate of flow and shall include a step-drawdown and a constant-rate discharge test. Production testing assumes artesian flow from the mechanically developed well. Temporary storage tanks will be used to contain the water if necessary. Refer to Section 1.18 of the Special Conditions for details regarding disposal of water.

2.15-2 **STEP-DRAWDOWN TEST**

Prior to starting the step-drawdown test, water-level or pressure measurements shall be made to assess the static water level or head. There shall be a period of at least 24 hours of non-pumping conditions following development work prior to the start of the step-drawdown test. The well shall be “step” tested at rates of approximately ½, ¾, 1, and 1¼ times the design capacity of approximately 1000 gpm, but may be as high as triple the design capacity. The complete step-drawdown test parameters for the well will be determined by the Geologist and is estimated to require a maximum of 12 hours.

The Contractor shall operate the valves and change the discharge as recommended by the Geologist. Discharge of the pump shall be controlled by both a gate valve and any master valves required to contain pressures. The discharge shall be controlled and maintained at approximately the desired discharge for each step with an accuracy of plus or minus 5 percent. Pump discharge shall be measured with an instantaneous flow meter and a totalizing meter and stopwatch, circular orifice meter, or Venturi meter as approved by the Geologist. Sand content measurements using a Rossum device shall be recorded at 30-minute intervals by the Contractor during the step drawdown test. The Contractor shall assist in collecting accurate water levels or pressure readings during all pumping operations and pumping tests.

2.15-3 **CONSTANT-RATE DISCHARGE TEST**

After a 24-hour minimum shut-in recovery period from the step test, a constant-rate discharge test shall be conducted by flowing the well at the design rate (or at a rate recommended by the Geologist) for a period of approximately 60 hours or until the pumping rate and pressure remains constant (within 0.1 foot at the constant rate) for at least 4 hours, or until the Geologist terminates the test. A recovery period of 24 hours shall follow the termination of the constant-rate discharge test. At this time, the Contractor will also collect residual pressure data.

During the constant-rate discharge test, the final sand content testing shall be conducted by the Contractor. The sand content shall be determined by averaging the results of samples collected at the following times during the final pumping test:

- 1) 5 minutes after start of the test;
- 2) after 1/4 of the total planned test time has elapsed;
- 3) after 1/2 of the time has elapsed;
- 4) after 3/4 of the time has elapsed;
- 5) near the end of the pumping test.

The Contractor shall provide qualified personnel on a 24-hour per day basis during the step drawdown and constant-rate discharge tests to assure proper operation of the valves, test equipment, and to assist in water level monitoring if requested by the Geologist.

2.15-4 ABORTED TEST

Whenever continuous flow at a uniform rate has been specified, failure of operations for a period greater than one percent of the elapsed pumping time shall require suspension of the test until the water level in the well has recovered to its original level. Recovery shall be considered “complete” after the well has been allowed to rest for a period at least equal to the elapsed pumping time of the aborted test, except that if any three successive water level measurements spaced at least 20 minutes apart show no further rise in the water level in the tested well, the test may be resumed immediately. The Geologist shall be the sole judge as to whether this latter condition exists. The Contractor will not be paid for any re-testing done if the specified time or recovery requirements of the Geologist for the aborted test are not first met. These tests are invalid and will not be construed as a test.

2.15-5 DISCHARGE WATER

Discharge water shall be conveyed from the well to the point of discharge. It is imperative to ensure that no damage by flooding or erosion is caused to the chosen drainage structure or disposal site. All piping and discharge lines shall be provided by the Contractor. In addition, temporary storage tanks will be used to contain the water if necessary. Refer to Section 1.18 of the Special Conditions for details regarding disposal of water and meeting discharge requirements. Limitations on infiltration gallery capacity may require early termination of the test, unless the District specifically requests the Contractor discharge the testing waters to the proximal canal.

2.15-6 RECORDS

The Contractor shall keep accurate records of the production test and furnish copies of all records to the Geologist or his representative upon completion of the test. The records shall also be available to the Geologist or his representative for inspection at any time during the test. For each test, the records shall include physical data describing the construction features such as, but not limited to: well depth and diameter, complete screen description, length and setting, a description of the measuring point and its measured height above land

surface and/or mean sea level, the methods used in measuring water levels and pumping rates, and the actual water-level measurements collected by the Contractor during the production operations and tests.

The Contractor shall also keep records on the type of equipment used including valves, gauges, and chambers. The Contractor will keep records of operation of equipment during the test and other essential information that will be useful in designing a pump or shut-in system.

SECTION 2.18
ABANDONMENT & DESTRUCTION
Bid Item No. 21

2.18-1 **SCOPE**

The Contractor, based on their actions, or at the specific request of the District, may be required to abandon the borehole or destroy the well.

2.18-2 **ABANDONMENT PRIOR TO INSTALLATION OF CASING**

Abandonment due to actions of Contractor.

If abandonment of the pilot borehole is by reason of any actions of Contractor, including but not limited to such causes as losing tools, damaging the well, misalignment, or any other cause attributed to careless or poor workmanship, the hole shall be completely filled with bentonite or other impervious earth materials in accordance with applicable State and County Standards. No payment will be made for drilling and filling the hole so abandoned, or for mobilization and demobilization, and the Contractor shall drill a new hole within fifty (50) feet of the same location at no cost to the District. If abandonment of the pilot borehole is necessary by reason of any actions of the Contractor, no grace period will be added to the time frame specified in Section 1.11.

Abandonment at Request of District or the Geologist.

If abandonment of the pilot borehole is specifically requested by the Geologist, including, but not limited to such causes as total lack of potential aquifers, insufficient number of potential aquifers, or unacceptable quality, the hole shall be completely filled with bentonite or other impervious earth materials in accordance with applicable State and County Standards. In this event, the Contractor will be paid for mobilization and demobilization at this site, as well as for the footage of drilling completed. The Contractor may then be requested to re-mobilize at a second test site selected by the District or the Geologist. No payment for stand-by time while awaiting a second well site will be made. If abandonment of the pilot borehole is necessary as specifically requested by the Geologist, a grace period will be added to the time frame specified in Section 1.11; this grace period will be likely equal to the number of days between completion of mobilization and the date of the Company's request to abandon the pilot borehole.

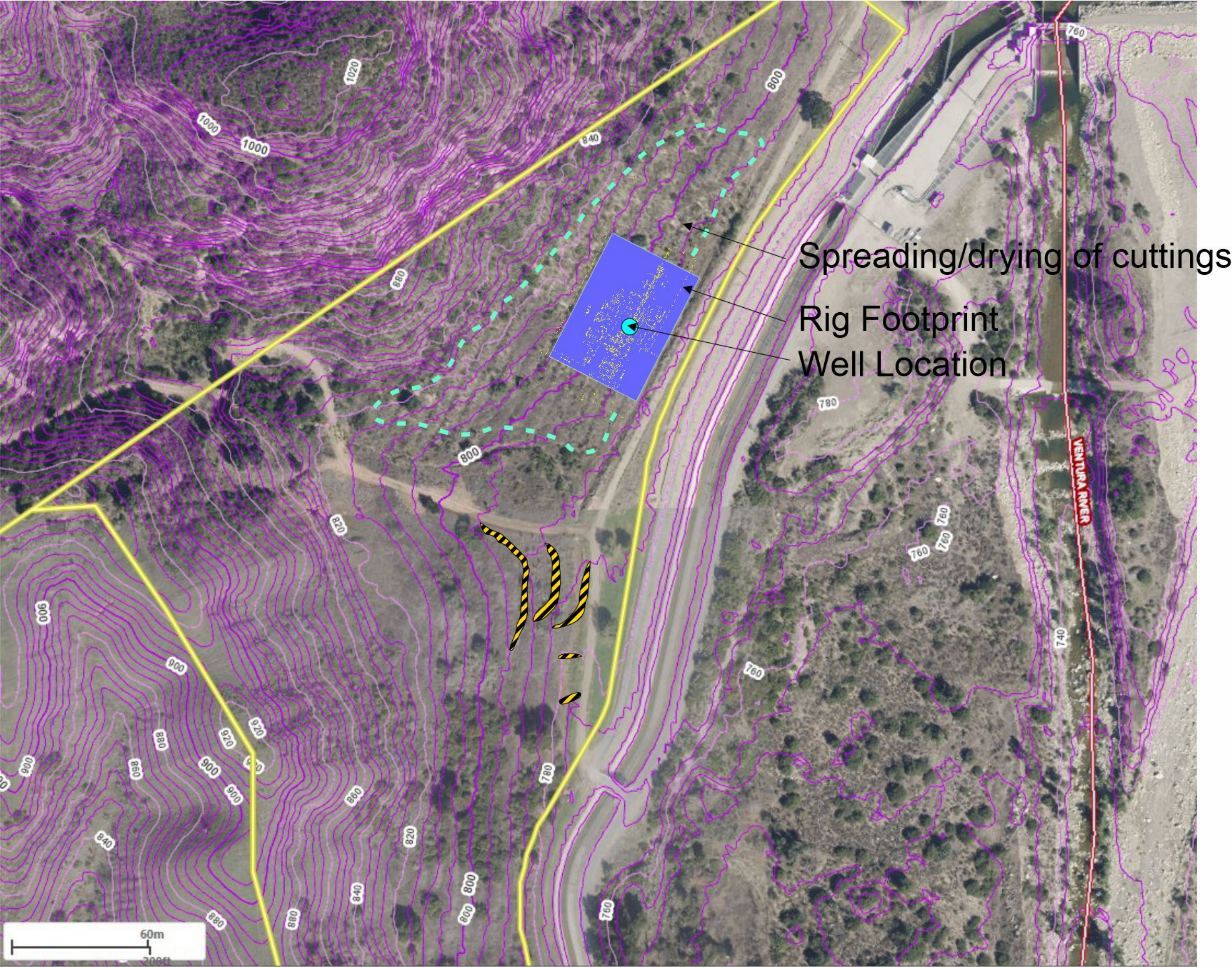
Abandonment hereunder shall also include payment for abandonment of any remaining or unused portion of the pilot borehole that is not being used for final well completion.

2.18-3 **DESTRUCTION DURING OR AFTER INSTALLATION OF CASING AND/OR WELL SCREEN**

Destruction due to actions of Contractor.

Destruction of the cased hole can be caused by reason of any action of the Contractor or negligence.

In such event, the Contractor shall pull or leave the casing(s) in place, at their discretion. If the casing is pulled, the hole shall be destroyed in accordance with applicable State and County Standards. No payment will be granted for lost or damaged casings and/or their installation in a well destroyed by reason of any action of the Contractor. The Contractor shall be required to drill a new well within fifty (50) feet of the original site at no cost to the District. If abandonment of the cased hole is necessary by reason of any actions of the Contractor, no grace period will be added to the time frame specified in Section 1.11.



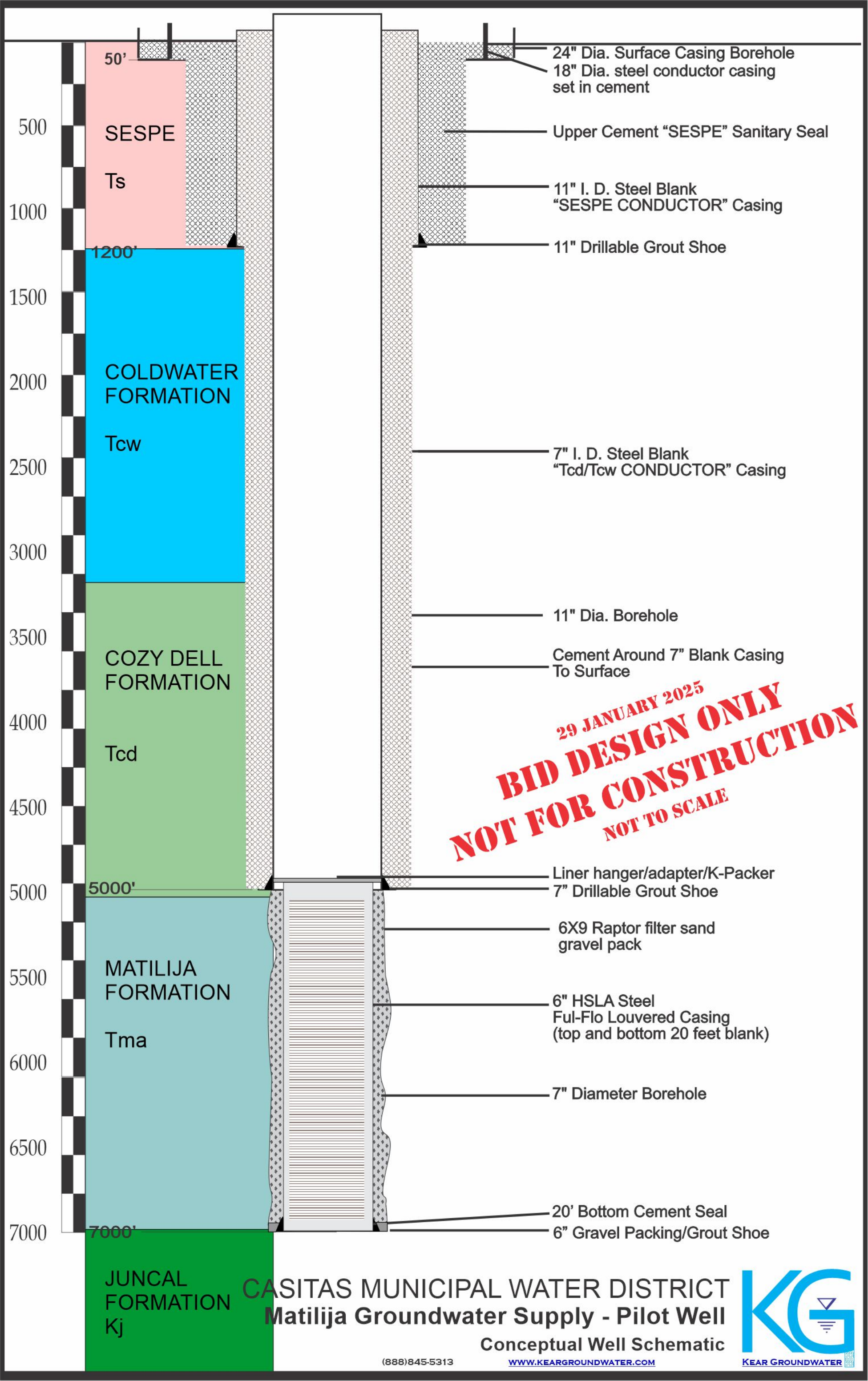
Spreading/drying of cuttings

Rig Footprint

Well Location

VENTURA RIVER

60m



50'
SESPE
Ts

1200'
COLDWATER FORMATION
Tcw

COZY DELL FORMATION
Tcd

5000'
MATILIJA FORMATION
Tma

7000'
JUNCAL FORMATION
Kj

24" Dia. Surface Casing Borehole
18" Dia. steel conductor casing
set in cement

Upper Cement "SESPE" Sanitary Seal

11" I. D. Steel Blank
"SESPE CONDUCTOR" Casing

11" Drillable Grout Shoe

7" I. D. Steel Blank
"Tcd/Tcw CONDUCTOR" Casing

11" Dia. Borehole

Cement Around 7" Blank Casing
To Surface

29 JANUARY 2025
BID DESIGN ONLY
NOT FOR CONSTRUCTION
NOT TO SCALE

Liner hanger/adaptor/K-Packer
7" Drillable Grout Shoe

6X9 Raptor filter sand
gravel pack

6" HSLA Steel
Ful-Flo Louvered Casing
(top and bottom 20 feet blank)

7" Diameter Borehole

20' Bottom Cement Seal

6" Gravel Packing/Grout Shoe

CASITAS MUNICIPAL WATER DISTRICT
Matilija Groundwater Supply - Pilot Well

Conceptual Well Schematic

pa

Santa Paula, Cal.,
January 12, 1935.

RECEIPT ACKNOWLEDGED, S.F. OFFICE

Mr. Geo. S. Smith,
Box 506,
Ojai, California.

Agent for: E. J. WILEY.

Dear Sir:

9

Your report of abandonment of well
No. "Industrial 10" 1, Sec. 4, T. 4 N., R. 23 W.,
S. B. B. & M., Ventura County, dated January 10,
1925, and submitted to this department on our form
102 has been examined in conjunction with records
filed in this office.

A review of the reports and records
shows that the requirements of this department,
which are based on all information filed with it,
have now been fulfilled.

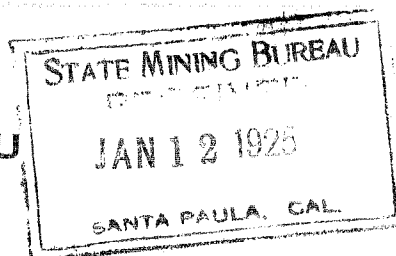
Yours truly,

R. D. Bush

State Oil and Gas Supervisor.

by *H. A. Godde*
Deputy Supervisor.

cc - E. J. Wiley.



CALIFORNIA STATE MINING BUREAU

LOG OF OIL OR GAS WELL

FIELD _____ COMPANY E. J. MILBYTownship 4 N. Range 25 W. Section 4 Number of well Industrial 10-1

In compliance with the provisions of Chapter 718, Statutes 1915, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated _____, was filed.

Signed [Signature] Dec. 11, 1924
(President, Secretary or Agent)

Date Jan. 10, 1925 Title Agent

Hole was filled with heavy mud.

On Dec. 9~~th~~, 1924, 50 sacks of Santa Cruz cement, treated with chemical, were pumped through 4" drill-pipe, hanging at 3652'.

On Dec. 10 the deputy supervisor found top of plug at 3485' and approved its location and hardness.

On Dec. 12 the 8 5/8" casing was shot and pulled from 800'.

On Dec. 14 the 12 1/2" casing was perforated by Baash-Ross from 500' to 800' with 2 rows of 1/2"xl" holes. This work was done by

E. E. Fairbanks	Toolpusher
H. A. Bell	Driller
E. W. Robertson	Tooldresser

Dismantled and completed tearing down derrick on Dec. 26, 1924.

CALIFORNIA STATE MINING BUREAU
DEPARTMENT OF PETROLEUM AND GAS

Special Report on Operations Witnessed

No. T. 2-689

Santa Paula, Cal. December 12, 1924.

Mr. Geo. S. Smith,

Box 506, Ojai, Cal.

Agent for E. J. Miley Company

DEAR SIR:

Operations at your well No. "Industrial 10"1, Section 4, T. 4 N., R. 23 W., E. B. B. & M.,
Oil Field, in Ventura County, were witnessed by

H. A. Godde, representative of the supervisor,
on December 10, 1924. There were also present G. Smith, Resident Geologist and

E. E. Fairbanks, Drilling Foreman.

Casing Record 12 1/2" cemented 815'; 3 5/8" cemented 3630', W.S.O.

The operations were performed for the purpose of witnessing the location and hardness of a
cement plug at 3485'.

and the data and conclusions are as follows:

Mr. Smith reported:

1. The lower portion of the hole was filled with heavy mud fluid.
2. 50 sacks of Santa Cruz cement, treated with chemical, was pumped through 4" drill pipe hanging at 3652' on December 9, 1924.

The Deputy arrived at the well at 3:45 P.M. and noted that the bailer could not be spudded below 3485' and brought up set cement and heavy mud fluid.

The test was completed at 4:50 p.m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 3485' ARE APPROVED.

Oral approval given the Company to continue work at the well as outlined in our report No. P 2-1268, dated December 11, 1924, is hereby confirmed.

K.
cc - E.J.Miley

R. D. BUSH,
State Oil and Gas Supervisor

By H. A. Godde Deputy

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CALIFORNIA STATE MINING BUREAU
DEPARTMENT OF PETROLEUM AND GAS

HISTORY OF OIL OR GAS WELL

FIELD.....COMPANY.....**H. J. WILEY**

Township.....**4 N.**....., Range.....**23 W.**....., Section.....**4**....., Number of well.....**Industrial 10 - 1**

Signed.....*Geo. J. Bennett*.....
(President, Secretary or Agent)

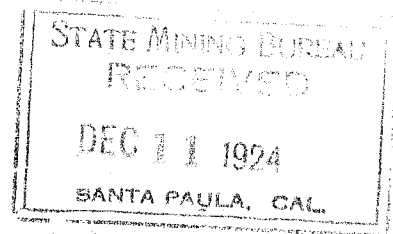
Date.....**December 11, 1924**..... Title.....**Agent**.....

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

Hole was spudded in on Dec. 9, 1922 and drilled with cable tools to 1567' by the Industrial Oil Syndicate.
 Rang 12 1/2" casing on spider at 815' and suspended operations September 7, 1923.
 H. J. Wiley took well over and started rigging rotary on June 25, 1924.
 Cemented 12 1/2" casing at 815' with 200 sacks cement, Perkins' method, on July 20, 1924.
 Drilled out.
 Found hole bridged to 1390.
 Started drilling rotary on July 25, 1924.
 6 5/8" casing 45' was cemented, Perkins' method, with 400 sacks of cement on Oct. 19, 1924.
 Determined to abandon; drilling was stopped at depth 5021' on Dec. 9, 1924.
 Nothing was sidetracked and there is no junk in hole.

STATE MINING BUREAU
RECEIVED
DEC 13 1924
SANTA PAULA, CAL.

Fill this blank in with typewriter. Write on one side of paper only
CALIFORNIA STATE MINING BUREAU
 FERRY BUILDING, SAN FRANCISCO
LOG OF OIL OR GAS WELL



FIELD..... COMPANY **S. J. MILBY**

Township **4 N.** Range **22 W.** Section **4** Elevation **750** Number of Well **(Industrial 10 - 1) 01a1 1**

In compliance with the provisions of Chapter 718, Statutes of 1915, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Signed *Geo. J. Smith*

Date **December 12, 1924**

Title **Agent.**
 (President, Secretary or Agent)

The summary on this page is for the ORIGINAL condition of the well

OIL SANDS

1st sand from.....to..... 4th sand from.....to.....
 2d sand from.....to..... 5th sand from.....to.....
 3d sand from.....to..... 6th sand from.....to.....

IMPORTANT WATER SANDS

1st sand from.....to..... 3d sand from.....to.....
 2d sand from.....to..... 4th sand from.....to.....

CASING RECORD

Size of Casing	Where Landed	Where Cut	Weight Per Foot	Threads per Inch	Kind of Shoe	Make of Casing	Cemented		Number of Sacks
							Yes	No	
12 1/2"	815		45 1/2				Yes		200
8 5/8"	3630		45 1/2	8	Common	Youngstown	Yes		400

CEMENTING OR OTHER SHUT-OFF RECORD

Casing, Size	Sacks	Time Set	Method	Test and Result (Give water level and bailing results)
8 5/8"	400	8 days	Perkins'	Bailed to 2000'. Stood 12 hours. Fluid level 2000'.

PLUGS AND ADAPTERS

Heaving Plug—Material..... Length..... Where set.....

Adapters —Material..... Size.....

TOOLS

Rotary tools were used from **1587** ft. to **5021** ft.

Cable tools were used from **0** ft. to **1587** ft.

PERFORATIONS

State clearly whether a machine was used or casing was drilled in shop

From	To	Size of Holes	Number of Rows	Holes per Foot	Machine—Shop
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				

Thirty days after completion well produced.....barrels of oil per day.

H. A. Bell

G. M. Larson

H. G. Dobie

H. Warden

W. M. Critton

J. G. Bird

W. R. Hicks

S. Spencer

Joe Cooper

Date drilling started Dec. 9, 1922

Date well was completed Stopped drilling

Dec. 9, 1924

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
0	4	4	Surface sand
4	27	23	Boulders
27	118	91	Sand stone
118	126	8	Sandstone and boulders
126	135	9	Hard sand
135	180	45	Hard sand, boulders and conglomerate
180	197	17	Sand and shale
197	595	398	Sandstone and very hard conglomerate
595	1202	607	Conglomerate and red sandstone
1202	1254	52	Red shale
1254	1272	18	Hard shell
1272	1371	99	Sticky red shale
1371	1404	33	Tough red shale
1404	1416	12	Red clay with hard boulders
1416	1425	9	Hard red sandy shale
1425	1446	21	Hard red sandstone with streaks tough shale
1446	1453	7	Hard sand
1453	1476	23	Hard red sandy shale
1476	1693	217	Hard sandy shale
1693	1763	70	Tough red shale
1763	1805	42	Sandy shale
1805	1831	26	Hard sand
1831	1992	161	Tough shale with streaks sand
1992	2067	75	Hard sandy shale
2067	2123	56	Hard sand
2123	2148	25	Sticky shale
2148	2168	20	Sandy shale
2168	2175	7	Hard sand
2175	2227	52	Sandy shale
2227	2250	23	Tough shale with hard streaks
2250	2259	9	Hard sand
2259	2271	12	Sandy shale
2271	2296	27	Tough sticky shale
2296	2310	14	Hard sand
2310	2344	34	Tough shale with hard streaks
2344	2359	15	Sandy shale
2359	2446	87	Tough shale with streaks shale
2446	2559	23	Tough shale with streaks hard sand
2559	2562	3	Shell
2562	2600	38	Tough shale
2600	2680	80	Hard sandy shale
2680	2685	5	Coarse gray sand
2685	2705	20	Sandy blue shale
2705	2757	52	Hard sand and hard sandy shale
2757	2761	4	Conglomerate

CALIFORNIA STATE MINING I REAU
DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P. 2-1268

Santa Paula, Cal. December 11, 1924.

Mr. Geo. S. Smith,

Box 506, Ojai, Cal.

Agent for E. J. Wiley Company

DEAR SIR:

Your proposal to abandon Well No. "Industrial 10" 1,

Section 4, T 4 N., R. 25 W., S. 12 E., B. & M., Oil Field, Ventura County,

dated Dec. 6, 1924, received Dec. 11, 1924, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS:

The 8 5/8" shut-off was approved.

THE NOTICE STATES:

The present condition of the well is as follows:

Depth: 5021

12 1/2" casing cemented at 815'.

8 5/8" casing cemented at 3630'.

No oil-bearing formations were encountered.

PROPOSAL:

The proposed work is as follows:

Fill lower portion of hole with heavy mud.

Pump in 50 sacks cement, treated, with drill-pipe hanging at 3652'.

Out and pull 8 5/8" casing from 800'.

Perforate 12 1/2" casing in attempt to make water-well for lease owner.

RECOMMENDATION:

The proposal is approved with the following recommendations:

1. The hole should be filled with heavy mud fluid below a depth of 800'.

2. A cement or wooden plug should be placed on top of the 8 5/8" casing, prior to perforating the 12 1/2" casing.

This office must be notified to witness the location and hardness of the cement plug.

The Company should file a report in duplicate on our form 102, when the work of abandonment has been completed. The report should contain the following:

1. Names of all workmen employed on the job.
2. Dates when work was commenced and completed.
3. Depth to which hole was cleaned out.
4. Depths at which casing was out, ripped or perforated.
5. Amounts and sizes of all casing removed from the well.
6. Depths at which plugs were placed, together with statement of

kinds and amounts of materials composing each plug.

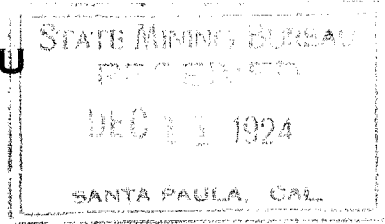
R. D. BUSH,
State Oil and Gas Supervisor

By *R. A. Godde* Deputy

K.
cc-E. J. Wiley

CALIFORNIA STATE MINING BUREAU

Department of Petroleum and Gas



Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin

----- OJAI, Cal., ----- Cal. Dec. 6 ----- 1924

Mr. H. A. Godde -----

Deputy State Oil and Gas Supervisor

----- Santa Paula ----- Cal.

DEAR SIR:

In compliance with Section 16, Chapter 718, Statutes of 1915, notice is hereby given that it is our intention to abandon well number Ojai 1 Section 4 T. 4 N. R. 23 W., S. B. B. & M.,
----- Oil Field Ventura ----- County,
commencing work on the 2nd 9th day of December ----- 1924.

The present condition of the well is as follows:

- Depth: 5021
- 12 $\frac{1}{2}$ " Casing cemented at 815'.
- 8 5/8" Casing cemented at 3630'.
- No oil-bearing formations were encountered.

The proposed work is as follows:

- Fill lower portion of hole with heavy mud.
- Pump in 50 sacks cement, treated, with drill-pipe hanging at 3652.
- Cut and pull 8 5/8" casing from 800'.
- Perforate 12 $\frac{1}{2}$ " casing in attempt to make water-well for lease owner.

Reference to file of data

Maps	Model	Cross Section	Cards	Forms	
				114	127
				✓	✓

Respectfully yours,

E. J. MILEY

(Name of Company or Operator)

By Geo. V. Smith

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Test of Water Shut-off (BAILING)

No. T. 2-672

Santa Paula, Cal. October 28, 1924

Mr. Dave Wallace,

Box 506, Ojai, Cal.

Agent for E. J. Miley Company

DEAR SIR:

Your well No. "Industrial 10"- 1, Sec. 4, T. 4 N., R. 23 W., S. B. B. & M.,

Oil Field, in Ventura County, was tested for

shut-off of water on October 27, 1924. Mr. H. A. Godde

designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present

G. Smith, Resident Geologist and E. E. Fairbanks, Drilling Foreman.

Location of water tested above 3630' and normal fluid level not determined.

Depth and manner of water shut-off: { 3630 ft. of 8 5/8 in. 45 lb. } casing was { cemented } 10-15 in. 24 hard gray shale Formation

at 3630 ft. with 200 sacks Santa Cruz Victor cement by Perkins-2 plug method; 1 1/2" rotary tools were used in landing water string. last 125 sacks treated.

Casing record of well 12 1/2" cemented 815'; 8 5/8" as above.

Reported total depth of hole 3633 ft. Hole bridged from - ft. to - ft. Hole cleaned out to 3633 ft. for this test.

At time of test depth of hole measured 3633 ft. and bailer brought up sample of hard gray shale.

At 1:30 a.m. October 27, 1924 oil bailed to no oil, water bailed to 2000 ft.

At 1:30 p.m. October 27, 1924 top of oil found at no oil ft., top of water found at 2000 ft.

Result of bailing test:

Mr. Fairbanks reported:

- 1. The 12 1/2" casing was cemented at 815'.
2. On drilling ahead for this test, hard cement was encountered at 3272'.
3. The casing was tested by applying a pump pressure of 500 lb. prior to drilling out the cement. There was no loss of pressure during a 1 hour test.

The Deputy noted that while standing 12 hr. for test, no oil or water entered the well.

THE SHUT-OFF IS APPROVED.

K. cc - E. J. Miley,

R. D. BUSH, State Oil and Gas Supervisor

By H. A. Godde Deputy

CALIFORNIA STATE MINING BUREAU
DEPARTMENT OF PETROLEUM AND GAS

STATE MINING BUREAU
RECEIVED
OCT 28 1924
SANTA PAULA, CAL.

Notice of Test of Water Shut-off

This notice must be given at least five days before the test, and a longer time is desirable

Ojai ----- Cal. Oct. 27 1924

Mr. H. A. Godde -----
Deputy State Oil and Gas Supervisor

Santa Paula ----- Cal.

DEAR SIR:

In compliance with Section 19, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to test the shut-off of water in well number Ojai No. 1 -----

Section 4 T. 4 N R. 23 W, S. B. B. & M., ----- Oil Field,
Ventura ----- County, on the 27th day of October 1924

3 5/8 inch 45 lb. casing was ~~used~~ cemented in hard gray shale at 3630'
(Formation) (Depth)

on Oct. 19 ----- 1924
(Date)

400 sacks of cement were used. 200 Santa Cruz
200 Victor last 125 sacks treated

The Perkins' two-plug ----- method was used in placing the cement.

Fluid level will be bailed to a depth of 2000 feet and left undisturbed for at least 12 hours before your inspection.

The well is 3630 feet deep. There is/is not a plug or bridge from ----- feet to ----- feet.

Reference to file of data

Maps	Model	Cross Section	Cards	Forms	
				114	121
				✓	✓

Respectfully yours,

E. J. MILEY
(Name of Company or Operator)

By Geo. P. Smith

Address notice to Deputy State Oil and Gas Supervisor in charge of district where well is located

CALIFORNIA STATE MINING BUREAU
DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P. 1252
2-1243

Santa Paula, Cal. October 28, 1924.

Mr. Dave Wallace

Box 506, Ojai, Cal.

Agent for E. J. Miley Company

DEAR SIR:

Your supplementary proposal to drill Well No. "Industrial 10" 1,
Section 4, T. 4 N., R. 23 W., S.B. - - - Oil Field, Ventura County,
dated Oct. 27, 1924, received Oct. 28, 1924, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS:

The original work on the well was started by the Industrial Oil Syndicate No. 10.

THE NOTICE STATES:

The new conditions are as follows:

Casing record: 12 1/2" cemented at 816' with 400 sacks.
Hole drilled to 3630'; no showings of oil to date.

PROPOSAL:

We now propose:

To cement 8 5/8" casing at 3630' as conductor string. Make test of water shut-off. If same is O.K. will prospect ahead.

RECOMMENDATION:

The proposal is approved.

This office must be notified to witness a bailing test of the effectiveness of the 8 5/8" shut-off.

NOTE: A supplementary notice should be filed with this office prior to landing or cementing another string of casing in the hole.

K.
cc - E. J. Miley,

R. D. BUSH,
State Oil and Gas Supervisor
By R. A. Godde Deputy

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P. 2-1073

Santa Paula,

Cal. Jan. 29, 1923.

Mr. Chas. F. Sawyer,

Los Angeles, Cal.

Treas. Agent for Industrial Oil Syndicate #10. COMPANY

DEAR SIR:

"Industrial"

Supplementary

drill

Well No. 10-1

Section 4

T4 N., R. 23 W., S. B. & M.

Your proposal to

Oil Field

Ventura

County, dated Jan. 23, 1923. (Rec'd at this office Jan. 25th.)

has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The new conditions are as follows:

The following information is given in response to your letter of Jan. 9, 1923:

Location: Approximately 1/4 mile from Eowe's S.W. corner between N.W. corner of Williams Ranch and N.E. corner of Sturgess Ranch.

Elevation: Approximately 750. feet.

Spudded Dec. 9, 1922.

Present Depth: Jan. 18, 1923, 130 feet deep. Condition O.K.

Carrying 15 1/2" casing at 100 feet.

PROPOSAL:

Recommendation

"We now propose:

Cement 15 1/2" 70# casing below surface formation.
Cement 12 1/2" 45# " at approximately 1000 feet.
Cement 10" 45# " " 2000 feet.

We expect to encounter first oil sand at approximately 1800 to 2000 Ft."

continued on page 2.

R. E. COLLOM

State Oil and Gas Supervisor

By

H. D. Thomson

Deputy

CALIFORNIA STATE MINING BUREAU
DEPARTMENT OF PETROLEUM AND GAS

Report on Proposed Operations

No. P 2-1073

Page 2

Industrial Oil Syndicate #10. ~~Company~~

Well No. "Industrial" 10-1 Sec. 4 T. 4 N., R. 23 W., S. 3. B. & M.

continued from page 1.

RECOMMENDATION:

Since this well is to be drilled in an undeveloped area, an accurate estimate cannot be made of the depth to oil-bearing formations, or the depth at which to shut off water.

Your proposal to continue drilling is approved.

It is recommended:

1. That depth, character and content of all possible fluid-bearing formations be carefully determined in drilling.
2. That all formations which may contain oil or gas in productive amount be protected by approved methods from infiltration of water or dissipation of the gas.
3. That you notify this office as soon as the first oil-bearing formation is encountered, so that an inspection can be made.

Also notify this office on our form No. 106 (supply of which is enclosed) when casing has been set for the purpose of shutting off water, in order that arrangements may be made to witness test of water shutoff.

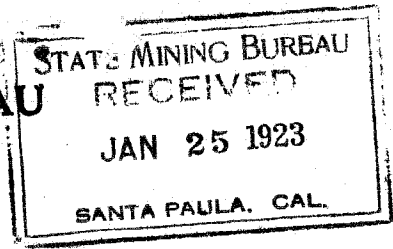
BH.
encl.

R. E. COLLOM
State Oil and Gas Supervisor

By H. B. Thomson Deputy

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS



111-01371

SUPPLEMENTARY NOTICE

Los Angeles Cal. Jan 23 1923

Mr. H. B. Thompson

Deputy State Oil and Gas Supervisor

Santa Paula Cal.

DEAR SIR:

Please be advised that our notice to you dated _____, 192__, stating our intention

to drill well number Industrial No. 10-1 Section 4 T. 4 N R. 23 W., S.B.B. & M.,
(Drill, deepen, redrill, test, abandon) Oil Field, Ventura County,

must be amended on account of changed or recently discovered conditions.

The new conditions are as follows: The following information is given in response to your letter of Jan. 9, 1923:
Location: Approximately 1/4 mile from Rowe's S.W. corner between N.W. corner of Williams Ranch and N. E. corner of Sturgess Ranch.

Elevation: Approximately 750 feet.

Spudded Dec. 9, 1922.

Present Depth: Jan. 18, 180 feet deep. Condition O.K. Carrying 15 1/2" casing at 100 feet.

We propose to:

Cement 15 1/2" 70# casing below surface formations.

Cement 12 1/2" 45# " at approximately 1000 feet.

Cement 10 " 45# " " " 2000 " .

We now propose

We expect to encounter first oil sand at approximately 1800 to 2000 Ft.

Reference to file of data

Mans	Model	Cross Section	Cards	Forms
				114
				<i>[Handwritten marks]</i>

DRT-IH

Respectfully yours,

CC:

Ralph Giffan,
Orange County Drilling Co.

INDUSTRIAL OIL SYNDICATE #10

(Name of Company)

By

Chas F Sawyer
President

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

LOG OF OIL OR GAS WELL—Continued

FIELD COMPANY E. L. MILNE

Township 4 N., Range 23 W., Section 4, Number of well Industrial 10 - 1

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
2761	2765	4	Sticky shale
2765	2771	6	Hard sand
2771	2780	9	Hard sandy shale
2780	2795	15	Tough shale
2795	2797	2	Hard sand
2797	2809	12	Shale with streaks hard sand
2809	2813	4	Tough shale
2835	28 2835	20	Hard sand
2835	2844	11	Hard sandy shale
2844	2851	7	Hard sand
2851	2852	1	Sandy shale
2852	2868	16	Tough shale with streaks hard sand
2868	2875	7	Tough shale
2875	2879	4	Hard sand
2879	2907	28	Hard sandy shale
2907	2922	15	Hard sand
2922	2928	6	Tough blue shale
2928	2930	2	Hard sand
2930	2960		Corrected measurement
2960	2966	6	Hard sand
2966	2974	8	Sandy shale
2974	2978	4	Hard sand
2978	2991	13	Sandy shale
2991	3007	16	Hard sand
3007	3009	2	Sticky shale
3009	3020	11	Hard sand
3020	3025	5	Sandy shale
3025	3030	7	Hard sand streaks shale
3030	3042	12	Sticky shale
3042	3048	6	Hard sand
3048	3051	3	Sticky shale
3051	3063	12	Hard sand
3063	3067	4	Sandy shale
3067	3080	13	Hard sand
3080	3087	7	Conglomerate
3087	3093	6	Hard shale with streaks hard sand
3093	3103	10	Hard sand
3103	3106	3	Sandy shale
3106	3115	9	Hard sandy shale
3115	3122	7	Hard sand
3122	3135	13	Conglomerate
3135	3137	2	Sandy blue shale
3137	3143	10	Hard sand
3147	3153	6	Hard sand with streaks shale
3153	3157	4	Hard sand
3157	3165	8	Conglomerate

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

LOG OF OIL OR GAS WELL—Continued

FIELD COMPANY E. J. MILEY
 Township 4 N., Range 25 W., Section 4, Number of well Industrial 10 - 1

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
3165	3166	1	Shale
3166	3171	5	Hard shale
3171	3182	11	Conglomerate
3182	3191	9	Hard sandy shale
3191	3195	4	Conglomerate
3195	3191		Corrected Measurement
3191	3195	4	Conglomerate
3195	3232	37	Hard sandy shale
3232	3246	14	Conglomerate
3246	3254	8	Hard sandy shale
3254	3272	18	Hard sand
3272	3278	6	Hard sandy shale
3278	3283	5	Hard shale
3283	3288	5	Conglomerate
3288	3296	8	Hard sandy shale
3296	3304	8	Conglomerate
3304	3316	12	Hard sandy shale
3316	3319	3	Sandy shale
3319	3323	4	Conglomerate
3323	3328	5	Hard sandy shale
3328	3329	1	Hard sand
3329	3333	4	Conglomerate
3333	3336	3	Hard shale
3336	3342	6	Conglomerate
3342	3344	2	Hard shale
3344	3351	7	Hard sandy shale
3351	3354	3	Hard sand
3354	3340		Corrected Measurement
3340	3345	5	Hard sand
3345	3348	3	Hard sandy shale
3348	3351	3	Hard sand
3351	3354	3	Hard sandy shale streaks sand
3354	3358	4	Hard sandy shale
3358	3389	31	Hard sand
3389	3402	13	Sandy shale
3402	3405	3	Sandy shale
3405	3428	23	Hard sand
3428	3465	37	Hard sandy shale
3465	3468	3	Hard sand
3468	3483	15	Hard sand
3483	3498	15	Hard sandy shale
3498	3522	24	Hard sand
3522	3524	2	Shale
3524	3531	7	Hard sandy shale
3531	3535	4	Sandy shale
3535	3543-	8	Hard sand
3543	3544	1	Shale

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

LOG OF OIL OR GAS WELL—Continued

FIELD COMPANY H. J. MILEY

Township 4 N., Range 22 W., Section 4, Number of well Industrial 10 - 1

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
3544	3549	5	Hard sandy shale
3549	3556	7	Hard sand
3556	3562	6	Sandy shale
3562	3574	12	Hard sandy shale
3574	3576	2	Hard sand
3576	3580	4	Hard sandy shale
3580	3582	2	Hard sand
3582	3590	8	Hard sandy shale
3590	3601	11	Hard sand
	3602		Corrected Measurement
3602	3629	27	Hard sand
3629	3633		Corrected Measurement
3633	3702	69	Hard sandy shale
3702	3743	41	Sandy shale
3743	3746	3	Hard shale
3746	3776	30	Hard sandy shale showing gas
3776	3780	4	Hard sand do
3780	3857	77	Hard sandy shale do
3857	3863		Corrected Measurement
3863	4014	151	Hard sandy shale do
4014	4035	21	Hard sand do
4035	4043	8	Hard sandy shale do
4043	4071	28	Hard sand do
4071	4084	13	Hard sandy shale do
4084	4105	21	Hard sand do
4105	4139	34	Hard sandy shale do
4139	4168	29	Hard sand do
4168	4186	18	Sandy shale with hard streaks do
4186	4222	36	Hard sand do
4222	4239	17	Sandy shale with hard streaks do
4239	4269	30	Hard sand do
4269	4277	8	Sand do
4277	4278	1	Shell
4278	4283	5	Sandy shale do
4283	4327	44	Sand with hard streaks do
4327	4411	84	Hard sand do
4411	4423	12	Sand with hard streaks do
4423	4438	15	Hard sand do
4438	4443	5	Shale do
4443	4440		Corrected Measurement
4440	4456	16	Hard sand do
4456	4480	24	Hard shale do
4480	4498	18	Hard sandy shale do
4498	4560	62	Hard shale do
4560	4570	10	Hard sandy shale
4570	4650	80	Hard shale do
4650	4657	7	Hard sand do

CALIFORNIA STATE MINING BUREAU
DEPARTMENT OF PETROLEUM AND GAS

LOG OF OIL OR GAS WELL—Continued

FIELD COMPANY B. J. MILNER

Township 4 N., Range 23 W., Section 4, Number of well Industrial 10 - 1

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Name of Formation
Top of Formation	Bottom of Formation		
4657	4664	7	Hard sandy shale showing gas /
4664	4665		Corrected Measurement
4665	4726	61	Hard shale do
4726	4736	10	Sandy shale do
4736	4776	40	Tough shale do
4776	4784	8	Tough shale
4784	4812	28	Hard shale
4812	4826	14	Hard sandy shale
4826	4834	8	Hard shale
4834	4836		Corrected Measurement
4836	4859	23	Hard sandy shale
4859	4885	26	Tough shale
4885	4903 4903	18	Hard shale with streaks hard sand
4903	4917	14	Hard sand
4917	4922	5	Tough shale
4922	4932	10	Hard sand
4932	4941	9	Tough shale
4941	4943	2	Hard sandy shale
4943	4962	19	Tough shale with streaks hard sand
4962	4974	12	Hard shale
4974	4986	12	Hard sandy shale
4986	5017	31	Hard sand
	5019		Corrected Measurement
5019	5021	2	Hard sand <u>Bottom</u>

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

Memorandum of Failure to Give Notice

No. N 2-20

SAN FRANCISCO Cal. February 6, 1923

Mr. Charles F. Sawyer,
Los Angeles Cal. 404 Mortgage Guarantee Bldg.
Secretary, Industrial Oil Syndicate #10 Company
(Title)

DEAR SIR:

According to the subjoined report of the deputy supervisor for District No. 2, your company has done certain work in Ventura County, without first filing a notice of such work with this department.

Section 17, Chapter 718, Statutes of 1915, amended 1917, 1919 and 1921, reads in part as follows:

"The owner or operator of any well referred to in this act shall, before commencing the work of drilling an oil or gas well, file with the supervisor, or his local deputy, a written notice of intention to commence drilling."

[Signature]
State Oil and Gas Supervisor

MR. R. E. COLLOM, Santa Paula, Cal. Jan. 23, 1923.
State Oil and Gas Supervisor,
San Francisco, Cal.

DEAR SIR:

This is to report that Industrial Oil Syndicate #10 Company, operating at well No. Industrial #10-1 Section 4, T. 4N, R. 23W, S. 8. B. & M., in Ventura Oil Field, in Ventura County, failed to submit notice of intention to drill, as required by Section 17, Chapter 718, Statutes 1915, as amended. (Drill, redrill, plug, deepen, test, abandon, etc.)

Our usual report on proposed operations is therefore omitted and approval of the following described work, which has been performed without filing notice, is withheld.

Work being done or completed without filing notice:

A supplementary notice dated Jan. 23, 1923, signed by Chas. F. Sawyer, Treas., states that the well was spudded in on Dec. 9, 1922. Depth on Jan. 18, 1923, 180 ft.

[Signature]
Deputy Supervisor, District 2

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

MEMORANDUM OF TELEPHONE OR PERSONAL CONVERSATION

10 a.m. M. July 21 1924
(Time) (Date)

Company E. J. Miley Well No. 1
Field _____ Sec. 4 T. 4 R. 23 B. & M.

On this date a telephone conversation was held, concerning the above well, with Mr. Wallace
of the Geologist Company.

Details of operations were discussed as follows:

12 1/2" cmtd. 815'
T.D. - 1587'

E. J. Miley has taken over property of Industrial Oil Syndicate #10 well No. 1.

12 1/2" cmtd. 815' - the 12 1/2" casing had been hanging in the hole for some time and was cemented at 815' for the reason that Co. did not want to fool with it.
total depth - 1587'

Told Wallace to write a letter covering:

1. Date of change
2. Name of new Co. with Pres. or Sec. address
3. Description of Property.

Visited well 8-8-24

1. T.D. - 1928'
2. Core 1924-1928' showed red shale with str. gr. sand.
3. No oil showings to date
4. Slight gas showing at 1800'
5. Wallace said he would send map of property.

9-12-24 Mr. Smith has taken Wallace's place. Signed W. J. G.

1. T.D. 3180'. Title J. S.
2. No oil to date - some gas

9-23-24. 1. T.D. 3333' - olive green sand shale.

CA FORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

MEMORANDUM OF TELEPHONE OR PERSONAL CONVERSATION

12 Noon Oct. 22, 1924
(Time) (Date)

Company E. F. Wiley Well No. 1

Field _____ Sec. 4 T. 4 R. 23 B. & M.

On this date a personal telephone conversation was held, concerning the above well, with Mr. Smith of the _____ Company.

Details of operations were discussed as follows:

Visited well 10-22-24.
Mr. Smith reported:
1. T.D. 3630' in hard gray shale.
2. Cemented 8 5/8" 45' at 3630'.
3. No showings of oil or gas to date.
Told Smith to file supplementary notice and notice of test of water shut-off - also that we wanted to witness bailing test.

Signed HAG

Title P.S.

CA FORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

MEMORANDUM OF TELEPHONE OR PERSONAL CONVERSATION

(Time) M Dec. 9, (Date) 1924

Company E. J. Miley Well No. 1

Field _____ Sec. 4 T. 1N R. 13W, P.D. B. & M.

On this date a ^{personal} telephone conversation was held, concerning the above well, with Mr. G. Smith of the President Geologist Company.

Details of operations were discussed as follows:

Mr. Smith reported:

1. T. D. 5021' - No showings of oil encountered. Some gas below the shoe. - Want to abandon.
2. Told him to fill lower portion with heavy mud.
3. Place cement plug 3645' to 3635' - test and continue 20' up inside the 8 3/8" casing.
4. Cut and pull 8 3/8" from 795'.
5. O.K. to perforate 12 1/2" flow water well.

Signed H.A.G.

Title P.S.

CALIFORNIA STATE MINING BUREAU

DEPARTMENT OF PETROLEUM AND GAS

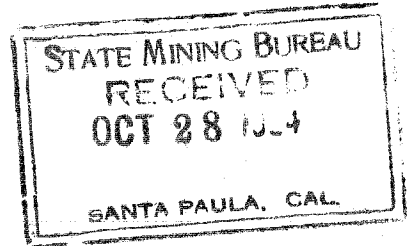
SUPPLEMENTARY NOTICE

Ojai ----- Cal. Oct. 27 1924

Mr. H. A. Godde -----

Deputy State Oil and Gas Supervisor

Santa Paula ----- Cal.



DEAR SIR:

Please be advised that our notice to you dated -----, 1924, stating our intention

to drill well number Ojai 1 Section 4 T. 4 N R. 23 W, S.B. B. & M.
(Drill, deepen, redrill, test, abandon)

----- Oil Field, Ventura ----- County,

must be amended on account of changed or recently discovered conditions.

The new conditions are as follows:

Casing record:-
 12 1/2" cemented at 815' with 400 sacks.
 Hole drilled to 3630' ; no showings of oil to date.

We now propose

To cement 8 5/8" casing at 3630' as conductor string. Make test of water shut-off. If same is O.K. will prospect ahead.

Reference to file of data

Maps	Model	Cross Section	Cards	Forms	
				114	113
				✓	←

Respectfully yours,

E. J. MILEY

(Name of Company)

By

E. J. Miley

PART H – MITIGATION MONITORING PROGRAM

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**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
AIR QUALITY								
<p>AQ-1 The following emissions reduction measures shall be implemented during site preparation, well drilling and well head piping and equipment installation:</p> <ul style="list-style-type: none"> The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 	Throughout the construction period	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities 	Throughout the construction period	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> All trucks shall be required to cover their loads as required by California Vehicle Code §23114. 	Throughout the construction period	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 	Throughout the construction period	The construction inspector will inspect roadways and other exposed soils for excessive dust generation	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			

**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
AIR QUALITY (Continued)								
<ul style="list-style-type: none"> Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust 	Throughout the construction period	The construction inspector will inspect dust control efforts and order additional measures as needed	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> Signs shall be posted on-site limiting off-road traffic speed to 15 miles per hour or less 	Throughout the construction period	The construction inspector will ensure signs are posted and maintained	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use their discretion in conjunction with the VCAPCD in determining when winds are excessive 	Throughout the construction period	The construction inspector will coordinate with site supervisor to curtail construction operations as needed during high wind periods	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			

**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
AIR QUALITY (Continued)								
<ul style="list-style-type: none"> Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads 	Throughout the construction period	The construction inspector will ensure roads are swept as needed	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations 	Throughout the construction period	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> Material stockpiles shall be enclosed, covered, stabilized, or otherwise treated as needed to prevent blowing fugitive dust off-site. 	Throughout the construction period	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> All project construction and site preparation operations shall be conducted in compliance with all applicable VCAPCD Rules and Regulations with emphasis on Rule 50 (Opacity), Rule 51 (Nuisance), Rule 55 (Fugitive Dust) and Rule 10 (Permits Required). 	Throughout the construction period	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
<ul style="list-style-type: none"> Off-road construction equipment shall utilize engines certified to the Federal Emissions Standard Category of Tier 3 or Tier 4, if available. 	Throughout the construction period	The construction inspector will ensure appropriate engines are used, if available	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			

**MATILIJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
AIR QUALITY (Continued)								
<ul style="list-style-type: none"> • Signs displaying the VCAPCD complaint line telephone number (805/303-1400 during business hours; 805/303-2797 after hours) shall be posted in a prominent location visible to the public. 	Throughout the construction period	The construction inspector will ensure the signage is in place	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			

**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
BIOLOGICAL RESOURCES								
<p>BIO-1 To avoid disturbance of birds protected under the Migratory Bird Treaty Act, activities related to the Project including vegetation removal, ground disturbance and construction shall occur outside of the bird breeding season for migratory birds including raptors (February 1 through August 1), if practicable.</p> <p>If Project activities must occur during the bird breeding season, a breeding bird survey shall be conducted by a qualified biologist no more than 3 days prior to the initiation of ground disturbing activities. The breeding bird pre-construction survey shall be conducted on foot inside the Project footprint including a 300-foot buffer. The survey shall be conducted by a biologist familiar with the identification of local avian species. If active nests are found, ground disturbing activities within a nest setback area surrounding the nest shall be postponed or halted. Ground disturbing activities can occur outside of the setback area. The nest setback area shall be determined by the qualified biologist based on the affected species and the proposed work activity and shall be demarcated by the qualified biologist. All construction personnel shall be notified as to the existence of the nest setback area zone and told to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur inside this nest setback area until the biologist has confirmed that that the nest has been abandoned and/or breeding/nesting is completed, and the young have fledged the nest.</p>	<p>Bird breeding season: February 1 through August 1</p>	<p>The construction inspector will ensure the breeding bird survey is conducted and nest setback zones are avoided as required</p>	<p>Weekly during the bird breeding season</p>	<p>CMWD</p>	<p>CMWD staff will prepare inspection reports</p>			

**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
CULTURAL RESOURCES								
CUL-1 In the unanticipated event that cultural material(s) are encountered during ground-disturbing activities at the Project site, all work shall be stopped within a 100-foot radius of the find and a qualified archaeologist shall be summoned to the Project site to evaluate the significance of the material(s) in question. Work may resume once the find has been evaluated and any necessary action taken to appropriately address the encountered material.	Throughout the construction period	The construction inspector will observe work in progress and ensure work is suspended as appropriate, the project manager will ensure evaluation of the find is completed	Initially and weekly thereafter	CMWD	CMWD staff will prepare an incident report to be included in the project inspection report			
HAZARDS AND HAZARDOUS MATERIALS								
HAZ-1 CMWD shall require the contractor to develop and implement a Hazard Detection and Prevention Plan/Emergency Response (Plan) to be followed throughout all phases of construction. The Plan shall include/address but not be limited to the following: 1. The Project well shall have hydraulic blow out prevention (BOP) equipment for the anticipated pressures. The hydraulic BOP equipment should have remote control on ground and a remotely operated choke, rotating head, and a gas buster equipment should be installed before drilling out of surface pipe.	The Plan shall be approved prior to the start of construction	The CMWD project manager will ensure the Plan is developed, approved and implemented	Weekly, throughout the construction period	CMWD	CMWD staff will review the Plan and document implementation			

**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
HAZARDS AND HAZARDOUS MATERIALS (Continued)								
<p>2.The drilling operation shall have a mud program to minimize the risk of having hydrogen sulfide (H₂S) and other formation fluids at the surface. Proper mud weight and safe drilling practices should be applied, and H₂S scavengers should be used to minimize the hazards while drilling. The drilling program should include the use of a Garrett gas train or hatch tester to inspect for sulfide concentrations in the mud system.</p> <p>3.Appropriate prohibitions/limitations on smoking, open flames or spark-producing equipment at the Project site.</p> <p>4.Appropriate firefighting equipment to be provided and maintained at all times (including but not limited to a minimum of four fire extinguishers having a minimum rating of 40 B:C conveniently located at the rig and additional extinguishers near the fuel storage area, or current regulatory requirement).</p> <p>5.Use only approved containers/portable tanks for storage of flammable and combustible materials.</p> <p>6.Worker Education including but not limited to training on the explosive, fire and H₂S hazards associated with the well drilling operation.</p>	The Plan shall be approved prior to the start of construction	The CMWD project manager will ensure the Plan is developed, approved and implemented	Weekly, throughout the construction period	CMWD	CMWD staff will review the Plan and document implementation			

**MATILJA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
HAZARDS AND HAZARDOUS MATERIALS (Continued)								
<p>7. Requirements for personal protective equipment shall state that H₂S meters should also be positioned on the drilling rig floor to alarm the field crew before the gas enters the work area, or each field member wear personal H₂S monitors in the breathing zone (identified as an 18-inch sphere around the head). The monitors should be set with a visual and audible alarm at 10 parts per million (ppm) and should be bump tested at a frequency of every 30 days.</p> <p>8. A multi-gas monitor shall be used in the work area. The multi-gas meters should include H₂S, oxygen (O₂), Flammable Gas (Lower Explosive Limit), carbon dioxide (CO), and volatile organic compounds (VOCs) set to alarm at the permissible exposure limits for each type of gas.</p>	The Plan shall be approved prior to the start of construction	The CMWD project manager will ensure the Plan is developed, approved and implemented	Weekly, throughout the construction period	CMWD	CMWD staff will review the Plan and document implementation			
HYDROLOGY AND WATER QUALITY								
HYD-1 The drill cuttings spread at the Project site shall be surrounded by a berm to prevent off-site transport by stormwater runoff.	During spreading of drill cuttings	The construction inspector will observe work in progress	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			
NOISE								
NOI-1 The drill rig and associated equipment (including the generators) shall be entirely enclosed with minimum 20-foot-tall temporary sound walls providing a minimum of 14 dB transmission loss at an octave band center frequency of 125 Hz. The sound walls shall be in place whenever drilling is ongoing.	Prior to the initiation of drilling	The construction inspector will ensure sound walls are in place and maintained	Initially and weekly thereafter	CMWD	CMWD staff will prepare inspection reports			

**MATILIJIA GROUNDWATER SUPPLY PROJECT
MITIGATION MONITORING PROGRAM – IMPLEMENTATION TABLE**

Mitigation Measure	Implementation Timing	Monitoring Methods	Monitoring Frequency	Party Responsible for Monitoring	Method of Compliance Verification	Verification of Compliance		
						Signature	Date	Remarks
<p>NOI-2 The CMWD shall provide advanced notification about the Project, at least two weeks prior to initiation construction, to residents within a one-mile radius of the Project site. The notifications shall include a description of Project construction activities and schedule including the period and duration of 24-hour per day drilling operations. The notification shall also provide a contact 's name, phone number and email address to whom residents can direct their questions and concerns.</p>	Two weeks prior to the initiation of drilling	The CMWD project manager will ensure notification is completed	Once, prior to drilling	CMWD	CMWD staff will prepare inspection reports			